

# Results from the National and NCAR Agricultural Climate Change Effects Assessments

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## **Results from the National and NCAR Agricultural Climate Change Effects Assessments**

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As part of the ongoing U.S. national assessment (USNA) of potential consequences of climate variability and change and NCAR's southeastern project, a U.S. agricultural sector climate change effects assessment was recently done. This memo outlines the procedures and assumptions used as well as giving a brief discussion of the results.

### 1.0 Climate Change Procedures and assumptions used

This assessment built upon a number of previous efforts, the most recent of which was sponsored by the Electric Power Research Institute and is reported in Adams et al.(1999) The other notable direct ancestor of this work is Adams et al(1990). Eight principal effects of climate change were considered. These involve the effects of climate change on

- 1) crop yields,
- 2) irrigated crop water use,
- 3) irrigation water supply,
- 4) livestock performance,
- 5) livestock pasture usage,
- 6) animal unit month grazing supply,
- 7) international trade, and
- 8) pesticide usage

The analysis also considers the indirect influence of climate change altered livestock and crop yields as they influence production costs and input usage.

Each of these will be discussed in turn. First a discussion of the climate change simulation scenarios utilized is in order.

### 1.1 GCM Climate change simulation scenarios

Results in the study were derived for a number of global circulation model (GCM) weather simulator based climate change scenarios. The scenarios used were

- a) the Canadian climate change simulator with scenarios from 2030 and 2090,
- b) the United Kingdom Hadley climate change simulator with scenarios from 2030 and 2090,
- c) the Australian CSIRO climate change simulator for scenarios arising in 2060, and
- d) the NCAR REGCM regional climate change simulator laid on top of the

## Australian CSIRO simulator for the year 2060

The latter two were included both for the NCAR southeast project and because part of their data were used in the USNA. The former two were included in context of the NCAR project because data were needed on crops not simulated under NCAR efforts.

### 1.2 Crop Yields and Crop Irrigation Water Use

One of the major tasks undertaken under the project involved the simulation of crop yields. Simulations were done by five different groups. The simulation groups and crops simulated were

- a) Goddard Institute for Space Sciences, Columbia University with the principal contacts Francesco N. Tubiello and Cynthia Rosenzweig. Their simulations involved oranges, potatoes, corn, winter wheat and spring wheat. Simulations were run for the Canadian and Hadley scenarios.
- b) University of Florida with the principal contacts Shrikant Jagtap and Jim Jones. Their simulations involved soybeans, sorghum, rice, and tomatoes. Simulations were run for the Canadian and Hadley scenarios.
- c) Natural Resource Ecology Laboratory, Colorado State University with the principal contact Keith Paustian. Those simulations involved alfalfa, other hay and grassland grazing. Simulations were run for the Canadian and Hadley scenarios.
- d) Pacific Northwest National Laboratory with the principal contacts Cesar Izaraulde, Robert Brown and Norman Rosenberg. Their simulations involved corn, soybeans, wheat and hay. Simulations were run for the Hadley scenario.
- e) National Center for Atmospheric Research (NCAR) with the principal contacts Linda Mearns and Elena Tsvetsinskaya. Those simulations involved corn, cotton, sorghum, soybeans, rice and wheat. The simulation results were not developed to be directly comparable to the USNA results and as a consequence only the cotton results from here are used in the USNA. Also due to the omission of a number of the crop simulated data were adapted from the other simulation teams to fill-in sensitivity information for a hay, oranges, tomatoes and potatoes. Simulations were run for the CSIRO and NCAR-REGCM scenarios.

Runs were done with and without farmer adaptation referencing whether the crop simulators were run allowing farmers to adapt cultural practices like planting date to the altered climate.

The crop simulations involved 46 locations, but not all crops were simulated in all locations. Also a number of crops were not simulated in a number of regions where their production was important. For example corn production was largely confined to the midwest and south. Also cotton was omitted from the USNA analysis. Consequently a number of procedures had to be employed to fill in missing data. These fall into the classes of a) adding more geographic detail, b) adding missing crops that were simulated in some parts of the study and not others and c) adding proxy crops. Each will be discussed.

### 1.2.1 Adding more Geographic Detail

The ASM model used for the overall impact analysis had 64 regions. The crop simulations were done for no more than 46 regions with only selected regions used for some crops. This meant that climate change impact data for some ASM regions had to be drawn from as alike as possible simulation regions. In addition, in certain areas there were multiple simulation sites in an ASM region. The procedure employed for developing data for any of the ASM regions involved the following steps

Step 1) For each simulation region the corresponding ASM region was chosen( see appendix A for a list). The simulation data was then copied to the ASM regions. If multiple simulation sites were defined within a single ASM site (for example in Florida we had three), then the arithmetic average across three sites was used.

Step 2) For each ASM region and type of crop where irrigation was important and irrigated yields were not simulated the dryland yield sensitivity was used. Simultaneously for each region where dryland was important and dryland yields were not simulated the irrigated yield sensitivity was used.

Step 3) Steps 1 and 2 left a number of regions without any data at all or without data for specific crops. In turn a proxy region approach was used on a crop by crop basis where for each ASM region a prioritized lists of proxy regions was made. For example for Alabama the first priority proxy region was Mississippi, the second Georgia, the third Arkansas, the fourth Tennessee, and the fifth Florida.(a full list of these appears in appendix A.) The program would then draw from the highest priority available data). Unfortunately this did not completely fill out the needed data. Thus this procedure was used three times over. In turn than if say they were numbers of Florida but none in Alabama, Mississippi, or Louisiana the program might in the first pass take the Florida results pass any proxy for the missing Alabama results, then in the second pass take Alabama is a proxy for Mississippi and in the third pass take Mississippi has a proxy for Louisiana. After that three stage process the data set was complete.

### 1.2.2 Extrapolating crop results between simulations

Climate change effects estimates for cotton were not developed by the USNA crop simulation team for their scenarios. Similarly the NCAR team did not simulate oranges, tomatoes, potatoes, and hay. Also the CO<sub>2</sub> assumptions differed between these simulation teams with the NCAR simulations done for CO<sub>2</sub> concentrations roughly corresponding to the expected level in 2060, but the USNA simulations done under the concentrations expected for 2030 and 2090. This created the need to extrapolate crop simulation results between the climate scenarios.

A first unsuccessful approach to this problem involved a proxy crop approach. At first it was felt we could use the yield results for crops like soybeans or sorghum as a measure of the cotton sensitivity. Unfortunately investigation of the NCAR CSIRO and REGCM based results showed that cotton behaved substantially differently from any of the other simulated crops. Thus, use of a single proxy crop was not felt to be in order.

Subsequently an attempt was made to estimate a regression equation which gave cotton yield sensitivity as a function of the sensitivity of other crops in the region. However the regression estimate yielded a goodness of fit measure (R squared) of less than 0.1 with no significant coefficients for any of the other crops. Thus it was decided to try to adapt the results directly from one climate scenario to another. This was done using different procedures for cotton and the other crops as follows.

#### 1.2.2.1 Cotton

Cotton was not simulated for the USNA Canadian or Hadley scenarios. Thus cotton yield sensitivity data needed to be constructed for the USNA analysis. Conceptually this was done by projecting the spatial distribution from the CSIRO and REGCM scenarios into the Canadian and Hadley data sets adjusting for the degree to which climate change induced crop yields sensitivity appears over time. This data was developed via the following steps

- Step 1. To get a handle on how to construct 2060 results from 2030 and 2090 results an estimate of how climate change effects vary over time by scenario was developed for the USNA scenarios. Namely, a 2030 and 2090 estimate of average national crop yield and water use sensitivity across all crops was developed for the Canadian and Hadley scenarios. This was done by taking a harvested acreage weighted average across the rice, corn, wheat, soybeans, tomatoes, potatoes, hay, and sorghum results for the 2030 and 2090 results. The harvested acreage weights came from 1992 NRI data for dryland and irrigated land use.
- Step 2 To develop a basis for comparison of the effects with the REGCM and CSIRO 2060 results, a 2060 estimate of average national crop yield and water use sensitivity was formed for the Canadian and Hadley scenarios. This was done by taking a simple average of the 2030 and 2090 results.



- Step 3. To develop ASM compatible regional level data that could be extrapolated, a 2060 estimate of average cotton climate change effects by relevant ASM region was formed. This was done by averaging the NCAR CSIRO and REGCM results by region for each irrigation status.
- Step 4. To develop the 2030 and 2090 sets of regional and scenario specific cotton yield estimates for the Canadian and Hadley scenarios the results of steps 1-3 were used as follows. The regionally disaggregated estimates for 2060 from step 3 were multiplied by the average national crop yields sensitivity as derived in step one for the target year were divided by the 2060 national sensitivity estimate from step 2.

Operationally this procedure extrapolates the 2060 spatial distribution of cotton yield and water use sensitivity results after adjusting for the degree to which climate change induced crop yield and water use sensitivity appears over time. The time adjustment is done to reflect the phasing in of climate change effects. In particular if the sensitivity in 2090 is four times that in 2030 the data would reflect that altered sensitivity over time.

This procedure does introduce bias as the NCAR simulations contain spatial weather patterns which differ from those in the Canadian and Hadley simulations. However, this was felt to be superior to any proxy crop approach given the other characteristics of the data as discussed above. A sensitivity analysis will be done on the cotton assumptions in context of the overall economic results.

#### 1.2.2.2 Other Crops

In the NCAR study we needed to construct 2060 climate change sensitivity results for oranges, tomatoes, potatoes, and hay/grass. This was done by averaging the 2030 and 2090 crop sensitivity results across the Canadian and Hadley scenarios. Thus for Florida tomatoes the average of the four possible combinations across the two periods simulated and two underlying GCM simulator weather scenarios was constructed. This was felt to be a less critical assumption than in the USNA as the real point of the NCAR study is to look at the differences in climate change impact estimates due to different geographic differences in crop simulation for the specific crops simulated. The main point of the extrapolation filling in data for the crops which were not simulated is to mitigate biases that might occur because a number of crops were treated without consideration of climate change. In this case identical climate change effects estimates were used for oranges, tomatoes, hay/grass and potatoes across the CSIRO and REGCM scenarios.

#### 1.2.3 Proxy crops

Since not all crops were simulated a proxy crop strategy was employed for several, crops

where the yields and water use of a certain simulated crop was used as an estimator of the sensitivity for another crop. The table below identifies the crop proxies used.

Crop with missing data	Crop used as proxy
hard red spring wheat	wheat
hard red winter wheat	wheat
soft wheat	wheat
durham wheat	wheat
barley	wheat
oats	wheat
silage	corn
orangefrsh	oranges
orangeproc	oranges
grpfrtfrsh	oranges
grpfrtproc	oranges
tomatoproc	tomatoes
tomatofrsh	tomatoes
sugarcane	rice
sugarbeet	hay

#### 1.2.4 Resultant Yield and Water Use Distribution

Tables were constructed giving 1992 NRI harvested acreage based weighted average regional and national simulation results. Tables 1 and 2 gives the national results without and with farmer adaptation, while Appendix B give the results by scenario and USDA crop producing region. Appendix C gives the raw set of climate sensitivity simulation results while Appendix D gives the full regionalized set of simulation results used in the analysis after use of proxy regions and crops.

#### 1.3 Irrigation water supply

Information was also needed on how climate change influences available agricultural water supply. An estimate of this was derived by obtaining the simulated water supply data arising under the parallel USNA water effort. Data were obtained from David M Wolock, who is Hydrologist with USGS in Lawrence, KS. The underlying supporting document gives the calculated changes in water supply. It is assumed the same percentage change that occurs in total water supply also occurs in the agricultural water supply. Attempts were also made to obtain additional data from Kenneth Frederick at RFF on how nonagricultural water use might change in the face of climate change. However that data does not appear to be a focus of the water study and thus was not ever obtained.

#### 1.4 Crop input usage

Traditionally technical progress in agriculture has been accompanied by increases in input usage. Larger yields require more fertilizer inputs, and greater amounts of harvesting inputs along with other factors. As part of the earlier EPRI study (Adams et al) Dr. Robert Evenson at Yale University estimated a relationship showing the percentage change in inputs for a one percent change in yield. For this study most crop inputs were increased at the rate of 40 percent of the yield change. Thus if yield went down by one percent in crop inputs went down by 4/10 of one percent. Similarly a two percent yield increase would be matched by a 8/10% input usage increase. This was done only for the miscellaneous inputs not for land, labor or water.

#### 1.5 Livestock performance

Warmer conditions cause livestock to achieve altered rates of gain. As part of the earlier EPRI study (Adams et al) Dr. Richard Conner at Texas A&M University estimated livestock performance declines. Appendix F lists these estimates on a per head basis. The model runs under the NCAR scenarios employed the average of these effects.

#### 1.6 Livestock Feed, AUMS and Pasture Usage

Altered livestock performance in terms of altered ending weights of sale animals or sales of livestock products means that animals need different amounts of feedstuffs to produce that ending weight or volume of products. In this study we assumed that feedstuff usage was strictly proportional to the volume of products. Thus, if 10 percent more milk were produced then 10 percent more feedstuffs had to be consumed. When multiple products were produced by the livestock unit then a weighted average of the percentage change in output is used to adjust the feedstuff usage. The feed usage quantities for which we applied these adjustments included not only traditional grains but also the number of animal unit months required of grazing and the acreage of pasture required.

#### 1.7 Other Livestock input usage

Similar to the case of crops and with the same rationale, Dr. Evenson's rate of expansion of 40 percent of the rate of production increase was used to expand other nonfeed input usage.

#### 1.8 Pasture supply

Alterations in climate change influences the rate at which grass grows. Alterations in the growth rate of grass then alters the available feed supply from a given area of pasture. In the analysis a sensitivity estimate for livestock pasture usage was formed as the inverse of the climate change sensitivity of grass yield. Thus if grass growth increased by 10 percent, then the livestock pasture use was multiplied by 1/1.1. This was done after adjusting for the pasture required due to a change in body weight .

#### 1.9 Animal unit month grazing supply

Alterations in climate change also influences the grass available on the western range lands. The availability of such lands traditionally has been measured in terms of animal unit months of grazing. An estimate of the AUM supply sensitivity in climate change was developed by assuming the change in a AUM supply was the same as the change in grass supply. Thus if grass growth increased by 10 percent, then the AUMS available increased by 10 percent.

#### 1.10 International trade.

Ideally this study would use estimates of the effect of climate change on crop yields in other areas of the world to project changes in export and import potential for the United States agricultural sector. However such information was unavailable for the climate change scenarios hand. As of this point time this factor has not yet included although it is planned. Currently we plan to run scenarios where climate change sensitivity across all the scenarios offsets 50 percent of the potential coarse grain exports from the U.S. 18% for wheat and four percent of the exports for other commodities. percent of the supply of other agricultural commodities based on work at USDA-ERS by Darwin. Two scenarios were also devised from the earlier work by Kane and Reilly based on the GISS and UKMO GCM models and are in the data in Tables 3 and 4.

#### 1.11 Pesticide Costs

A component of this study explained in Chen and McCarl involves sensitivity of pesticide costs to climate change. In that study component a national estimate of the sensitivity of pesticide expenditures for corn, cotton, soybeans, wheat and potatoes was developed in terms of the percentage change in pesticide costs given a percentage change in precipitation and temperature. These estimates were used in adjusting pesticide costs, according to scenario.

### 2.0 Dynamic Procedures and assumptions used

During the process of this study the analysis involved extrapolation to potential future time periods. In doing that extrapolation econometric parameters were estimated for domestic demand, import demand, export demand, and yield. Also procedures were used to identify rates of change in agricultural input usage within crop and livestock production processes as yield increased. The exact procedures are explained in Lim, Nayda, McCarl and Atwood. The essential procedure estimates an item such as demand or yield in year  $t$  as a function of time using data from 1950 to 1992. In turn future items are projected as base year levels times one plus the rate of change exponentiated to the number of years. Also crop inputs are felt to change with yields using the procedure discussed above in section 1.4.

### 3.0 Model Experimentation and Rationale for Choice

Five elements define the basic nature of the scenarios run for this analysis. All scenarios are listed in Table 5. The first component of the definition involves the combination of climate change scenarios/crop simulator assumption used ( labeled **GCM** in Table 5 )used and is defined

as follows.

BASE	a base scenario with no climate change imposed,
CC	the Canadian climate change scenario,
HC	the Hadley climate scenario,
HC-PNNL	the Hadley climate scenario with the simulation results for crops done by Pacific Northwest Laboratory used in place of the runs done by other USNA teams. This involved alternative data for corn, soybeans, wheat and hay,

The second major component of the scenario description involves the year (labeled **GCM Year** in Table 5) for which the GCM and simulation is run and involves the years 2030 and 2090. This is really an indicator of the CO<sub>2</sub> assumption employed in the crop simulator. The BASE assumption in terms of parts per million for CO<sub>2</sub> is 355, while for the 2030 case the assumption is 445 ppm and for 2090 the assumption is 660 ppm.

The third major component of the scenario description is an indicator of the sensitivity analysis run being done (labeled **Other** in Table 5). Currently this has six alternative settings.

BASE	indicating no sensitivity analysis is being done
DIFFCOTTON	indicating a sensitivity analysis is being done on cotton assumption. Under these cases a proxy crop approach is used for cotton climate change sensitivity. In particular, for each region if there is no cotton information then the soybean climate sensitivity information is used if available and if not the sorghum climate sensitivity information.
DARWIN	indicating that an export scenario from Dr. Roy Darwin at USDA.
GISS	indicating use of an export alteration scenario based on the GISS GCM model results in Kane and Reilly as described by the data in Table 3.
Ukmo	indicating use of an export alteration scenario based on the UKMO GCM model results in Kane and Reilly as described by the data in Table 4.
PEST	indicating use of a pesticide cost alteration scenario based on the results in the environmental chapter.

The fourth major component of the scenario description is an indicator of the adaptation assumption being used (labeled **Farm Adaptation** in table 5). The adaptation assumption refers to whether the crop simulators were run allowing farmers to adapt cultural practices like planting

date to the altered climate. Currently this has two alternative settings.

Y or Yes      Yes adaptation according to the results in chapter 2 and Table 2 is allowed

N or None      No adaptation is allowed and Table 1 results are used

The fifth major component involves the economic state that is assumed to be present at the time climate change is imposed (labeled **Assumed Year** in table 5). There are two choices for this assumption. One can freeze the economy in its current state and look at the effects of the future projected climate change if climate change were to happen today. Second one can advance the economy to a future state(s) and then impose the future projections for climate change on that projected economy. In general we favor freezing the economy at current levels and then imposing future projected climate change upon it. The main reason for this is that in order to for example construct a 2030 economy we need to project forward demand for agricultural commodities; yields of agricultural commodities; available land, labor and water; export demand; import supply; and a number of other factors. Past experience has shown that alternative assumptions behind the projection of these items result in much bigger alterations than the implications of climate change. As a consequence we feel that the errors due to imperfect projections of the economy are large because of unknown factors we cannot currently anticipate and are desirable to avoid. For example, 90 years ago soybeans were a much less important crop than it has now become. A sensitivity analysis is done on the implications of using future base years.

### 3.1 Timing of Analysis Years

One major question involved with the overall study involves the assumptions underlying the economic state that is assumed to be present at the time climate change is imposed. There are two major and obvious choices for this assumption. One can freeze the economy and its current state and look at the effects of the future projected climate change if it weren't happen today. Second one can advance the economy to a future state(s) and then impose the future projections for climate change on that projected economy. In this study both approaches will be pursued. However, in general we favor freezing the economy at current levels and then imposing future projected climate change upon it. The main reason for this is that in order to for example construct a 2030 economy we need to project forward demand for agricultural commodities; yields of agricultural commodities; available land, labor and water; export demand; import supply; and a number of other factors. Past experience has shown that alternative assumptions behind the projection of these items result in much bigger alterations in the results than the implications of climate change. As a consequence we feel that the errors due to imperfect projections of the economy are large because of unknown factors we cannot currently anticipate and are desirable to avoid. For example, 90 years ago soybeans once a much less important crop than it has now become.

## 4.0 Results

The basic results from the study are presented in tables 6 through 9. Before discussing the results we need to define the items that are within them.

### 4.1 Basic Definition of Items Included

Here we discuss the nature of the items included in each of the tables.

#### 4.1.1 Contents of Table 6 series – welfare results

The table 6 series contain results which compare the economic welfare measures across scenarios. Two different types of items are tabled. The first involves the scenario description and the second gives the numerical results by welfare measure. The main table 6 gives the numerical welfare results in billions of dollars. Table 6a gives the changes in the numerical results between each of the climate change induced scenarios and the appropriate base scenario. The base scenario used depends on the base year of the model run. Table 6b gives the percentage changes dividing the change in table 6a by the base value for each measure. The percentage change results for total surplus, net welfare and consumer surplus are typically very small because of the large magnitude of consumer surplus.

##### 4.1.1.1 Scenario description items

Six items describe the scenario

Num	gives the scenario number
BaseYr	identifies the year for which the economy is set up.
GCM	identifies the underlining global circulation model from which the weather scenario arose.
GCMYR	identifies the year for which the crop simulators are run in terms of the CO <sub>2</sub> assumption.
Other	identifies the sensitivity analysis case being examined with the items defined as discussed above
Adap	Adaptation assumption being used.

#### 4.1.1.2 Scenario welfare result items

Five items describe the welfare results

Consumer surplus	Gives the magnitude of the area underneath the domestic consumer demand curves and above the price line. This measure is in billion dollars and is of the order of \$1.1 trillion in the base solution. And arises across approximately 60 consumed commodities.
Producer surplus	Gives the magnitude of the area above the domestic supply curves and above the price line for the primary factors of production land, labor, and water. This measure approximates that producer income to all the producers in the sector including crop and livestock producers. This measure is in billion dollars and is of the order of \$30 billion in the base solution. This is the sum across 63 U.S. subregions.
Foreign surplus	Gives the magnitude of the area underneath the foreign export demand curves and above the price line plus that above the foreign import supply curves and below the price line. This measure encompasses explicit demand and supply curves in 23 foreign regions for four varieties of wheat, corn, sorghum, and soybeans plus areas arising from excess demand and excess supply curves for the 50 other commodities in the model. This measure is in billion dollars and is of the order of \$71 billion in the base solution.
Total surplus	The sum of consumer plus producer plus foreign surplus giving a measure of total welfare arising under the scenario. This measure is in billion dollars and is of the order of \$1.3 trillion in the base solution.
Net welfare	Same as total surplus above since in this analysis the government farm program is assumed to have been eliminated.

#### 4.1.2 Contents of Table 4 series – resource usage results

The table 7 series contains results which compare resource usage across scenarios. Two basically different types of items are tabled. The first involves the scenario description and the second gives the numerical results by resource. Table 7 gives the numerical welfare results. Table 7a gives the changes in percentage terms between each of the climate change induced scenarios and the appropriate base scenario. The base scenario used depends on the base year of the model run.



#### 4.1.2.1 Scenario description items

Six items describe the scenario

Num	gives the scenario numbers has identified in table 2
BSYR	identifies the year for which the economy is set up. This topic is further discussed under the assumed year heading in section 3.0.
GCM	identifies the underlining global circulation model from which the weather scenario arose as discussed in section 3.0.
GCMYEAR	identifies the year for which the crop simulators are run in terms of the CO2 assumption. This is further discussed in section 3.0 under GCM year section.
Oth	identifies the sensitivity analysis case being examined with the items defined as discussed in section 3.0.
Adap	Adaptation assumption being used.

#### 4.1.2.2 Scenario resource usage result items

Seven items describe the resource usage results

Irrig Land	Gives the quantity of crop land irrigated in thousands of acres . This corresponds to approximately 45 million acres in the base solution
Dry Land	Gives the quantity of crop land farmed without irrigation in thousands of acres . This corresponds to approximately 277 million acres in the base solution.
Crop Land	Gives the quantity of crop land farmed in thousands of acres and is the sum of irrigated plus dryland cropped acres. This corresponds to approximately 322 million acres in the base solution.
Pasture Land	Gives the quantity of land used for livestock pasture in thousands of acres . This corresponds to approximately 387 million acres in the base solution

Aum Grazing Gives the quantity of land usage for animal grazing which trades on an animal unit month (AUM) basis generally in the West. This corresponds to approximately 83 million AUMS in the base solution

Water use Gives the quantity of irrigation water used in thousands of acre feet. This corresponds to approximately 73 million acre feet in the base solution. This result accounts for changes in irrigation water demand by crops and changes in cropped acres.

Labor use Gives the quantity of labor used across family and hired sources in thousands of hours . This corresponds to approximately 3.7 quadrillion hours in the base solution

#### 4.1.3 Contents of Table 8 Market Prices and Quantities

Table 8 contains results which compare measures of market activity across scenarios. Two basically different types of items are tabled. The first involves the scenario description and the second gives the numerical results by market activity measure. The market activity measures are index numbers with 100 being the base. The base scenario used depends on the base year of the model run. An index number of say 109.55 means that there is 9.55 percent more of this item in the alternative scenario than in the base.

##### 4.1.3.1 Scenario description items

Six items describe the scenario and are identical discussion to those for table 7.

##### 4.1.3.2 Scenario welfare result items

Six items describe the market activity results

Crop price this is a fisher ideal price index of the market level U.S. average annual commodity price averaged across all of the crop commodities in the model. This arises across approximately 15 crop commodities.

Crop prodn this is a fisher ideal quantity index of total U.S. farm level crop production across all of the crop commodities in the model. This arises across approximately 15 crop commodities.

Crop export this is a fisher ideal quantity index of U.S. crop exports across all of the crop commodities in the model. This arises across approximately 15 crop commodities.

Crop import this is a fisher ideal quantity index of U.S. crop imports across all of the

crop commodities in the model. This arises across approximately 15 crop commodities

- Lvst price      this is a fisher ideal price index of the market level U.S. average annual commodity price averaged across all of the livestock commodities in the model. This arises across approximately 15 livestock commodities.
- Lvst prodn      this is a fisher ideal quantity index of total U.S. farm level livestock production across all of the livestock commodities in the model. This arises across approximately 15 livestock commodities.

#### 4.1.4 Contents of Table 9 - regional production results

Table 9 contains results which compare measures of regional production activity across scenarios. Two basically different types of items are tabled. The first involves the scenario description and the second gives the numerical results by regional production activity measure. The regional production activity measures are index numbers summarizing the or a measure of gross income to farming with 100 being the base. The base scenario used depends on the base year of the model run. An index number of say 104.05 means that there is 4.05 percent more value of production in the alternative scenario than in the base.

##### 4.1.4.1 Scenario description items

Six items describe the scenario and are identical to those discussed in section 4.1.2.1.

##### 4.1.4.2 Scenario regional production result items

Ten items describe the regional production results

- |         |   |
|---------|---|
| Northea | Index number for gross value of production in the Northeastern region of the United States. The states included are defined in figure 1 |
| Lakesta | Index number for gross value of production in the Lake states region of the United States. The states included are defined in figure 1  |
| Cornbel | Index number for gross value of production in the Corn Belt region of the United States. The states included are defined in figure 1    |
| Northpl | Index number for gross value of production in the northern Plains   |

	region of the United States. The states included are defined in figure 1
Appalac	Index number for gross value of production in the Appalachian region of the United States. The states included are defined in figure 1
Southea	Index number for gross value of production in the Southeastern region of the United States. The states included are defined in figure 1
Deltast	Index number for gross value of production in the Delta states region of the United States. The states included are defined in figure 1
Southpl	Index number for gross value of production in the Southern Plains region of the United States. The states included are defined in figure 1
Pacific	Index number for gross value of production in the Pacific region of the United States. The states included are defined in figure 1
Northea	Index number for gross value of production in the Northeastern United States. The states included are defined in figure 1

## 4.2 Results for the Principal Analysis

### 4.2.1 National assessment

The main analysis that can be done here concerns the effects of climate change as manifest under the principal Hadley and Canadian Climate change scenarios. The main results in terms of welfare arise from the subset of results tabled in Table 10.

1. The welfare results show that climate change is mostly beneficial for total society in terms of agricultural impacts particularly if adaptation is concerned. This differs from the results of previous scenario analysis where a mix of positive and negative results have been found.
2. Distributionally climate change is found to be largely detrimental for producers

with only a very few cases of gains observed across the whole table 6 data set. Climate changes are also found to be beneficial for foreign surplus and for consumers.

3. The main reason for results 1 and 2 can be traced back to the crop simulation results where for example the national summary shows yields are mainly increasing and irrigation water use decreasing.
4. Climate change uniformly shows increases in crop production and exports with decreases in crop prices. Livestock production and prices are mixed .
5. Regionally there is a shift. The Lake states, Mountain states and Pacific region show gains in production while the Southeast , the Delta, Southern Plains and Appalachia generally lose. Results in the Cornbelt are generally positive and the northern Plains has about 50-50 split. This is not unexpected result as many have indicated a north-south migration crop production.
6. Climate change largely causes a decrease in resource usage due to expanded productivity. In particular dryland, total crop land, pasture land, and water usage declines. There are couple scenarios with increases in irrigated acreage and a grazing. Labor use is somewhat mixed.

#### 4.2.1.1 Sensitivity Analysis

Several sensitivity studies were done on various issues. They showed that

1. Cotton treatment appears to be somewhat of a critical factor as there are substantial welfare shifts under the two alternative assumptions including one from positive to negative. See the results singled out in Table 11.
2. Factoring in farm adaptation increases the climate change benefits to total society by about a billion dollars. See the results singled out in Table 12. Producer losses are generally reduced by adaptation.
3. Factoring in climate effects in other countries does not greatly alter the climate change benefits to total society. See the results singled out in Table 13. However it does have substantial distributional assumptions with consumers gaining and producers losing.
4. Changing the base year does not alter the sign of the climate change benefits to total society. See the results singled out in Table 14. However it increases the magnitude and can alter the distribution of benefits between producers and consumers.

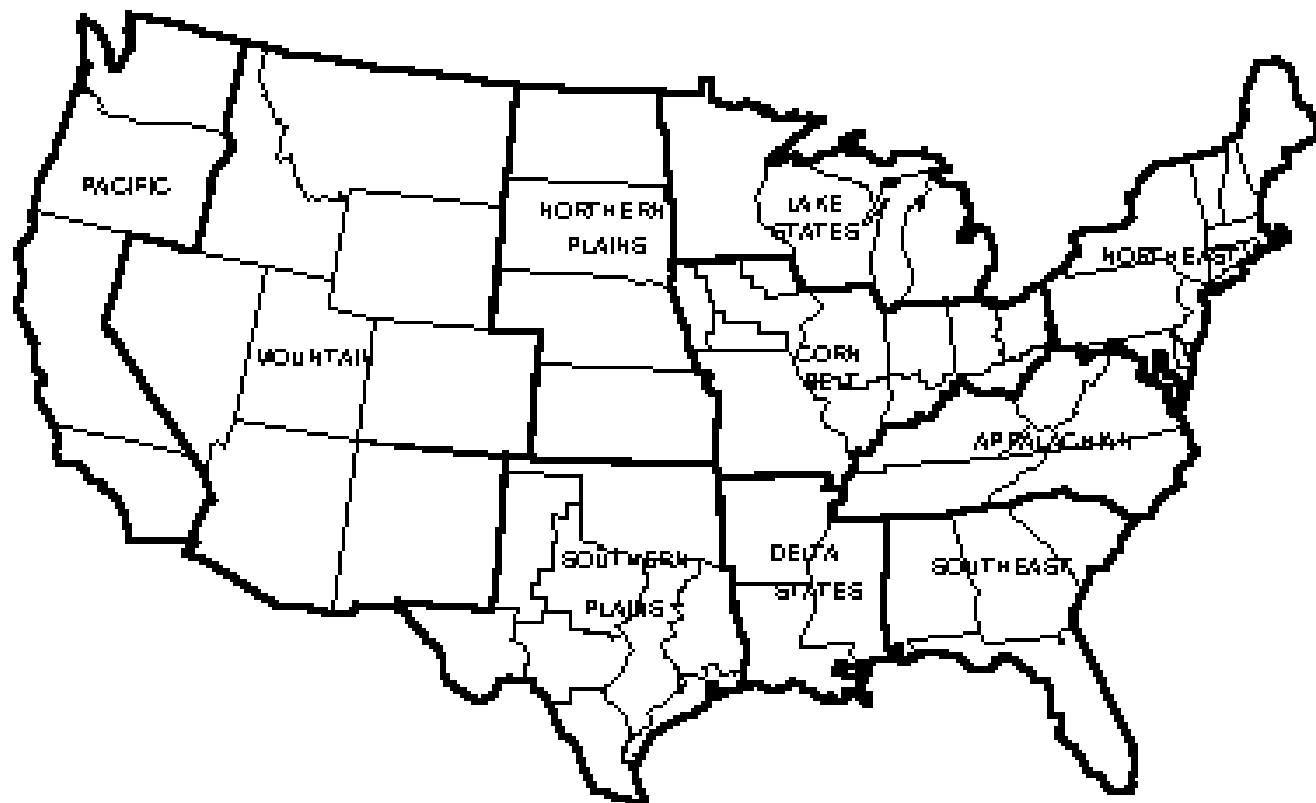
5. Factoring in the alternative crop simulation done by PNNL with EPIC does not qualitatively alter the results. See the results singled out in Table 15.
6. Factoring in pest effects reduces climate change benefits to total society. See the results singled out in Table 16

#### 4.2.2 NCAR assessment

Most of the findings from the above USNA hold for the NCAR assessment. Only additional points will be mentioned here.

1. Consideration of the variability in the Southeast has large implications. In particular the total welfare estimate is reduced by bit more than two-thirds when one does more detailed Southeast modeling than one on those the more aggregate SE modeling. Additional information in terms of regional fluctuations and the way that is pass-through to the crop simulation results do have important implications.

List of Tables and Figures  
Figure 1 Regional Map



REGIONS IN  
ASM

Table 1 National average data without Adaptation  
Data converted to percentage change from Base Conditions

Crop	Irrig Stat	neffect	cc 2030	cc 2090	hc 2030	hc 2090	csiro 2060	regcm 2060	hc-pnnl 2030	hc-pnnl 2090
cotton	DRYLAND	yld	18	96	32	82	55	59	32	82
cotton	IRRIG	yld	36	122	56	102	74	84	56	102
cotton	IRRIG	wuse	-11	107	36	60	48	48	36	60
corn	DRYLAND	yld	19	23	17	34	5	2	11	16
corn	IRRIG	yld	-1	-2	0	7	-7	-10	21	22
corn	IRRIG	wuse	-34	-54	-30	-60	-21	-12	57	38
soybeans	DRYLAND	yld	20	30	34	76	27	11	7	9
soybeans	IRRIG	yld	16	28	17	34	40	37	17	34
soybeans	IRRIG	wuse	0	3	-12	-26	24	45	-12	-26
HRSW	DRYLAND	yld	15	-4	20	30	27	28	17	24
HRSW	IRRIG	yld	-10	-18	4	6	13	8	4	6
HRSW	IRRIG	wuse	-28	-22	-17	-21	-19	-28	-17	-21
HRWW	DRYLAND	yld	-16	-1	21	55	35	69	24	41
HRWW	IRRIG	yld	-4	-6	5	13	-1	1	5	13
HRWW	IRRIG	wuse	5	-9	-8	-29	-18	-33	-8	-29
SOFT	DRYLAND	yld	-5	3	8	20	-10	-10	58	68
SOFT	IRRIG	yld	-6	-5	3	9	-13	-13	3	9
SOFT	IRRIG	wuse	5	-29	-12	-44	-48	-45	-12	-44
DURW	DRYLAND	yld	15	-5	21	30	26	37	10	18
DURW	IRRIG	yld	-10	-21	5	6	12	10	5	6
DURW	IRRIG	wuse	-28	-15	-18	-21	-15	-30	-18	-21
sorghum	DRYLAND	yld	17	21	15	70	26	60	15	70
sorghum	IRRIG	yld	-1	-16	1	-2	20	29	1	-2
sorghum	IRRIG	wuse	-7	-23	-9	-35	0	-5	-9	-35
rice	DRYLAND	yld	-2	-8	3	10	-12	-12	3	10
rice	IRRIG	yld	-2	-8	3	10	-12	-12	3	10
rice	IRRIG	wuse	-10	37	-2	-4	15	26	-2	-4
barley	DRYLAND	yld	56	25	83	132	163	144	70	124
barley	IRRIG	yld	-40	-71	8	15	42	24	8	15
barley	IRRIG	wuse	-98	-90	-61	-85	-100	-112	-61	-85
oats	DRYLAND	yld	23	-2	54	101	57	57	158	182
oats	IRRIG	yld	-17	-31	12	28	20	0	12	28
oats	IRRIG	wuse	-57	-73	-47	-80	-122	-132	-47	-80



Table 1 National average data without Adaptation Data (continued)

Crop	Irrig Stat	neffect	cc	cc	hc	hc	csiro	regcm	hc-pnnl	hc-pnnl
			2030	2090	2030	2090	2060	2060	2030	2090
silage	DRYLAND	yld	17	18	15	32	11	13	11	24
silage	IRRIG	yld	1	0	1	9	1	0	26	30
silage	IRRIG	wuse	-35	-50	-33	-63	-23	-15	69	57
hay	DRYLAND	yld	-10	-1	2	15	24	24	43	57
hay	IRRIG	yld	3	2	23	24	30	30	37	40
hay	IRRIG	wuse	2	26	-29	-36	10	10	44	44
SUGARCANE	DRYLAND	yld	-5	-5	0	8	-16	-14	0	8
SUGARCANE	IRRIG	yld	-5	-5	0	8	-16	-14	0	8
SUGARCANE	IRRIG	wuse	-23	3	-8	-1	12	6	-8	-1
SUGARBEET	DRYLAND	yld	7	11	9	24	31	31	30	45
SUGARBEET	IRRIG	yld	22	23	39	42	53	53	41	44
SUGARBEET	IRRIG	wuse	-12	40	-28	-28	21	21	51	61
POTATOES	DRYLAND	yld	7	-25	6	-3	-4	-4	6	-3
POTATOES	IRRIG	yld	-6	-28	-3	-13	-13	-13	-3	-13
POTATOES	IRRIG	wuse	-5	7	-1	4	1	1	-1	4
tomatofrsh	DRYLAND	yld	10	540	23	404	244	244	23	404
tomatofrsh	IRRIG	yld	-9	-21	1	-4	-8	-8	1	-4
tomatofrsh	IRRIG	wuse	-9	14	-5	5	1	1	-5	5
tomatoproc	DRYLAND	yld	35	1693	55	1232	754	754	55	1232
tomatoproc	IRRIG	yld	-16	-6	-6	-14	-11	-11	-6	-14
tomatoproc	IRRIG	wuse	-3	-6	-4	-4	-4	-4	-4	-4
orangefrsh	DRYLAND	yld	32	91	40	69	58	58	40	69
orangefrsh	IRRIG	yld	32	91	40	69	58	58	40	69
orangefrsh	IRRIG	wuse	-21	94	-6	-6	15	15	-6	-6
orangeproc	DRYLAND	yld	13	120	28	49	52	52	28	49
orangeproc	IRRIG	yld	13	120	28	49	52	52	28	49
orangeproc	IRRIG	wuse	0	438	11	24	118	118	11	24
grpfrtfrsh	DRYLAND	yld	21	101	33	60	54	54	33	60
grpfrtfrsh	IRRIG	yld	21	101	33	60	54	54	33	60
grpfrtfrsh	IRRIG	wuse	-1	324	8	21	88	88	8	21
grpfrtproc	DRYLAND	yld	15	112	29	53	52	52	29	53
grpfrtproc	IRRIG	yld	15	112	29	53	52	52	29	53
grpfrtproc	IRRIG	wuse	1	401	11	24	109	109	11	24
PASTURE	DRYLAND	yld	3	20	22	38	21	21	22	38

Table 2 National average data with Adaptation  
Data converted to percentage change from Base Conditions

Crop	Irrig Stat	neffect	cc		hc		csiro	regcm	hc-pnml	hc-pnml
			2030	2090	2030	2090	2060	2060	2030	2090
cotton	DRYLAND	yld	18	96	32	82	55	59	32	82
cotton	IRRIG	yld	36	122	56	102	74	84	56	102
cotton	IRRIG	wuse	-11	107	36	60	48	48	36	60
corn	DRYLAND	yld	20	24	17	34	5	2	11	16
corn	IRRIG	yld	1	0	1	9	-7	-10	21	22
corn	IRRIG	wuse	-33	-55	-32	-60	-21	-12	57	38
soybeans	DRYLAND	yld	39	64	49	97	27	11	7	9
soybeans	IRRIG	yld	23	33	23	40	40	37	23	40
soybeans	IRRIG	wuse	18	12	0	-20	24	45	0	-20
HRSW	DRYLAND	yld	20	14	23	36	27	28	17	24
HRSW	IRRIG	yld	-1	-6	7	10	13	8	7	10
HRSW	IRRIG	wuse	-12	-15	-12	-15	-19	-28	-12	-15
HRWW	DRYLAND	yld	-9	13	23	59	35	69	24	41
HRWW	IRRIG	yld	-1	0	8	16	-1	1	8	16
HRWW	IRRIG	wuse	9	-3	-6	-25	-18	-33	-6	-25
SOFT	DRYLAND	yld	-3	4	9	21	-10	-10	58	68
SOFT	IRRIG	yld	-5	-3	5	11	-13	-13	5	11
SOFT	IRRIG	wuse	5	-24	-10	-45	-48	-45	-10	-45
DURW	DRYLAND	yld	18	12	22	33	26	37	10	18
DURW	IRRIG	yld	2	-4	9	10	12	10	9	10
DURW	IRRIG	wuse	-3	-5	-9	-12	-15	-30	-9	-12
sorghum	DRYLAND	yld	43	87	32	96	26	60	32	96
sorghum	IRRIG	yld	22	8	22	21	20	29	22	21
sorghum	IRRIG	wuse	3	-19	2	-27	0	-5	2	-27
rice	DRYLAND	yld	7	4	9	18	-12	-12	9	18
rice	IRRIG	yld	7	4	9	18	-12	-12	9	18
rice	IRRIG	wuse	2	48	5	8	15	26	5	8
barley	DRYLAND	yld	96	133	105	197	163	144	70	124
barley	IRRIG	yld	3	-16	28	40	42	24	28	40
barley	IRRIG	wuse	-40	-57	-41	-61	-100	-112	-41	-61
oats	DRYLAND	yld	33	24	57	106	57	57	158	182
oats	IRRIG	yld	-6	-15	17	33	20	0	17	33
oats	IRRIG	wuse	-37	-60	-38	-68	-122	-132	-38	-68
silage	DRYLAND	yld	18	20	16	32	11	13	11	24
silage	IRRIG	yld	3	3	2	10	1	0	26	30
silage	IRRIG	wuse	-35	-52	-35	-62	-23	-15	69	57

Table 2 National average data with Adaptation Data (continued)

Crop	Irrig Stat	neffect	cc	cc	hc	hc	csiro	regcm	hc-pnnl	hc-pnnl
			2030	2090	2030	2090	2060	2060	2030	2090
hay	DRYLAND	yld	-10	-1	2	15	24	24	43	57
hay	IRRIG	yld	3	2	23	24	30	30	37	40
hay	IRRIG	wuse	2	26	-29	-36	10	10	44	44
SUGARCANE	DRYLAND	yld	6	7	7	16	-16	-14	7	16
SUGARCANE	IRRIG	yld	6	7	7	16	-16	-14	7	16
SUGARCANE	IRRIG	wuse	-19	-11	-6	7	12	6	-6	7
SUGARBEET	DRYLAND	yld	7	11	9	24	31	31	30	45
SUGARBEET	IRRIG	yld	22	23	39	42	53	53	41	44
SUGARBEET	IRRIG	wuse	-12	40	-28	-28	21	21	51	61
POTATOES	DRYLAND	yld	8	-20	7	1	-1	-1	7	1
POTATOES	IRRIG	yld	-4	-21	-1	-8	-8	-8	-1	-8
POTATOES	IRRIG	wuse	-3	10	0	7	4	4	0	7
tomatofrsh	DRYLAND	yld	473	3606	410	1327	1454	1454	410	1327
tomatofrsh	IRRIG	yld	1	6	10	13	8	8	10	13
tomatofrsh	IRRIG	wuse	-8	6	2	13	3	3	2	13
tomatoproc	DRYLAND	yld	1437	10977	1223	4015	4413	4413	1223	4015
tomatoproc	IRRIG	yld	10	44	10	17	20	20	10	17
tomatoproc	IRRIG	wuse	3	-14	-3	-6	-5	-5	-3	-6
orangefrsh	DRYLAND	yld	32	91	40	69	58	58	40	69
orangefrsh	IRRIG	yld	32	91	40	69	58	58	40	69
orangefrsh	IRRIG	wuse	-21	94	-6	-6	15	15	-6	-6
orangeproc	DRYLAND	yld	13	120	28	49	52	52	28	49
orangeproc	IRRIG	yld	13	120	28	49	52	52	28	49
orangeproc	IRRIG	wuse	0	438	11	24	118	118	11	24
grpfrtfrsh	DRYLAND	yld	21	101	33	60	54	54	33	60
grpfrtfrsh	IRRIG	yld	21	101	33	60	54	54	33	60
grpfrtfrsh	IRRIG	wuse	-1	324	8	21	88	88	8	21
grpfrtproc	DRYLAND	yld	15	112	29	53	52	52	29	53
grpfrtproc	IRRIG	yld	15	112	29	53	52	52	29	53
grpfrtproc	IRRIG	wuse	1	401	11	24	109	109	11	24
PASTURE	DRYLAND	yld	3	20	22	38	21	21	22	38

Table 3 Regional Production Changes from SWOPSIM for GISS Scenario

Region	GISS, %				
	Wheat	Coarse Grains	Rice	Other Crops	Secondary
Canada	20	17.2	2.2	20.3	1.4
EC&Western Europe	-0.7	3.1	4.5	12	0.7
FSU	23	12	13.2	17.6	0.1
Eastern Europe	6.8	1.3	1.3	13.7	0.1
Australia&NZ	-11.6	10.7	17.1	8.2	0.4
China&Taiwan&S. Korea	14.9	0.1	1.1	15.6	-0.1
Other East Asia	-21	-32.9	-5.7	-15.6	0.4
India	-4.4	-13.9	-2.2	-6.1	0.8
Argentina	-25.8	8.5	9.8	6	0.4
Brazil	-35.2	-10.3	-11.8	-0.5	0.2
Mexico	-34.9	-34.8	-18	-19.9	0.2
Japan	-1.9	22.2	11.4	11.2	0.4
Africa (all) & MiddleEast	-19	-24	3.2	-5.3	1.9
Latin America other than Brazil/mexico/Argentina	-29.1	-10.6	-9.7	-18.6	0.1

Table 4 Regional Production Changes from SWOPSIM for UKMO Scenario

Region	UKMO, %				
	Wheat	Coarse Grains	Rice	Other Crops	Secondary
Canada	4.5	-6.6	6	-7.5	-2
EC&Western Europe	11	9.8	13.5	11.6	-1.4
FSU	-8.1	-6	-7.4	-1.4	-0.3
Eastern Europe	1.5	3	3.1	11.2	-0.3
Australia&NZ	46.2	19.8	28	27	-0.3
China&Taiwan&S. Korea	0.9	0.7	2.6	12.9	0.5
Other East Asia	-15	-30	-15.7	-10.2	-0.8
India	-19.8	-36	-17.1	-25.6	-1.2
Argentina	-7.6	-0.6	18.7	17.5	0
Brazil	-28.4	-13.7	-18.6	-7	-0.6
Mexico	-27.2	-33.8	-24.1	-16.1	-0.2
Japan	1.6	17.3	8.5	10.4	-1.7
Africa (all) & MiddleEast	-12.8	-25.3	8.7	-8	-1.6
Latin America other than Brazil/mexico/Argentina	-28.7	-17.6	-15.5	-25.2	0.1

Table 5 Scenarios Analyzed

Scenario Number	Assumed Year	GCM	GCM Year	Other	Farm Adaptation
1	2000	BASE	2000	BASE	None
2	2030	BASE	2000	BASE	None
3	2090	BASE	2000	BASE	None
4	2000	cc	2030	BASE	None
5	2000	cc	2090	BASE	None
6	2030	cc	2030	BASE	None
7	2090	cc	2090	BASE	None
8	2000	hc	2030	BASE	None
9	2000	hc	2090	BASE	None
10	2030	hc	2030	BASE	None
11	2090	hc	2090	BASE	None
12	2000	csiro	2060	BASE	None
13	2000	regcm	2060	BASE	None
14	2000	hc-pnnl	2030	BASE	None
15	2000	hc-pnnl	2090	BASE	None
16	2000	cc	2030	BASE	Yes
17	2000	cc	2090	BASE	Yes
18	2000	hc	2030	BASE	Yes
19	2000	hc	2090	BASE	Yes
20	2000	cc	2030	giss	None
21	2000	cc	2090	giss	None
22	2000	hc	2030	giss	None
23	2000	hc	2090	giss	None
24	2000	cc	2030	Ukmo	None
25	2000	cc	2090	Ukmo	None
26	2000	hc	2030	Ukmo	None
27	2000	hc	2090	Ukmo	None
28	2000	cc	2030	darwin	None
29	2000	cc	2090	darwin	None
30	2000	hc	2030	darwin	None
31	2000	hc	2090	darwin	None
32	2000	cc	2030	diffcot	None
33	2000	cc	2090	diffcot	None
34	2000	hc	2030	diffcot	None
35	2000	hc	2090	diffcot	None
36	2000	cc	2030	pest	None
37	2000	cc	2090	pest	None
38	2000	hc	2030	pest	None
39	2000	hc	2090	pest	None
40	2000	cc	2030	pest	Yes
41	2000	cc	2090	pest	Yes
42	2000	hc	2030	pest	Yes
43	2000	hc	2090	pest	Yes

Table 6 Welfare Results in billion \$

--	Scenario	Description	--			Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	BASE	2000	BASE	N	1156.6	31.2	70.9	1258.7045
2	2030	BASE	2000	BASE	N	1637.6	48.2	126.8	1812.6076
3	2090	BASE	2000	BASE	N	3102.5	117.2	302.8	3522.4977
4	2000	cc	2030	BASE	N	1159.4	26.9	71.8	1258.1007
5	2000	cc	2090	BASE	N	1161.0	26.6	72.1	1259.7694
6	2030	cc	2030	BASE	N	1638.8	48.5	127.4	1814.6451
7	2090	cc	2090	BASE	N	3161.5	115.7	306.4	3583.5386
8	2000	hc	2030	BASE	N	1166.0	27.5	71.5	1265.0772
9	2000	hc	2090	BASE	N	1167.9	30.4	71.9	1270.2462
10	2030	hc	2030	BASE	N	1649.1	50.3	127.4	1826.7237
11	2090	hc	2090	BASE	N	3217.0	118.3	305.6	3641.0135
12	2000	csiro	2060	BASE	N	1167.3	25.4	71.4	1264.0383
13	2000	regcm	2060	BASE	N	1166.1	24.5	71.5	1262.0494
14	2000	hc-pnn	2030	BASE	N	1167.8	27.9	71.2	1266.9049
15	2000	hc-pnn	2090	BASE	N	1170.5	27.2	71.6	1269.3374
16	2000	cc	2030	BASE	Y	1161.5	26.1	71.9	1259.5014
17	2000	cc	2090	BASE	Y	1162.6	27.4	72.2	1262.2525
18	2000	hc	2030	BASE	Y	1166.7	28.0	71.6	1266.2004
19	2000	hc	2090	BASE	Y	1168.7	30.9	72.0	1271.6686
20	2000	cc	2030	giss	N	1158.8	27.5	71.8	1257.9855
21	2000	cc	2090	giss	N	1160.8	26.9	72.1	1259.7161
22	2000	hc	2030	giss	N	1165.9	27.7	71.5	1265.1329
23	2000	hc	2090	giss	N	1167.9	30.4	71.9	1270.2856
24	2000	cc	2030	Ukmo	N	1159.4	27.0	71.8	1258.1229
25	2000	cc	2090	Ukmo	N	1161.0	26.6	72.1	1259.7695
26	2000	hc	2030	Ukmo	N	1166.0	27.5	71.5	1265.0616
27	2000	hc	2090	Ukmo	N	1167.9	30.4	71.9	1270.2460
28	2000	cc	2030	darwi	N	1161.5	24.8	71.8	1258.0985
29	2000	cc	2090	darwi	N	1161.7	25.6	72.1	1259.4072
30	2000	hc	2030	darwi	N	1167.6	25.9	71.5	1265.0359
31	2000	hc	2090	darwi	N	1168.4	29.7	71.9	1269.9993
32	2000	cc	2030	diffc	N	1159.0	26.8	71.5	1257.3935
33	2000	cc	2090	diffc	N	1159.7	26.7	71.4	1257.7945
34	2000	hc	2030	diffc	N	1165.6	27.6	71.3	1264.4119
35	2000	hc	2090	diffc	N	1167.8	31.0	71.6	1270.4821
36	2000	cc	2030	pest	N	1159.4	26.9	71.8	1258.0531
37	2000	cc	2090	pest	N	1161.0	26.4	72.1	1259.5580
38	2000	hc	2030	pest	N	1166.0	27.5	71.5	1264.9970
39	2000	hc	2090	pest	N	1168.1	30.1	71.9	1270.0535
40	2000	cc	2030	pest	Y	1161.4	26.0	71.9	1259.3975
41	2000	cc	2090	pest	Y	1162.5	27.3	72.2	1262.0295
42	2000	hc	2030	pest	Y	1166.6	28.0	71.5	1266.1395
43	2000	hc	2090	pest	Y	1168.8	30.8	72.0	1271.5192

Table 6a Changes in Welfare Results in billion \$

-- Scenario Description --						Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	BASE	2000	BASE	N	0.000	0.000	0.000	0.000
2	2030	BASE	2000	BASE	N	0.000	0.000	0.000	0.000
3	2090	BASE	2000	BASE	N	0.000	0.000	0.000	0.000
4	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
5	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
6	2030	cc	2030	BASE	N	1.181	0.280	0.576	2.037
7	2090	cc	2090	BASE	N	58.980	-1.508	3.569	61.041
8	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
9	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
10	2030	hc	2030	BASE	N	11.502	2.097	0.517	14.116
11	2090	hc	2090	BASE	N	114.546	1.188	2.782	118.516
12	2000	csiro	2060	BASE	N	10.660	-5.808	0.482	5.334
13	2000	regcm	2060	BASE	N	9.535	-6.707	0.517	3.345
14	2000	hc-pnn	2030	BASE	N	11.202	-3.278	0.277	8.200
15	2000	hc-pnn	2090	BASE	N	13.940	-3.993	0.686	10.633
16	2000	cc	2030	BASE	Y	4.880	-5.077	0.994	0.797
17	2000	cc	2090	BASE	Y	6.019	-3.746	1.275	3.548
18	2000	hc	2030	BASE	Y	10.060	-3.169	0.604	7.496
19	2000	hc	2090	BASE	Y	12.140	-0.218	1.043	12.964
20	2000	cc	2030	giss	N	2.162	-3.690	0.808	-0.719
21	2000	cc	2090	giss	N	4.157	-4.306	1.160	1.012
22	2000	hc	2030	giss	N	9.285	-3.429	0.572	6.428
23	2000	hc	2090	giss	N	11.341	-0.750	0.990	11.581
24	2000	cc	2030	Ukmo	N	2.819	-4.208	0.807	-0.582
25	2000	cc	2090	Ukmo	N	4.452	-4.531	1.144	1.065
26	2000	hc	2030	Ukmo	N	9.416	-3.629	0.570	6.357
27	2000	hc	2090	Ukmo	N	11.351	-0.796	0.987	11.541
28	2000	cc	2030	darwi	N	4.951	-6.390	0.834	-0.606
29	2000	cc	2090	darwi	N	5.146	-5.549	1.107	0.703
30	2000	hc	2030	darwi	N	11.034	-5.231	0.529	6.331
31	2000	hc	2090	darwi	N	11.784	-1.459	0.969	11.295
32	2000	cc	2030	diffc	N	2.410	-4.313	0.592	-1.311
33	2000	cc	2090	diffc	N	3.133	-4.470	0.427	-0.910
34	2000	hc	2030	diffc	N	8.983	-3.588	0.312	5.707
35	2000	hc	2090	diffc	N	11.205	-0.124	0.696	11.778
36	2000	cc	2030	pest	N	2.765	-4.220	0.803	-0.651
37	2000	cc	2090	pest	N	4.449	-4.729	1.134	0.853
38	2000	hc	2030	pest	N	9.392	-3.669	0.569	6.292
39	2000	hc	2090	pest	N	11.484	-1.111	0.976	11.349
40	2000	cc	2030	pest	Y	4.847	-5.147	0.993	0.693
41	2000	cc	2090	pest	Y	5.921	-3.860	1.264	3.325
42	2000	hc	2030	pest	Y	10.036	-3.201	0.600	7.435
43	2000	hc	2090	pest	Y	12.171	-0.385	1.029	12.815

Table 6b Percentage Changes in Welfare Results

-- Scenario Description --						Consumer	Producer	Foreign	Total	Net
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus	Welfare
1	2000	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00
2	2030	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00
3	2090	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00
4	2000	cc	2030	BASE	N	0.24	-13.57	1.14	-0.05	-0.05
5	2000	cc	2090	BASE	N	0.38	-14.54	1.61	0.08	0.08
6	2030	cc	2030	BASE	N	0.07	0.58	0.45	0.11	0.11
7	2090	cc	2090	BASE	N	1.90	-1.29	1.18	1.73	1.73
8	2000	hc	2030	BASE	N	0.81	-11.60	0.80	0.51	0.51
9	2000	hc	2090	BASE	N	0.98	-2.55	1.39	0.92	0.92
10	2030	hc	2030	BASE	N	0.70	4.35	0.41	0.78	0.78
11	2090	hc	2090	BASE	N	3.69	1.01	0.92	3.36	3.36
12	2000	csiro	2060	BASE	N	0.92	-18.64	0.68	0.42	0.42
13	2000	regcm	2060	BASE	N	0.82	-21.52	0.73	0.27	0.27
14	2000	hc-pnn	2030	BASE	N	0.97	-10.52	0.39	0.65	0.65
15	2000	hc-pnn	2090	BASE	N	1.21	-12.81	0.97	0.84	0.84
16	2000	cc	2030	BASE	Y	0.42	-16.29	1.40	0.06	0.06
17	2000	cc	2090	BASE	Y	0.52	-12.02	1.80	0.28	0.28
18	2000	hc	2030	BASE	Y	0.87	-10.17	0.85	0.60	0.60
19	2000	hc	2090	BASE	Y	1.05	-0.70	1.47	1.03	1.03
20	2000	cc	2030	giss	N	0.19	-11.84	1.14	-0.06	-0.06
21	2000	cc	2090	giss	N	0.36	-13.82	1.64	0.08	0.08
22	2000	hc	2030	giss	N	0.80	-11.00	0.81	0.51	0.51
23	2000	hc	2090	giss	N	0.98	-2.41	1.39	0.92	0.92
24	2000	cc	2030	Ukmo	N	0.24	-13.50	1.14	-0.05	-0.05
25	2000	cc	2090	Ukmo	N	0.38	-14.54	1.61	0.08	0.08
26	2000	hc	2030	Ukmo	N	0.81	-11.64	0.80	0.51	0.51
27	2000	hc	2090	Ukmo	N	0.98	-2.55	1.39	0.92	0.92
28	2000	cc	2030	darwi	N	0.43	-20.51	1.17	-0.05	-0.05
29	2000	cc	2090	darwi	N	0.44	-17.81	1.56	0.06	0.06
30	2000	hc	2030	darwi	N	0.95	-16.79	0.75	0.50	0.50
31	2000	hc	2090	darwi	N	1.02	-4.68	1.37	0.90	0.90
32	2000	cc	2030	difffc	N	0.21	-13.84	0.83	-0.10	-0.10
33	2000	cc	2090	difffc	N	0.27	-14.34	0.60	-0.07	-0.07
34	2000	hc	2030	difffc	N	0.78	-11.51	0.44	0.45	0.45
35	2000	hc	2090	difffc	N	0.97	-0.40	0.98	0.94	0.94
36	2000	cc	2030	pest	N	0.24	-13.54	1.13	-0.05	-0.05
37	2000	cc	2090	pest	N	0.38	-15.18	1.60	0.07	0.07
38	2000	hc	2030	pest	N	0.81	-11.77	0.80	0.50	0.50
39	2000	hc	2090	pest	N	0.99	-3.57	1.38	0.90	0.90
40	2000	cc	2030	pest	Y	0.42	-16.52	1.40	0.06	0.06
41	2000	cc	2090	pest	Y	0.51	-12.39	1.78	0.26	0.26
42	2000	hc	2030	pest	Y	0.87	-10.27	0.85	0.59	0.59
43	2000	hc	2090	pest	Y	1.05	-1.24	1.45	1.02	1.02



Table 7 Resource Usage

-- Scenario Description --						Irrig	Dry	Crop	Pasture	Aum	Water	Labor
Num	BSYR	GCM	GCMYR	Oth	Adap	Land	Land	Land	Land	Grazing	Use	Use
1	2000	BASE	2000	BASE	N	46040	275960	322000	382811	82577	74317	3763615
2	2030	BASE	2000	BASE	N	66319	273604	339923	363014	77238	93587	3903177
3	2090	BASE	2000	BASE	N	71984	287243	359227	339654	68215	95857	3404059
4	2000	cc	2030	BASE	N	47843	247542	295385	323269	71213	69535	3691466
5	2000	cc	2090	BASE	N	26920	259906	286826	310170	72459	56103	3697609
6	2030	cc	2030	BASE	N	64801	267648	332450	326655	72721	89923	3943919
7	2090	cc	2090	BASE	N	45740	303155	348895	313439	71636	69373	3386295
8	2000	hc	2030	BASE	N	43806	253929	297735	331739	87947	67549	3841511
9	2000	hc	2090	BASE	N	27845	275502	303347	321241	92575	43944	3931353
10	2030	hc	2030	BASE	N	65522	268915	334437	351075	92716	85905	4181687
11	2090	hc	2090	BASE	N	70471	299004	369475	291216	81493	70884	3781312
12	2000	csiro	2060	BASE	N	28662	260132	288795	311182	81185	53796	3775993
13	2000	regcm	2060	BASE	N	28039	251227	279266	311838	81040	53483	3714075
14	2000	hc-pnn	2030	BASE	N	35179	260558	295737	336188	88839	61987	3806631
15	2000	hc-pnn	2090	BASE	N	34978	241685	276663	318673	92442	61269	3883419
16	2000	cc	2030	BASE	Y	44713	244862	289575	324872	71581	70763	3680390
17	2000	cc	2090	BASE	Y	22763	274615	297378	310915	72652	49921	3742109
18	2000	hc	2030	BASE	Y	41239	260364	301603	329997	87492	65607	3841450
19	2000	hc	2090	BASE	Y	28184	277025	305209	323263	93049	46333	3937976
20	2000	cc	2030	giss	N	48170	252779	300949	321595	71037	68966	3700861
21	2000	cc	2090	giss	N	26744	261234	287978	309140	72224	55673	3696499
22	2000	hc	2030	giss	N	43611	256260	299870	330695	87616	67437	3844696
23	2000	hc	2090	giss	N	28360	276811	305170	319028	92025	44992	3930646
24	2000	cc	2030	Ukmo	N	47843	247542	295385	323269	71213	69530	3691466
25	2000	cc	2090	Ukmo	N	26920	259906	286826	310170	72459	56098	3697609
26	2000	hc	2030	Ukmo	N	43806	253929	297735	331739	87947	67505	3841511
27	2000	hc	2090	Ukmo	N	27845	275502	303347	321241	92575	43944	3931353
28	2000	cc	2030	darwi	N	46545	235476	282021	323662	71360	68249	3656605
29	2000	cc	2090	darwi	N	24143	251912	276056	312792	73080	51765	3680865
30	2000	hc	2030	darwi	N	39390	245560	284950	330945	87713	61545	3812812
31	2000	hc	2090	darwi	N	27195	270391	297585	323553	93121	42360	3912709
32	2000	cc	2030	diffc	N	47612	247948	295560	322593	70968	71828	3690252
33	2000	cc	2090	diffc	N	25538	262071	287609	309216	72481	47477	3698851
34	2000	hc	2030	diffc	N	33734	267153	300888	332800	88189	55847	3833250
35	2000	hc	2090	diffc	N	25500	279598	305098	320374	92364	36888	3927865
36	2000	cc	2030	pest	N	47759	247673	295432	323210	71197	69397	3691047
37	2000	cc	2090	pest	N	26894	259186	286079	310426	72510	56046	3696579
38	2000	hc	2030	pest	N	43749	253863	297612	331893	87995	67478	3840808
39	2000	hc	2090	pest	N	27683	274609	302292	320575	92406	43789	3925795
40	2000	cc	2030	pest	Y	44476	244998	289474	325446	71670	70513	3681164
41	2000	cc	2090	pest	Y	22686	274022	296708	311262	72740	49599	3739942
42	2000	hc	2030	pest	Y	41144	260080	301224	329935	87482	65484	3837831
43	2000	hc	2090	pest	Y	28116	276651	304767	322464	92858	46178	3935150

Table 7a Percentage change in Resource Usage

-----	Scenario	Description	-----			Irrig	Dry	Crop	Pasture	Aum	Water	Labor
Num	BSYR	GCM	GCMYR	Oth	Adap	Land	Land	Land	Land	Grazing	Use	Use
1	2000	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2030	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	2090	BASE	2000	BASE	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	2000	cc	2030	BASE	N	3.92	-10.30	-8.27	-15.55	-13.76	-6.43	-1.92
5	2000	cc	2090	BASE	N	-41.53	-5.82	-10.92	-18.98	-12.25	-24.51	-1.75
6	2030	cc	2030	BASE	N	-2.29	-2.18	-2.20	-10.02	-5.85	-3.91	1.04
7	2090	cc	2090	BASE	N	-36.46	5.54	-2.88	-7.72	5.01	-27.63	-0.52
8	2000	hc	2030	BASE	N	-4.85	-7.98	-7.54	-13.34	6.50	-9.11	2.07
9	2000	hc	2090	BASE	N	-39.52	-0.17	-5.79	-16.08	12.11	-40.87	4.46
10	2030	hc	2030	BASE	N	-1.20	-1.71	-1.61	-3.29	20.04	-8.21	7.14
11	2090	hc	2090	BASE	N	-2.10	4.09	2.85	-14.26	19.46	-26.05	11.08
12	2000	csiro	2060	BASE	N	-37.75	-5.74	-10.31	-18.71	-1.69	-27.61	0.33
13	2000	regcm	2060	BASE	N	-39.10	-8.96	-13.27	-18.54	-1.86	-28.03	-1.32
14	2000	hc-pnn	2030	BASE	N	-23.59	-5.58	-8.16	-12.18	7.58	-16.59	1.14
15	2000	hc-pnn	2090	BASE	N	-24.03	-12.42	-14.08	-16.75	11.95	-17.56	3.18
16	2000	cc	2030	BASE	Y	-2.88	-11.27	-10.07	-15.14	-13.32	-4.78	-2.21
17	2000	cc	2090	BASE	Y	-50.56	-0.49	-7.65	-18.78	-12.02	-32.83	-0.57
18	2000	hc	2030	BASE	Y	-10.43	-5.65	-6.33	-13.80	5.95	-11.72	2.07
19	2000	hc	2090	BASE	Y	-38.78	0.39	-5.21	-15.56	12.68	-37.65	4.63
20	2000	cc	2030	giss	N	4.63	-8.40	-6.54	-15.99	-13.98	-7.20	-1.67
21	2000	cc	2090	giss	N	-41.91	-5.34	-10.57	-19.24	-12.54	-25.09	-1.78
22	2000	hc	2030	giss	N	-5.28	-7.14	-6.87	-13.61	6.10	-9.26	2.15
23	2000	hc	2090	giss	N	-38.40	0.31	-5.23	-16.66	11.44	-39.46	4.44
24	2000	cc	2030	Ukmo	N	3.92	-10.30	-8.27	-15.55	-13.76	-6.44	-1.92
25	2000	cc	2090	Ukmo	N	-41.53	-5.82	-10.92	-18.98	-12.25	-24.52	-1.75
26	2000	hc	2030	Ukmo	N	-4.85	-7.98	-7.54	-13.34	6.50	-9.17	2.07
27	2000	hc	2090	Ukmo	N	-39.52	-0.17	-5.79	-16.08	12.11	-40.87	4.46
28	2000	cc	2030	darw	N	1.09	-14.67	-12.42	-15.45	-13.58	-8.16	-2.84
29	2000	cc	2090	darw	N	-47.56	-8.71	-14.27	-18.29	-11.50	-30.35	-2.20
30	2000	hc	2030	darw	N	-14.44	-11.02	-11.51	-13.55	6.22	-17.19	1.31
31	2000	hc	2090	darw	N	-40.93	-2.02	-7.58	-15.48	12.77	-43.00	3.96
32	2000	cc	2030	diff	N	3.41	-10.15	-8.21	-15.73	-14.06	-3.35	-1.95
33	2000	cc	2090	diff	N	-44.53	-5.03	-10.68	-19.22	-12.23	-36.12	-1.72
34	2000	hc	2030	diff	N	-26.73	-3.19	-6.56	-13.06	6.80	-24.85	1.85
35	2000	hc	2090	diff	N	-44.61	1.32	-5.25	-16.31	11.85	-50.36	4.36
36	2000	cc	2030	pest	N	3.73	-10.25	-8.25	-15.57	-13.78	-6.62	-1.93
37	2000	cc	2090	pest	N	-41.59	-6.08	-11.16	-18.91	-12.19	-24.59	-1.78
38	2000	hc	2030	pest	N	-4.98	-8.01	-7.57	-13.30	6.56	-9.20	2.05
39	2000	hc	2090	pest	N	-39.87	-0.49	-6.12	-16.26	11.90	-41.08	4.31
40	2000	cc	2030	pest	Y	-3.40	-11.22	-10.10	-14.99	-13.21	-5.12	-2.19
41	2000	cc	2090	pest	Y	-50.73	-0.70	-7.85	-18.69	-11.91	-33.26	-0.63
42	2000	hc	2030	pest	Y	-10.64	-5.75	-6.45	-13.81	5.94	-11.89	1.97
43	2000	hc	2090	pest	Y	-38.93	0.25	-5.35	-15.76	12.45	-37.86	4.56

Table 8 National Index Numbers

---- Scenario Description ----							Crop	Crop	Crop	Crop	Lvst	Lvst	Lvst	Lvst
Num	Yr	BSYR	GCM	GCMyr	Oth	Adap	Price	Prodn	Export	Import	Price	Prodn	Export	Import
1	2000	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2	2030	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
3	2090	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
4	2000	cc	2030	BASE	N		87.52	108.25	121.97	99.66	102.05	97.10	100.00	100.00
5	2000	cc	2090	BASE	N		84.12	114.67	148.41	105.39	99.10	97.95	100.00	100.00
6	2030	cc	2030	BASE	N		94.27	114.73	132.51	94.37	104.67	101.93	100.00	99.92
7	2090	cc	2090	BASE	N		87.51	123.64	147.47	99.00	95.22	105.81	100.07	100.00
8	2000	hc	2030	BASE	N		81.60	110.92	127.17	91.03	93.74	102.82	100.00	100.00
9	2000	hc	2090	BASE	N		76.60	139.71	253.89	93.91	91.69	105.21	100.00	100.00
10	2030	hc	2030	BASE	N		89.14	117.39	133.09	74.93	98.44	113.74	100.00	100.09
11	2090	hc	2090	BASE	N		81.65	140.13	169.25	97.90	77.75	121.15	100.11	99.62
12	2000	csiro	2060	BASE	N		79.70	110.90	121.93	94.35	90.63	102.37	100.00	100.00
13	2000	regcm	2060	BASE	N		81.47	108.66	114.15	92.67	93.07	101.99	100.00	100.00
14	2000	hc-pnn	2030	BASE	N		81.01	109.56	119.17	93.65	88.77	104.24	100.01	100.00
15	2000	hc-pnn	2090	BASE	N		75.42	112.31	127.69	96.64	86.25	106.19	100.05	100.00
16	2000	cc	2030	BASE	Y		84.15	110.14	127.70	96.45	100.91	97.34	100.00	100.00
17	2000	cc	2090	BASE	Y		81.20	129.03	209.84	96.05	98.78	98.19	100.00	100.00
18	2000	hc	2030	BASE	Y		80.43	115.38	145.09	88.57	93.29	102.89	100.00	100.00
19	2000	hc	2090	BASE	Y		75.03	149.85	296.51	90.86	91.45	105.43	100.00	100.00
20	2000	cc	2030	giss	N		87.78	108.17	122.03	100.85	102.25	96.95	100.00	100.00
21	2000	cc	2090	giss	N		84.49	113.69	144.45	105.73	99.35	97.85	100.00	100.00
22	2000	hc	2030	giss	N		81.79	111.19	127.95	91.36	93.86	102.72	100.00	100.00
23	2000	hc	2090	giss	N		76.38	138.94	250.09	93.90	91.63	104.93	100.00	100.00
24	2000	cc	2030	Ukmo	N		87.52	108.25	121.96	99.66	102.05	97.10	100.00	100.00
25	2000	cc	2090	Ukmo	N		84.12	114.67	148.43	105.39	99.10	97.95	100.00	100.00
26	2000	hc	2030	Ukmo	N		81.60	110.92	127.17	91.03	93.74	102.82	100.00	100.00
27	2000	hc	2090	Ukmo	N		76.60	139.71	253.89	93.91	91.69	105.21	100.00	100.00
28	2000	cc	2030	darwi	N		85.53	105.62	108.98	99.07	100.37	97.28	100.00	100.00
29	2000	cc	2090	darwi	N		84.26	114.31	146.45	104.05	98.54	98.37	100.00	100.00
30	2000	hc	2030	darwi	N		79.91	104.62	96.56	89.85	92.29	103.29	100.00	100.00
31	2000	hc	2090	darwi	N		76.23	139.16	252.24	92.68	91.14	105.41	100.00	100.00
32	2000	cc	2030	diffc	N		88.58	107.65	119.90	100.41	102.14	97.03	100.00	100.00
33	2000	cc	2090	diffc	N		87.01	112.02	138.82	103.88	99.02	97.88	100.00	100.00
34	2000	hc	2030	diffc	N		82.71	109.61	122.05	88.69	93.67	102.72	100.00	100.00
35	2000	hc	2090	diffc	N		77.22	137.88	245.34	91.11	91.33	105.02	100.00	100.00
36	2000	cc	2030	pest	N		87.67	108.20	121.78	99.66	102.06	97.09	100.00	100.00
37	2000	cc	2090	pest	N		84.19	114.26	146.58	105.56	99.04	97.97	100.00	100.00
38	2000	hc	2030	pest	N		81.68	110.78	126.61	91.03	93.74	102.83	100.00	100.00
39	2000	hc	2090	pest	N		76.59	139.07	251.07	93.91	91.44	105.20	100.00	100.00
40	2000	cc	2030	pest	Y		84.19	110.03	127.52	96.98	100.94	97.38	100.00	100.00
41	2000	cc	2090	pest	Y		81.35	128.76	208.77	96.05	98.82	98.20	100.00	100.00
42	2000	hc	2030	pest	Y		80.50	115.32	145.08	88.55	93.30	102.80	100.00	100.00
43	2000	hc	2090	pest	Y		75.06	149.31	294.31	90.88	91.34	105.36	100.00	100.00

Table 9 Regional Index Numbers for Total Value of Production

---- Scenario Description ----

Num	Yr	BSYR	GCM	GCMyr	Oth	Adap	northea	lakesta	cornbel	northpl	appalac	southea	deltast	southpl	mountai	pacific
1	2000	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2	2030	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
3	2090	BASE	2000	BASE	N		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
4	2000	cc	2030	BASE	N		110.58	170.53	113.15	92.35	89.08	38.91	90.42	81.67	129.94	126.97
5	2000	cc	2090	BASE	N		111.96	179.24	134.00	77.66	92.23	63.00	80.77	75.15	119.76	163.82
6	2030	cc	2030	BASE	N		105.94	165.77	115.02	103.89	97.80	51.42	84.82	87.18	121.77	134.04
7	2090	cc	2090	BASE	N		110.06	197.07	126.35	89.43	102.40	116.64	111.47	85.46	114.67	171.82
8	2000	hc	2030	BASE	N		113.29	146.67	114.61	108.86	108.85	111.99	118.02	102.42	143.66	155.29
9	2000	hc	2090	BASE	N		125.55	219.10	156.19	142.03	141.62	120.71	141.91	116.90	136.96	162.86
10	2030	hc	2030	BASE	N		105.75	142.65	118.21	116.65	113.72	122.20	128.92	96.90	133.67	150.05
11	2090	hc	2090	BASE	N		118.72	221.63	140.00	121.69	129.34	227.91	154.14	151.68	156.99	161.88
12	2000	csiro	2060	BASE	N		114.50	122.21	100.10	138.28	81.95	80.86	112.46	108.88	245.95	145.01
13	2000	regcm	2060	BASE	N		104.76	118.84	81.57	169.99	76.86	60.81	101.56	132.01	215.45	158.82
14	2000	hc-pnn	2030	BASE	N		146.80	144.44	119.46	98.08	121.81	121.90	133.24	146.99	121.15	120.46
15	2000	hc-pnn	2090	BASE	N		152.88	165.57	120.38	94.03	114.29	128.64	137.75	176.61	137.94	140.79
16	2000	cc	2030	BASE	Y		109.62	165.24	113.08	105.54	92.29	37.16	98.89	84.84	142.71	141.81
17	2000	cc	2090	BASE	Y		110.72	192.83	139.13	118.13	99.95	82.45	101.67	86.05	148.35	174.98
18	2000	hc	2030	BASE	Y		112.33	143.94	118.62	125.46	115.88	115.40	125.59	105.82	144.32	160.73
19	2000	hc	2090	BASE	Y		125.45	225.76	167.20	161.20	153.15	123.39	141.26	130.47	158.97	173.61
20	2000	cc	2030	giss	N		110.39	169.88	113.07	93.81	90.59	40.27	93.22	80.70	127.70	123.91
21	2000	cc	2090	giss	N		112.15	180.73	133.93	72.42	94.52	63.43	80.89	77.72	120.58	161.81
22	2000	hc	2030	giss	N		113.37	146.64	114.97	110.18	110.18	112.72	117.66	103.05	142.78	155.46
23	2000	hc	2090	giss	N		125.12	218.93	156.21	140.14	141.52	121.29	137.62	120.55	135.18	167.91
24	2000	cc	2030	Ukmo	N		110.58	170.53	113.15	92.35	89.08	38.91	90.42	81.67	129.94	126.97
25	2000	cc	2090	Ukmo	N		111.96	179.24	134.00	77.66	92.23	63.00	80.77	75.15	119.76	163.82
26	2000	hc	2030	Ukmo	N		113.29	146.67	114.61	108.86	108.85	111.99	118.02	102.42	143.66	155.29
27	2000	hc	2090	Ukmo	N		125.55	219.10	156.19	142.03	141.62	120.71	141.91	116.90	136.96	162.86
28	2000	cc	2030	darw	N		109.54	170.83	108.67	89.94	86.22	39.10	90.18	80.85	133.94	127.95
29	2000	cc	2090	darw	N		111.41	182.93	134.67	74.60	87.67	61.92	81.09	71.05	116.82	163.24
30	2000	hc	2030	darw	N		113.07	137.61	110.24	99.14	106.79	108.78	119.97	90.89	143.16	157.38
31	2000	hc	2090	darw	N		125.24	218.42	156.34	139.93	141.57	123.34	139.45	112.14	139.05	159.87
32	2000	cc	2030	diff	N		110.31	170.79	113.12	92.25	92.76	37.86	76.30	80.85	126.29	128.36
33	2000	cc	2090	diff	N		112.37	178.86	133.99	78.34	86.99	46.67	52.38	81.36	116.07	149.03
34	2000	hc	2030	diff	N		112.68	147.50	115.44	107.69	124.21	107.05	99.25	92.42	140.21	149.13
35	2000	hc	2090	diff	N		125.31	219.38	158.02	141.26	144.65	109.25	122.90	123.88	133.38	146.20
36	2000	cc	2030	pest	N		110.66	170.37	112.94	92.44	88.99	38.92	90.33	81.67	129.89	126.50
37	2000	cc	2090	pest	N		112.03	178.34	133.14	77.03	92.13	61.00	81.46	76.51	120.03	163.58
38	2000	hc	2030	pest	N		113.27	146.47	114.23	109.09	108.84	112.19	117.93	102.34	143.55	154.96
39	2000	hc	2090	pest	N		125.38	218.69	155.24	140.57	141.55	120.36	139.69	119.47	136.62	162.33
40	2000	cc	2030	pest	Y		109.85	165.18	112.91	105.48	93.28	37.27	97.72	85.09	142.72	140.91
41	2000	cc	2090	pest	Y		111.03	192.24	138.41	118.13	99.91	82.16	99.91	86.46	148.14	173.92
42	2000	hc	2030	pest	Y		112.46	143.79	118.40	125.02	115.64	115.35	126.09	105.81	144.69	160.50
43	2000	hc	2090	pest	Y		125.41	224.44	166.62	160.66	153.18	123.00	140.96	132.36	157.68	172.90

Table 10 Base Climate Change analysis - Changes in Welfare Results in billion \$

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
3	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
4	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
5	2000	cc	2030	pest	Y	4.847	-5.147	0.993	0.693
6	2000	hc	2030	pest	Y	10.036	-3.201	0.600	7.435
7	2000	cc	2090	pest	Y	5.921	-3.860	1.264	3.325
8	2000	hc	2090	pest	Y	12.171	-0.385	1.029	12.815

Table 11 Difference due to different treatment of Cotton- Changes in Welfare Results in billion \$

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2000	cc	2030	diffc	N	2.410	-4.313	0.592	-1.311
3	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
4	2000	cc	2090	diffc	N	3.133	-4.470	0.427	-0.910
5	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
6	2000	hc	2030	diffc	N	8.983	-3.588	0.312	5.707
7	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
8	2000	hc	2090	diffc	N	11.205	-0.124	0.696	11.778

Table 12 Difference due to consideration of adaptation Changes in Welfare Results in billion \$

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2000	cc	2030	BASE	Y	4.880	-5.077	0.994	0.797
3	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
4	2000	cc	2090	BASE	Y	6.019	-3.746	1.275	3.548
5	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
6	2000	hc	2030	BASE	Y	10.060	-3.169	0.604	7.496
7	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
8	2000	hc	2090	BASE	Y	12.140	-0.218	1.043	12.964

Table 13 Difference due to climate sensitive export scenarios - Changes in Welfare Results in billion \$

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2000	cc	2030	darwi	N	4.951	-6.390	0.834	-0.606
3	2000	cc	2030	giss	N	2.162	-3.690	0.808	-0.719
4	2000	cc	2030	Ukmo	N	2.819	-4.208	0.807	-0.582
5	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
6	2000	hc	2030	darwi	N	11.034	-5.231	0.529	6.331
7	2000	hc	2030	giss	N	9.285	-3.429	0.572	6.428
8	2000	hc	2030	Ukmo	N	9.416	-3.629	0.570	6.357
9	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
10	2000	cc	2090	darwi	N	5.146	-5.549	1.107	0.703
11	2000	cc	2090	giss	N	4.157	-4.306	1.160	1.012
12	2000	cc	2090	Ukmo	N	4.452	-4.531	1.144	1.065
13	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
14	2000	hc	2090	darwi	N	11.784	-1.459	0.969	11.295
15	2000	hc	2090	giss	N	11.341	-0.750	0.990	11.581
16	2000	hc	2090	Ukmo	N	11.351	-0.796	0.987	11.541

Table 15a Difference due to alternative base years -- Changes in Welfare Results in billion \$

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BaseYr	GCM	GCMYR	Other	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2030	cc	2030	BASE	N	1.181	0.280	0.576	2.037
3	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
4	2090	cc	2090	BASE	N	58.980	-1.508	3.569	61.041
5	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
6	2030	hc	2030	BASE	N	11.502	2.097	0.517	14.116
7	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
8	2090	hc	2090	BASE	N	114.546	1.188	2.782	118.516

Table 15b Difference due to alternative base years - Percentage Changes in Welfare Results

-- Scenario		Description --				Consumer	Producer	Foreign	Total
Num	BasYr	GCM	GCMYR	Oth	Adap	Surplus	Surplus	Surplus	Surplus
1	2000	cc	2030	BASE	N	0.24	-13.57	1.14	-0.05
2	2030	cc	2030	BASE	N	0.07	0.58	0.45	0.11
3	2000	cc	2090	BASE	N	0.38	-14.54	1.61	0.08
4	2090	cc	2090	BASE	N	1.90	-1.29	1.18	1.73
5	2000	hc	2030	BASE	N	0.81	-11.60	0.80	0.51
6	2030	hc	2030	BASE	N	0.70	4.35	0.41	0.78
7	2000	hc	2090	BASE	N	0.98	-2.55	1.39	0.92
8	2090	hc	2090	BASE	N	3.69	1.01	0.92	3.36

Table 16                    Difference due to different crop simulators -- Changes in Welfare Results in billion \$

-- Scenario Num	BaseYr	Description GCM	-- GCMYR	Other	Adap	Consumer Surplus	Producer Surplus	Foreign Surplus	Total Surplus
1	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
2	2000	hc-pnn	2030	BASE	N	11.202	-3.278	0.277	8.200
3	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
4	2000	hc-pnn	2090	BASE	N	13.940	-3.993	0.686	10.633

Table 17                    Difference due to treatment of pesticide cost effects Changes in Welfare Results in billion \$

-- Scenario Num	BaseYr	Description GCM	-- GCMYR	Other	Adap	Consumer Surplus	Producer Surplus	Foreign Surplus	Total Surplus
1	2000	cc	2030	BASE	N	2.819	-4.230	0.807	-0.604
2	2000	cc	2030	pest	N	2.765	-4.220	0.803	-0.651
3	2000	hc	2030	BASE	N	9.416	-3.613	0.570	6.373
4	2000	hc	2030	pest	N	9.392	-3.669	0.569	6.292
5	2000	cc	2090	BASE	N	4.452	-4.531	1.144	1.065
6	2000	cc	2090	pest	N	4.449	-4.729	1.134	0.853
7	2000	hc	2090	BASE	N	11.351	-0.796	0.987	11.542
8	2000	hc	2090	pest	N	11.484	-1.111	0.976	11.349

Table 18 Summary results for four climate change scenarios when compared to Base Case projections. Projections are in terms of percentage change from the Base Case value.

			Had-TEM	Had-VEMAP	Can-TEM	Can-VEMAP
Welfare (net present value)						
Total Forest		2000-2120	0.4	0.4	0.4	0.3
Both Sectors		2000-2120	1.2	1.2	0.9	0.9
Forest Price						
PULPSW	avg	2000-2010	-0.6	-0.6	-0.6	-0.6
PULPSW	avg	2020-2050	3.1	3.1	3.8	3.8
SAWTSW	avg	2000-2010	-0.4	-0.4	0.0	0.0
SAWTSW	avg	2020-2050	-6.4	-5.3	-5.3	-3.7
Forest Production (harvest)						
PULPSW	avg	2000-2010	0.2	0.2	0.1	-0.0
PULPSW	avg	2020-2050	-3.1	-3.0	-3.3	-3.1
SAWTSW	avg	2000-2010	0.5	0.4	0.2	0.0
SAWTSW	avg	2020-2050	1.4	0.6	0.8	0.4
Timber Inventory						
north	ALLWOOD	2000-2010	0.1	0.2	-0.1	0.0
north	ALLWOOD	2020-2050	-1.3	0.2	-0.1	0.0
south	ALLWOOD	2000-2010	0.1	0.1	-0.1	0.0
south	ALLWOOD	2020-2050	0.1	0.1	-0.1	0.0
Land Transfers						
Nation	FORCROP	2000-2010	3.1	-0.1	3.1	-0.6
Nation	FORCROP	2020-2050	-21.5	-12.4	-22.1	-11.1
Nation	FORPAST	2000-2010	-0.4	-1.4	-12.3	-12.3
Nation	FORPAST	2020-2050	-18.9	-16.1	24.6	32.1
Nation	CROPFOR	2000-2010	-100.0	-93.0	115.3	159.9
Nation	CROPFOR	2020-2050	-100.0	-100.0	-82.9	-93.6
Nation	PASTFOR	2000-2010	21.9	20.6	18.4	18.4
Nation	PASTFOR	2020-2050	-89.1	98.5	-8.9	76.7



Appendix A Proxy Assumptions used by Region

Table A1: Subregion to simulation Place correspondence

alabama. (MOAL )  
 arizona. (TUAZ )  
 arkansas. ( SHLA )  
 CALIFORNIN. (FRCA,RBCA )  
 CALIFORNIS .(BACA )  
 colorado. (ALCO )  
 conn. (buny )  
 delaware . (buny )  
 florida. (TAFI,MIFL,DBFL )  
 georgia . (SAGA )  
 idaho. (BOID )  
 ILLINOISN. (PEIL )  
 ILLINOISS . (PEIL )  
 INDIANAN. (ININ )  
 INDIANAS . (ININ )  
 IOWAW . (DEIA )  
 IOWACENT. (DEIA )  
 IOWANE . (DEIA )  
 IOWAS. (DEIA )  
 kansas. (TOKS,GOKS,DCKS )  
 kentucky . (lky )  
 louisiana. (SHLA )  
 maine . (CAME )  
 maryland. (rnc )  
 mass . ( CAME)  
 michigan. (MUMI )  
 minnesota . (SCMN,DUMN )  
 mississipp. (moal )  
 missouri .(toks )  
 montana. (GLMT )  
 nebraska .(SBNE,NPNE )  
 nevada. (LVNV )  
 newhampshi .( BUNY)  
 newjersey. ( BUNY)  
 newmexico .( ALCO )  
 newyork. (BUNY )  
 northcarol .(rnc )  
 northdakot. (FAND )  
 OHIONW . (COOH )  
 OHIOS . (COOH )  
 OHIONE. (COOH )  
 oklahoma. (OKOK )  
 oregon . (PEOR,MEOR )  
 pennsylvan. (BUNY)  
 rhodeislan .( BUNY)  
 southcarol .(csc )  
 southdakot .(SFSD, PISD )  
 tennessee. ( METN )  
 TXHIPLAINS. (ABTX )  
 TXROLINGPL. (ABTX )  
 TXCNTBLACK. (PATX )  
 TXEAST . (PATX )  
 TXEDPLAT. (CCTX )  
 TXCOASTBE . (CCTX )  
 TXSOUTH. (CCTX )  
 TXTRANSPEC .(EPTX )  
 utah. (lvnv )

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vermont . (buny )  
virginia. (rnc )  
washington .(YAWA,SPWA )  
westvirgin. (metn )  
wisconsin .(MAWI )  
wyoming. (sfsd )  
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Table A2 Priorities for filling in Missing Data

alabama. (1.mississippi,2.georgia,3.arkansas,4.tennessee,5.florida)  
arizona. (1.californis,2.newmexico,3.utah)  
arkansas. (1.mississippi,2.missouri,3.oklahoma,4.tennessee,5.missouri)  
CALIFORNIN. (1.californis,2.oregon,3.utah)  
CALIFORNIS .(1.californin,2.arizona,3.utah)  
colorado. (1.nebraska,2.kansas,3.newmexico)  
conn. (1.newyork,2.pennsylvan,3.newjersey)  
delaware . (1.maryland,2.pennsylvan,3.newjersey)  
florida. (1.georgia,2.alabama,3.southcarol)  
georgia . (1.georgia,2.alabama,3.southcarol)  
idaho. (1.washington,2.oregon,3.montana)  
ILLINOISN. (1.illinoiss,2.indianan,3.indianas,4.iowas,5.iowane,6.wisconsin)  
ILLINOISS . (1.illinoisn,2.indianas,3.missouri,4.indianan,5.iowas,6.iowane)  
INDIANAN. (1.indianas,2.illinoisn,3.illinoiss,4.ohionw,5.ohios,6.michigan)  
INDIANAS . (1.indianan,2.illinoiss,3.illinoisn,4.ohionw,5.ohios,6.michigan)  
IOWAW . (1.iowacent,2.southdakot,3.nebraska,4.iowas,5.iowane,6.northdakot)  
IOWACENT. (1.iowane,2.southdakot,3.nebraska,4.iowas,6.northdakot)  
IOWANE . (1.iowacent,2.illinoisn,3.wisconsin,4.iowas,6.northdakot)  
IOWAS. (1.iowacent,2.illinoisn,3.wisconsin,4.iowane,6.northdakot)  
kansas. (1.nebraska,2.oklahoma,3.missouri,4.colorado,5.iowas)  
kentucky . (1.indianas,2.illinoiss,3.tennessee,4.ohios)  
louisiana. (1.mississippi,2.arkansas,3.txeast)  
maine . (1.newyork,2.pennsylvan)  
maryland. (1.pennsylvan,2.virginia)  
mass . (1.newyork,2.pennsylvan)  
michigan. (1.minnesota,2.illinoisn,3.wisconsin)  
minnesota . (1.wisconsin,2.northdakot,3.wisconsin)  
mississippi. (1.alabama,2.louisiana,3.arkansas,4.tennessee,5.florida)  
missouri .(1.kansas,2.illinoiss,3.arkansas)  
montana. (1.wyoming,2.idaho,3.southdakot,4.colorado,5.washington)  
nebraska .(1.kansas,2.southdakot,3.colorado)  
nevada. (1.wyoming,2.idaho,3.southdakot,4.colorado,5.washington)  
newhampshi .(1.newyork,2.pennsylvan)  
newjersey. (1.newyork,2.pennsylvan)  
newmexico .(1.colorado,2.arizona)  
newyork. (1.pennsylvan,2.ohione)  
northcarol .(1.southcarol,2.virginia,3.georgia)  
northdakot. (1.southdakot,2.wyoming,3.colorado,4.nebraska)  
OHIONW . (1.indianan,2.ohione,3.michigan,4.ohios)

OHIOS . (1.indianas,2.ohionw,3.ohione,4.kentucky)  
 OHIONE. (1.pennsylvan,3.indianan,2.ohionw,4.michigan,5.ohios)  
 oklahoma. (2.kansas,1.arkansas,3.TXHIPLAINS)  
 oregon . (1.washington,2.idaho,3.californin)  
 pennsylvan. (1.newyork,2.ohione,3.maryland)  
 rhodeislan .(1.newyork,2.pennsylvan)  
 southcarol .(2.northcarol,3.alabama,1.georgia)  
 southdakot .(1.southdakot,2.northdakot,3.colorado,4.nebraska)  
 tennessee. (1.kentucky,2.northcarol,3.alabama,4.georgia)  
 TXHIPLAINS. (1.oklahoma,2.TXROLINGPL,3.newmexico)  
 TXROLINGPL. (3.oklahoma,1.TXhiplains,2.txcntblack)  
 TXCNTBLACK. (1.txrolingpl,1.TXhiplains,3.newmexico)  
 TXEAST . (1.txcntblack,2.louisiana)  
 TXEDPLAT. (1.txcoastbe,2.txcntblack,3.newmexico)  
 TXCOASTBE . (1.txcntblack,2.louisiana)  
 TXSOUTH. (1.txcoastbe,2.txcntblack,3.newmexico)  
 TXTRANSPEC .(1.TXhiplains,2.newmexico)  
 utah. (1.wyoming,2.idaho,3.southdakot,4.colorado,5.washington)  
 vermont . (1.newyork,2.pennsylvan)  
 virginia. (1.maryland,2.northcarol)  
 washington .(1.oregon,2.idaho,3.montana)  
 westvirgin. (1.maryland,2.pennsylvan)  
 wisconsin .(1.michigan,2.iowane)  
 wyoming. (1.southdakot,2.northdakot,3.montana,4.colorado,5.nebraska)  
 /

Appendix B Ten Region Level Aggregates of Data sets by Scenario

Table B1.1 Ten Region Level Aggregate of Data Set for Canadian Scenario run for 2030 without Adaptation  
Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	0.30	-10.90	-46.10
northeast	soybeans	22.87	7.52	-5.99
northeast	SOFT	3.10	1.20	-12.20
northeast	sorghum	2.68	-10.62	-30.96
northeast	barley	3.10	1.20	-12.20
northeast	oats	3.10	1.20	-12.20
northeast	silage	0.30	-10.90	-46.10
northeast	hay	-10.05	7.85	8.83
northeast	POTATOES	28.32	-2.70	-14.13
northeast	tomatofrsh	23.40	20.75	-24.18
northeast	tomatoproc	23.89	21.59	-24.41
northeast	PASTURE	3.29	0.00	0.00
lakestates	corn	59.82	51.23	-21.06
lakestates	soybeans	81.04	41.92	-15.76
lakestates	HRSW	7.00	-11.40	-24.20
lakestates	HRWW	7.00	-11.40	-24.20
lakestates	SOFT	7.00	-11.40	-24.20
lakestates	DURW	7.00	-11.40	-24.20
lakestates	barley	27.16	-44.24	-93.91
lakestates	oats	23.94	-38.98	-82.75
lakestates	silage	38.54	31.60	-31.95
lakestates	hay	-2.79	12.67	-30.61
lakestates	SUGARBEET	-6.27	13.79	-36.51
lakestates	POTATOES	24.00	-12.75	-14.06
lakestates	tomatofrsh	42.13	37.50	-7.19
lakestates	tomatoproc	42.13	37.50	-7.19
lakestates	PASTURE	15.59	0.00	0.00
cornbelt	cotton	21.69	27.45	-10.54
cornbelt	corn	11.71	-11.65	-36.48
cornbelt	soybeans	26.10	10.02	-13.53
cornbelt	SOFT	-5.47	-6.05	7.26
cornbelt	sorghum	10.92	-9.88	-19.16
cornbelt	rice	-3.46	-3.46	-17.04
cornbelt	oats	9.79	-5.83	-20.30
cornbelt	silage	9.35	-11.79	-37.93

cornbelt	hay	-10.91	1.49	-19.88
cornbelt	SUGARBEET	-6.03	4.83	-7.77
cornbelt	POTATOES	-28.27	-34.07	2.44
cornbelt	tomatofrsh	-2.77	-9.23	-48.08
cornbelt	tomatoproc	-2.90	-9.33	-47.85
cornbelt	PASTURE	2.92	0.00	0.00
northplain	corn	20.66	-9.89	-37.08
northplain	soybeans	8.60	22.31	14.99
northplain	HRSW	17.32	-8.33	-28.98
northplain	HRWW	-17.03	0.94	8.49
northplain	DURW	14.98	-9.51	-26.86
northplain	sorghum	15.01	3.73	-2.39
northplain	barley	62.91	-34.65	-109.64
northplain	oats	47.35	-16.10	-88.23
northplain	silage	19.91	-5.57	-30.86
northplain	hay	-4.81	4.73	-1.07
northplain	SUGARBEET	2.73	13.09	-5.09
northplain	POTATOES	10.01	-2.94	-5.36
northplain	PASTURE	8.54	0.00	0.00
appalachia	cotton	15.57	30.84	-10.54
appalachia	corn	-6.21	-15.38	-28.68
appalachia	soybeans	0.39	9.27	12.93
appalachia	SOFT	-2.12	-3.08	-0.49
appalachia	sorghum	-5.43	-11.60	-11.98
appalachia	barley	0.00	-1.28	-5.42
appalachia	oats	-6.13	-6.36	8.51
appalachia	silage	-5.23	-14.64	-31.89
appalachia	hay	-21.25	-10.77	37.88
appalachia	POTATOES	20.30	-13.30	-15.30
appalachia	tomatofrsh	11.46	0.00	-18.49
appalachia	tomatoproc	11.46	0.00	-18.49
appalachia	PASTURE	-11.34	0.00	0.00
southeast	cotton	17.69	43.74	-10.54
southeast	corn	-8.20	-16.40	-26.70
southeast	soybeans	-9.91	13.00	26.65
southeast	SOFT	-11.30	-10.60	20.10
southeast	sorghum	-2.11	-5.91	-7.70
southeast	barley	-11.30	-10.60	20.10
southeast	oats	-11.30	-10.60	20.10
southeast	silage	-8.20	-16.40	-26.70
southeast	hay	-58.22	-24.57	45.66

southeast	SUGARCANE	-5.38	-5.38	-26.90
southeast	POTATOES	20.30	-13.30	-15.30
southeast	tomatofrsh	-11.21	-12.69	-8.52
southeast	orangefrsh	8.97	8.97	4.07
southeast	orangeproc	8.97	8.97	4.07
southeast	grpfrtfrsh	8.97	8.97	4.07
southeast	grpfrtproc	8.97	8.97	4.07
southeast	PASTURE	-42.87	0.00	0.00
deltastate	cotton	21.19	46.47	-10.54
deltastate	corn	-6.61	-16.14	-26.23
deltastate	soybeans	-46.99	15.83	50.00
deltastate	SOFT	-11.30	-10.60	20.10
deltastate	sorghum	-4.54	-3.82	5.19
deltastate	rice	-2.81	-2.81	-10.66
deltastate	oats	-11.30	-10.60	20.10
deltastate	silage	-5.30	-15.93	-25.84
deltastate	hay	-56.55	-26.28	38.01
deltastate	SUGARCANE	-3.46	-3.46	-17.04
deltastate	tomatofrsh	-1.90	-11.27	4.40
deltastate	PASTURE	-49.41	0.00	0.00
southplain	cotton	17.89	25.44	-10.54
southplain	corn	5.03	-14.30	-26.56
southplain	soybeans	-8.93	9.42	27.34
southplain	HRWW	-39.25	-9.64	19.18
southplain	sorghum	24.27	-4.74	-12.90
southplain	rice	-4.15	-4.15	-18.53
southplain	barley	-151.55	-37.06	83.69
southplain	oats	-85.00	-21.45	3.11
southplain	silage	5.39	-14.23	-25.23
southplain	hay	-29.40	-18.94	7.90
southplain	SUGARBEET	-5.82	-2.84	-5.23
southplain	POTATOES	-17.00	-3.90	17.00
southplain	tomatofrsh	-1.90	-11.27	4.40
southplain	orangefrsh	45.50	45.50	-14.40
southplain	orangeproc	45.50	45.50	-14.40
southplain	grpfrtfrsh	45.50	45.50	-14.40
southplain	grpfrtproc	45.50	45.50	-14.40
southplain	PASTURE	4.67	0.00	0.00
mountain	cotton	8.67	59.58	-10.54
mountain	corn	24.00	-10.79	-41.55
mountain	HRSW	12.92	-16.98	-29.49

mountain	HRWW	5.33	-7.08	-13.60
mountain	DURW	15.06	-14.94	-27.99
mountain	sorghum	28.82	23.14	6.84
mountain	barley	66.64	-58.84	-107.64
mountain	oats	37.52	-38.64	-77.56
mountain	silage	21.61	-9.05	-38.34
mountain	hay	9.57	17.29	1.20
mountain	SUGARBEET	17.69	37.14	5.02
mountain	POTATOES	-1.34	-6.38	0.70
mountain	orangefrsh	66.90	66.90	7.60
mountain	orangeproc	66.90	66.90	7.60
mountain	grpfrtfrsh	66.90	66.90	7.60
mountain	grpfrtproc	66.90	66.90	7.60
mountain	PASTURE	20.90	0.00	0.00
pacific	cotton	11.73	33.44	-10.54
pacific	corn	19.20	-7.30	-35.10
pacific	HRSW	16.25	0.25	-5.40
pacific	HRWW	15.53	-3.76	-14.61
pacific	DURW	11.90	-24.10	-61.30
pacific	sorghum	28.82	23.14	6.84
pacific	rice	6.50	6.50	2.09
pacific	barley	53.89	-20.43	-68.10
pacific	oats	45.20	-28.24	-83.35
pacific	silage	19.20	-7.30	-35.10
pacific	hay	26.76	38.26	9.37
pacific	SUGARBEET	32.23	33.27	6.36
pacific	POTATOES	-3.29	2.27	-1.13
pacific	tomatofrsh	39.13	-19.75	1.71
pacific	tomatoproc	39.13	-19.75	1.71
pacific	orangefrsh	36.87	36.87	-31.71
pacific	orangeproc	36.87	36.87	-31.71
pacific	grpfrtfrsh	27.48	27.48	-8.81
pacific	grpfrtproc	27.47	27.47	-8.78
pacific	PASTURE	47.53	0.00	0.00



Table B1.2 Ten Region Level Aggregate of Data Set for Canadian Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	-1.30	-10.50	-58.70
northeast	soybeans	24.56	7.50	-17.97
northeast	SOFT	16.20	4.30	-42.60
northeast	sorghum	-0.93	-19.63	-50.25
northeast	barley	16.20	4.30	-42.60
northeast	oats	16.20	4.30	-42.60
northeast	silage	-1.30	-10.50	-58.70
northeast	hay	1.86	21.57	45.24
northeast	POTATOES	-21.75	-5.37	16.09
northeast	tomatofrsh	23.72	22.91	22.15
northeast	tomatoproc	24.94	24.78	24.27
northeast	PASTURE	11.81	0.00	0.00
lakestates	corn	77.15	67.26	-26.23
lakestates	soybeans	61.85	93.46	19.48
lakestates	HRSW	-0.20	-12.90	-26.20
lakestates	HRWW	-0.20	-12.90	-26.20
lakestates	SOFT	-0.20	-12.90	-26.20
lakestates	DURW	-0.20	-12.90	-26.20
lakestates	barley	-0.78	-50.06	-101.67
lakestates	oats	-0.68	-44.11	-89.59
lakestates	silage	49.52	42.42	-41.50
lakestates	hay	3.52	20.94	16.51
lakestates	SUGARBEET	-6.42	21.74	57.31
lakestates	POTATOES	-11.25	-19.05	-5.10
lakestates	tomatofrsh	42.03	39.74	1.44
lakestates	tomatoproc	42.03	39.74	1.44
lakestates	PASTURE	22.45	0.00	0.00
cornbelt	cotton	116.63	93.47	106.54
cornbelt	corn	13.19	-14.19	-62.22
cornbelt	soybeans	60.37	20.36	-35.23
cornbelt	SOFT	3.57	-4.39	-29.37
cornbelt	sorghum	11.13	-18.35	-47.51
cornbelt	rice	-10.89	-10.89	37.30
cornbelt	oats	17.06	-5.93	-66.13
cornbelt	silage	9.90	-14.29	-61.30
cornbelt	hay	10.34	1.26	-20.99
cornbelt	SUGARBEET	1.39	9.01	20.00

cornbelt	POTATOES	-44.08	-48.42	-5.56
cornbelt	tomatofrsh	-11.32	-17.12	-42.58
cornbelt	tomatoproc	-11.40	-17.20	-42.73
cornbelt	PASTURE	20.42	0.00	0.00
northplain	corn	22.66	-17.01	-59.50
northplain	soybeans	3.85	23.33	16.36
northplain	HRSW	-9.22	-17.40	-18.08
northplain	HRWW	-22.23	-4.03	-6.28
northplain	DURW	-15.71	-19.45	-11.40
northplain	sorghum	35.44	-11.74	-29.19
northplain	barley	-49.66	-72.47	-58.94
northplain	oats	-23.65	-47.91	-82.90
northplain	silage	14.91	-17.25	-49.19
northplain	hay	-11.84	-12.61	21.18
northplain	SUGARBEET	-19.36	-0.85	48.96
northplain	POTATOES	-64.32	-29.44	32.29
northplain	PASTURE	-3.01	0.00	0.00
appalachia	cotton	83.72	105.02	106.54
appalachia	corn	-8.86	-19.91	-45.92
appalachia	soybeans	1.42	10.36	16.42
appalachia	SOFT	8.73	-0.78	-34.77
appalachia	sorghum	11.26	-19.32	-45.41
appalachia	barley	11.88	1.36	-38.07
appalachia	oats	2.99	-4.67	-28.75
appalachia	silage	-8.22	-18.58	-46.28
appalachia	hay	-10.69	-1.73	47.58
appalachia	POTATOES	-27.90	-18.20	7.60
appalachia	tomatofrsh	-6.56	-23.33	-30.25
appalachia	tomatoproc	-6.56	-23.33	-30.25
appalachia	PASTURE	-3.28	0.00	0.00
southeast	cotton	95.11	148.95	106.54
southeast	corn	-14.10	-23.30	-32.80
southeast	soybeans	-41.13	7.97	77.87
southeast	SOFT	-4.40	-9.70	-21.00
southeast	sorghum	-11.98	-17.08	-6.79
southeast	barley	-4.40	-9.70	-21.00
southeast	oats	-4.40	-9.70	-21.00
southeast	silage	-14.10	-23.30	-32.80
southeast	hay	-38.38	-21.53	126.61
southeast	SUGARCANE	0.57	0.57	-24.83
southeast	POTATOES	-27.90	-18.20	7.60

southeast	tomatofrsh	-41.60	-42.28	34.46
southeast	orangefrsh	125.93	125.93	506.07
southeast	orangeproc	125.93	125.93	506.07
southeast	grpfrtfrsh	125.93	125.93	506.07
southeast	grpfrtproc	125.93	125.93	506.07
southeast	PASTURE	4.04	0.00	0.00
deltastate	cotton	113.94	158.23	106.54
deltastate	corn	-11.55	-23.12	-35.57
deltastate	soybeans	-86.45	14.76	129.92
deltastate	SOFT	-4.40	-9.70	-21.00
deltastate	sorghum	-14.45	-15.20	9.96
deltastate	rice	-9.74	-9.74	43.21
deltastate	oats	-4.40	-9.70	-21.00
deltastate	silage	-9.45	-22.98	-37.84
deltastate	hay	-37.30	-19.26	65.50
deltastate	SUGARCANE	-10.89	-10.89	37.30
deltastate	tomatofrsh	-28.02	-42.12	27.67
deltastate	PASTURE	4.29	0.00	0.00
southplain	cotton	96.22	86.61	106.54
southplain	corn	6.33	-21.00	-52.20
southplain	soybeans	-13.05	8.92	46.00
southplain	HRWW	-25.05	-1.85	0.37
southplain	sorghum	10.14	-20.76	-15.77
southplain	rice	-4.04	-4.04	30.17
southplain	barley	-93.25	-8.34	6.69
southplain	oats	-68.01	0.83	-20.18
southplain	silage	7.16	-21.23	-53.99
southplain	hay	-20.23	-23.20	36.08
southplain	SUGARBEET	-20.49	-34.58	15.10
southplain	POTATOES	6.60	-75.50	-54.10
southplain	tomatofrsh	-28.02	-42.12	27.67
southplain	orangefrsh	40.70	40.70	13.90
southplain	orangeproc	40.70	40.70	13.90
southplain	grpfrtfrsh	40.70	40.70	13.90
southplain	grpfrtproc	40.70	40.70	13.90
southplain	PASTURE	-2.05	0.00	0.00
mountain	cotton	46.61	202.89	106.54
mountain	corn	30.26	-15.14	-64.35
mountain	HRSW	-10.54	-29.62	-30.28
mountain	HRWW	23.56	-18.92	-16.37
mountain	DURW	113.50	-27.55	-34.40

mountain	sorghum	71.06	3.69	-22.15
mountain	barley	26.20	-101.55	-121.40
mountain	oats	-21.61	-74.06	-83.14
mountain	silage	19.27	-19.01	-59.44
mountain	hay	16.77	16.32	23.27
mountain	SUGARBEET	26.10	34.54	25.39
mountain	POTATOES	-28.08	-47.27	0.92
mountain	orangefrsh	114.60	114.60	-0.70
mountain	orangeproc	114.60	114.60	-0.70
mountain	grpfrtfrsh	114.60	114.60	-0.70
mountain	grpfrtproc	114.60	114.60	-0.70
mountain	PASTURE	51.49	0.00	0.00
pacific	cotton	63.07	113.88	106.54
pacific	corn	8.20	-22.90	-54.50
pacific	HRSW	137.90	4.80	-26.35
pacific	HRWW	111.75	-3.65	-34.14
pacific	DURW	-20.80	-46.50	-73.60
pacific	sorghum	71.06	3.69	-22.15
pacific	rice	1.38	1.38	3.34
pacific	barley	350.72	-27.86	-134.92
pacific	oats	238.48	-46.24	-138.00
pacific	silage	8.20	-22.90	-54.50
pacific	hay	62.24	52.94	23.25
pacific	SUGARBEET	71.56	50.83	18.98
pacific	POTATOES	-3.91	-5.88	10.75
pacific	tomatofrsh	1947.83	-7.21	-4.20
pacific	tomatoproc	1947.83	-7.21	-4.20
pacific	orangefrsh	77.90	77.90	-41.66
pacific	orangeproc	77.90	77.90	-41.66
pacific	grpfrtfrsh	54.41	54.41	-15.18
pacific	grpfrtproc	54.37	54.37	-15.14
pacific	PASTURE	102.12	0.00	0.00

Table B1.3 Ten Region Level Aggregate of Data Set for Hadley Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	5.30	-5.30	-39.50
northeast	soybeans	32.18	10.96	-14.75
northeast	SOFT	8.20	1.90	-16.30
northeast	sorghum	8.58	-3.70	-25.38
northeast	barley	8.20	1.90	-16.30
northeast	oats	8.20	1.90	-16.30
northeast	silage	5.30	-5.30	-39.50
northeast	hay	2.83	26.64	-54.43
northeast	POTATOES	13.02	0.32	-1.96
northeast	tomatofrsh	22.85	20.49	-30.85
northeast	tomatoproc	23.07	20.99	-31.62
northeast	PASTURE	19.19	0.00	0.00
lakestates	corn	37.12	24.24	-34.11
lakestates	soybeans	63.24	32.03	-17.57
lakestates	HRSW	15.40	4.90	-17.40
lakestates	HRWW	15.40	4.90	-17.40
lakestates	SOFT	15.40	4.90	-17.40
lakestates	DURW	15.40	4.90	-17.40
lakestates	barley	59.76	19.01	-67.52
lakestates	oats	52.66	16.75	-59.50
lakestates	silage	23.89	14.62	-36.90
lakestates	hay	2.35	28.37	-56.20
lakestates	SUGARBEET	-2.23	30.49	-50.22
lakestates	POTATOES	22.93	0.00	-9.25
lakestates	tomatofrsh	41.26	29.50	-17.99
lakestates	tomatoproc	41.26	29.50	-17.99
lakestates	PASTURE	21.41	0.00	0.00
cornbelt	cotton	38.99	42.99	36.19
cornbelt	corn	11.58	-4.65	-26.52
cornbelt	soybeans	31.94	14.44	-14.51
cornbelt	SOFT	7.79	3.25	-11.29
cornbelt	sorghum	10.41	-2.94	-16.33
cornbelt	rice	2.32	2.32	-3.22
cornbelt	oats	21.73	4.72	-28.92
cornbelt	silage	10.33	-4.74	-28.37
cornbelt	hay	5.99	23.38	-44.95
cornbelt	SUGARBEET	2.46	21.50	-34.88

cornbelt	POTATOES	8.45	-5.00	-6.06
cornbelt	tomatofrsh	13.24	7.15	-36.02
cornbelt	tomatoproc	13.23	7.14	-35.92
cornbelt	PASTURE	19.74	0.00	0.00
northplain	corn	20.61	-5.39	-33.46
northplain	soybeans	28.79	23.29	-1.76
northplain	HRSW	20.18	4.75	-18.39
northplain	HRWW	16.76	7.78	-8.49
northplain	DURW	19.36	5.63	-17.47
northplain	sorghum	20.57	5.43	-9.13
northplain	barley	79.18	20.91	-71.07
northplain	oats	83.29	19.63	-65.24
northplain	silage	19.89	-3.88	-29.72
northplain	hay	3.90	26.14	-27.41
northplain	SUGARBEET	2.52	29.33	-28.07
northplain	POTATOES	18.92	1.55	-6.31
northplain	PASTURE	20.93	0.00	0.00
appalachia	cotton	27.99	48.30	36.19
appalachia	corn	3.87	-2.58	-31.81
appalachia	soybeans	38.01	12.03	-13.70
appalachia	SOFT	7.87	2.70	-13.29
appalachia	sorghum	20.31	-3.38	-24.05
appalachia	barley	8.01	2.36	-14.56
appalachia	oats	7.62	3.31	-10.98
appalachia	silage	3.77	-2.85	-32.74
appalachia	hay	-0.56	18.99	-39.35
appalachia	POTATOES	22.10	-3.90	-13.50
appalachia	tomatofrsh	17.34	8.24	-11.76
appalachia	tomatoproc	17.34	8.24	-11.76
appalachia	PASTURE	16.17	0.00	0.00
southeast	cotton	31.80	68.50	36.19
southeast	corn	1.60	-0.90	-28.10
southeast	soybeans	14.27	8.80	-4.45
southeast	SOFT	7.30	4.10	-8.00
southeast	sorghum	5.83	-2.97	-13.74
southeast	barley	7.30	4.10	-8.00
southeast	oats	7.30	4.10	-8.00
southeast	silage	1.60	-0.90	-28.10
southeast	hay	-25.29	-8.86	10.31
southeast	SUGARCANE	-0.99	-0.99	-11.03
southeast	POTATOES	22.10	-3.90	-13.50

southeast	tomatofrsh	-0.27	0.26	1.37
southeast	orangefrsh	25.37	25.37	14.67
southeast	orangeproc	25.37	25.37	14.67
southeast	grpfrtfrsh	25.37	25.37	14.67
southeast	grpfrtproc	25.37	25.37	14.67
southeast	PASTURE	24.80	0.00	0.00
deltastate	cotton	38.09	72.77	36.19
deltastate	corn	2.95	-1.26	-27.05
deltastate	soybeans	18.56	11.32	-3.41
deltastate	SOFT	7.30	4.10	-8.00
deltastate	sorghum	10.25	-2.44	-14.29
deltastate	rice	2.33	2.33	-3.38
deltastate	oats	7.30	4.10	-8.00
deltastate	silage	4.06	-1.56	-26.18
deltastate	hay	-22.99	-6.68	6.42
deltastate	SUGARCANE	2.32	2.32	-3.22
deltastate	tomatofrsh	8.54	3.26	-3.77
deltastate	PASTURE	22.29	0.00	0.00
southplain	cotton	32.17	39.83	36.19
southplain	corn	11.94	-3.64	-24.25
southplain	soybeans	23.68	12.68	-3.94
southplain	HRWW	10.98	4.40	-4.24
southplain	sorghum	10.22	-3.30	-5.29
southplain	rice	0.84	0.84	2.16
southplain	barley	40.09	16.52	-14.62
southplain	oats	32.93	11.32	-16.07
southplain	silage	12.53	-3.82	-22.43
southplain	hay	-13.46	4.96	-2.23
southplain	SUGARBEET	0.99	17.55	-14.01
southplain	POTATOES	-8.50	-1.00	7.70
southplain	tomatofrsh	8.54	3.26	-3.77
southplain	orangefrsh	46.90	46.90	-7.30
southplain	orangeproc	46.90	46.90	-7.30
southplain	grpfrtfrsh	46.90	46.90	-7.30
southplain	grpfrtproc	46.90	46.90	-7.30
southplain	PASTURE	15.35	0.00	0.00
mountain	cotton	15.58	93.31	36.19
mountain	corn	22.83	-6.26	-37.81
mountain	HRSW	16.90	-1.22	-13.26
mountain	HRWW	25.32	3.31	-9.76
mountain	DURW	39.37	-0.48	-15.88

mountain	sorghum	35.01	16.21	-7.82
mountain	barley	69.00	-8.26	-47.64
mountain	oats	55.84	0.82	-38.94
mountain	silage	20.23	-5.43	-32.42
mountain	hay	11.14	30.58	-16.37
mountain	SUGARBEET	18.74	55.50	-12.20
mountain	POTATOES	-7.16	-7.12	4.34
mountain	orangefrsh	69.90	69.90	3.30
mountain	orangeproc	69.90	69.90	3.30
mountain	grpfrtfrsh	69.90	69.90	3.30
mountain	grpfrtproc	69.90	69.90	3.30
mountain	PASTURE	19.50	0.00	0.00
pacific	cotton	21.09	52.37	36.19
pacific	corn	17.60	-4.60	-27.00
pacific	HRSW	65.75	4.60	-11.60
pacific	HRWW	58.29	1.17	-17.96
pacific	DURW	20.50	-16.20	-50.20
pacific	sorghum	35.01	16.21	-7.82
pacific	rice	6.29	6.29	-0.24
pacific	barley	193.84	-1.87	-74.97
pacific	oats	149.95	-10.52	-81.96
pacific	silage	17.60	-4.60	-27.00
pacific	hay	28.38	61.06	-2.56
pacific	SUGARBEET	29.51	51.93	-3.84
pacific	POTATOES	5.21	0.35	3.22
pacific	tomatofrsh	60.87	-9.06	0.13
pacific	tomatoproc	60.87	-9.06	0.13
pacific	orangefrsh	42.77	42.77	-14.53
pacific	orangeproc	42.77	42.77	-14.53
pacific	grpfrtfrsh	37.10	37.10	-3.53
pacific	grpfrtproc	37.09	37.09	-3.52
pacific	PASTURE	58.83	0.00	0.00



Table B1.4 Ten Region Level Aggregate of Data Set for Hadley Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	6.20	-5.80	-71.30
northeast	soybeans	41.97	20.49	-12.90
northeast	SOFT	23.60	8.50	-48.00
northeast	sorghum	8.73	-7.19	-38.07
northeast	barley	23.60	8.50	-48.00
northeast	oats	23.60	8.50	-48.00
northeast	silage	6.20	-5.80	-71.30
northeast	hay	10.57	31.95	-58.55
northeast	POTATOES	18.44	-1.06	-8.50
northeast	tomatofrsh	39.03	36.84	-39.67
northeast	tomatoproc	39.63	37.61	-41.48
northeast	PASTURE	26.68	0.00	0.00
lakestates	corn	86.26	60.51	-62.64
lakestates	soybeans	117.64	68.85	-22.38
lakestates	HRSW	22.30	11.50	-20.00
lakestates	HRWW	22.30	11.50	-20.00
lakestates	SOFT	22.30	11.50	-20.00
lakestates	DURW	22.30	11.50	-20.00
lakestates	barley	86.54	44.63	-77.61
lakestates	oats	76.25	39.32	-68.39
lakestates	silage	59.12	41.57	-66.59
lakestates	hay	11.81	36.01	-61.22
lakestates	SUGARBEET	6.19	37.96	-55.08
lakestates	POTATOES	29.68	0.74	-13.45
lakestates	tomatofrsh	70.69	57.64	-22.30
lakestates	tomatoproc	70.69	57.64	-22.30
lakestates	PASTURE	32.29	0.00	0.00
cornbelt	cotton	99.33	77.93	59.81
cornbelt	corn	25.58	-2.63	-62.11
cornbelt	soybeans	76.09	30.51	-37.13
cornbelt	SOFT	19.92	8.73	-45.90
cornbelt	sorghum	27.25	-4.60	-47.58
cornbelt	rice	9.85	9.85	-5.47
cornbelt	oats	49.23	15.16	-76.68
cornbelt	silage	21.63	-3.44	-63.07
cornbelt	hay	15.66	23.32	-55.85
cornbelt	SUGARBEET	2.46	21.50	-34.88

cornbelt	POTATOES	15.33	-7.72	-12.43
cornbelt	tomatofrsh	21.41	12.72	-58.42
cornbelt	tomatoproc	21.41	12.74	-58.41
cornbelt	PASTURE	30.87	0.00	0.00
northplain	corn	31.71	-3.67	-51.54
northplain	soybeans	76.72	40.99	-10.35
northplain	HRSW	27.30	6.94	-21.13
northplain	HRWW	54.10	16.29	-31.52
northplain	DURW	22.19	6.90	-19.15
northplain	sorghum	68.28	4.01	-35.69
northplain	barley	101.45	28.52	-81.21
northplain	oats	155.05	40.14	-97.70
northplain	silage	36.28	-1.83	-54.97
northplain	hay	22.12	21.52	-34.22
northplain	SUGARBEET	20.00	27.82	-28.04
northplain	POTATOES	7.73	-2.54	-3.01
northplain	PASTURE	26.63	0.00	0.00
appalachia	cotton	71.30	87.56	59.81
appalachia	corn	4.72	-3.76	-62.65
appalachia	soybeans	71.75	22.81	-21.10
appalachia	SOFT	21.32	8.65	-46.88
appalachia	sorghum	36.55	-3.75	-49.08
appalachia	barley	22.28	8.58	-47.35
appalachia	oats	19.56	8.76	-46.01
appalachia	silage	4.11	-3.86	-63.53
appalachia	hay	4.57	19.16	-51.80
appalachia	POTATOES	21.90	-7.80	-16.70
appalachia	tomatofrsh	24.40	17.65	5.04
appalachia	tomatoproc	24.40	17.65	5.04
appalachia	PASTURE	20.31	0.00	0.00
southeast	cotton	81.00	124.19	59.81
southeast	corn	-0.60	-1.90	-57.50
southeast	soybeans	33.84	14.62	-14.38
southeast	SOFT	17.30	8.90	-44.90
southeast	sorghum	9.46	-6.29	-32.55
southeast	barley	17.30	8.90	-44.90
southeast	oats	17.30	8.90	-44.90
southeast	silage	-0.60	-1.90	-57.50
southeast	hay	-18.00	-3.46	-7.86
southeast	SUGARCANE	6.51	6.51	2.07
southeast	POTATOES	21.90	-7.80	-16.70

southeast	tomatofrsh	-17.24	-11.61	23.79
southeast	orangefrsh	44.97	44.97	29.43
southeast	orangeproc	44.97	44.97	29.43
southeast	grpfrtfrsh	44.97	44.97	29.43
southeast	grpfrtproc	44.97	44.97	29.43
southeast	PASTURE	46.94	0.00	0.00
deltastate	cotton	97.04	131.93	59.81
deltastate	corn	2.44	-2.17	-56.95
deltastate	soybeans	47.06	19.73	-7.20
deltastate	SOFT	17.30	8.90	-44.90
deltastate	sorghum	16.27	-5.22	-32.47
deltastate	rice	10.48	10.48	-6.08
deltastate	oats	17.30	8.90	-44.90
deltastate	silage	4.93	-2.39	-56.49
deltastate	hay	-9.52	-2.11	-15.95
deltastate	SUGARCANE	9.85	9.85	-5.47
deltastate	tomatofrsh	3.36	-2.08	7.55
deltastate	PASTURE	55.48	0.00	0.00
southplain	cotton	81.95	72.22	59.81
southplain	corn	20.04	-3.69	-53.09
southplain	soybeans	59.13	23.09	-14.63
southplain	HRWW	30.70	15.56	-28.33
southplain	sorghum	87.07	-8.84	-31.99
southplain	rice	8.79	8.79	-0.43
southplain	barley	115.01	58.12	-108.70
southplain	oats	80.51	41.44	-63.99
southplain	silage	22.22	-3.90	-52.90
southplain	hay	0.12	3.23	-20.34
southplain	SUGARBEET	21.06	8.53	-28.32
southplain	POTATOES	-5.60	-7.80	8.40
southplain	tomatofrsh	3.36	-2.08	7.55
southplain	orangefrsh	103.60	103.60	13.80
southplain	orangeproc	103.60	103.60	13.80
southplain	grpfrtfrsh	103.60	103.60	13.80
southplain	grpfrtproc	103.60	103.60	13.80
southplain	PASTURE	37.41	0.00	0.00
mountain	cotton	39.69	169.16	59.81
mountain	corn	31.61	-4.25	-48.90
mountain	HRSW	27.47	-1.41	-24.13
mountain	HRWW	63.61	7.94	-23.36
mountain	DURW	123.28	0.47	-31.38

mountain	sorghum	106.99	20.88	-33.88
mountain	barley	129.42	-7.11	-84.24
mountain	oats	99.38	6.55	-71.94
mountain	silage	33.00	-3.73	-54.33
mountain	hay	30.50	33.00	-11.02
mountain	SUGARBEET	33.71	51.24	-7.77
mountain	POTATOES	-28.15	-29.72	12.75
mountain	orangefrsh	111.60	111.60	3.90
mountain	orangeproc	111.60	111.60	3.90
mountain	grpfrtfrsh	111.60	111.60	3.90
mountain	grpfrtproc	111.60	111.60	3.90
mountain	PASTURE	49.27	0.00	0.00
pacific	cotton	53.71	94.95	59.81
pacific	corn	34.40	-3.20	-59.80
pacific	HRSW	131.10	11.75	-21.50
pacific	HRWW	110.50	5.15	-30.09
pacific	DURW	6.10	-28.30	-73.60
pacific	sorghum	106.99	20.88	-33.88
pacific	rice	5.47	5.47	2.26
pacific	barley	356.07	6.66	-121.94
pacific	oats	257.55	-11.29	-128.74
pacific	silage	34.40	-3.20	-59.80
pacific	hay	50.29	70.33	5.81
pacific	SUGARBEET	54.16	64.50	3.02
pacific	POTATOES	-5.03	-6.95	16.27
pacific	tomatofrsh	1413.04	-19.65	1.84
pacific	tomatoproc	1413.04	-19.65	1.84
pacific	orangefrsh	73.03	73.03	-19.01
pacific	orangeproc	73.03	73.03	-19.01
pacific	grpfrtfrsh	59.70	59.70	-3.11
pacific	grpfrtproc	59.68	59.68	-3.09
pacific	PASTURE	92.55	0.00	0.00

Table B1.5 Ten Region Level Aggregate of Data Set for CSIRO Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland	Irrigated	Irrigated
		Yield	Yield	Wateruse
northeast	corn	-3.02	-6.69	-35.44
northeast	soybeans	20.78	45.80	28.87
northeast	SOFT	-0.89	-7.30	-64.48
northeast	barley	1.91	-22.43	-267.83
northeast	oats	-30.11	-36.66	-323.36
northeast	silage	-0.69	-5.71	-42.80
northeast	hay	9.59	29.69	-3.63
northeast	POTATOES	9.51	-2.20	-2.12
northeast	tomatofrsh	27.25	25.25	-18.14
northeast	tomatoproc	27.88	26.24	-18.31
northeast	PASTURE	15.24	0.00	0.00
lakestates	corn	-4.35	-14.73	-33.74
lakestates	soybeans	80.93	68.11	-5.64
lakestates	HRSW	11.38	15.03	-10.06
lakestates	HRWW	10.65	11.92	-22.83
lakestates	SOFT	-9.27	-18.95	-60.38
lakestates	DURW	11.39	15.08	-9.86
lakestates	barley	42.00	52.87	-57.27
lakestates	oats	34.31	34.46	-109.09
lakestates	silage	-5.92	-13.78	-30.23
lakestates	hay	23.67	49.30	12.45
lakestates	SUGARBEET	13.77	48.98	19.19
lakestates	POTATOES	16.34	-7.78	-10.47
lakestates	tomatofrsh	49.03	41.09	-11.51
lakestates	tomatoproc	49.03	41.09	-11.51
lakestates	PASTURE	22.94	0.00	0.00
cornbelt	cotton	63.86	53.10	48.00
cornbelt	corn	-5.32	-18.28	-21.54
cornbelt	soybeans	25.91	37.74	21.60
cornbelt	SOFT	-6.69	-7.95	-59.03
cornbelt	sorghum	40.90	20.70	-11.37
cornbelt	rice	-5.65	-5.65	22.01
cornbelt	oats	5.12	4.71	-192.02
cornbelt	silage	-4.37	-17.75	-20.80
cornbelt	hay	23.72	30.86	-17.86
cornbelt	SUGARBEET	19.44	33.79	8.74
cornbelt	POTATOES	-12.14	-23.80	-5.40

cornbelt	tomatofrsh	5.14	-1.62	-46.27
cornbelt	tomatoproc	5.09	-1.66	-46.23
cornbelt	PASTURE	18.49	0.00	0.00
northplain	corn	43.76	-13.89	-19.02
northplain	soybeans	52.94	42.89	17.60
northplain	HRSW	19.44	14.42	-14.25
northplain	HRWW	44.88	-1.09	-23.99
northplain	DURW	18.28	13.33	-13.22
northplain	sorghum	54.31	31.72	1.21
northplain	barley	76.38	54.74	-56.73
northplain	oats	94.70	47.77	-85.00
northplain	silage	52.79	-12.05	-21.16
northplain	hay	9.38	32.16	18.59
northplain	SUGARBEET	3.76	38.40	27.52
northplain	POTATOES	-6.91	-8.34	4.40
northplain	PASTURE	13.27	0.00	0.00
appalachia	cotton	54.34	55.58	48.00
appalachia	corn	-7.24	-10.42	-2.84
appalachia	soybeans	-5.68	41.28	56.49
appalachia	SOFT	-10.37	-16.66	-55.89
appalachia	sorghum	-6.92	10.87	27.51
appalachia	barley	26.54	-52.34	-178.26
appalachia	oats	-48.14	-68.78	-182.78
appalachia	silage	-8.48	-8.38	1.01
appalachia	hay	-0.85	12.66	3.84
appalachia	POTATOES	9.10	-10.80	-9.48
appalachia	tomatofrsh	11.66	0.63	-13.87
appalachia	tomatoproc	11.66	0.63	-13.87
appalachia	PASTURE	5.46	0.00	0.00
southeast	cotton	68.25	92.19	48.00
southeast	corn	-1.34	-10.48	-12.31
southeast	soybeans	-17.35	29.40	46.30
southeast	SOFT	-17.17	-19.50	-6.49
southeast	sorghum	-21.40	-6.74	19.44
southeast	barley	-62.44	-73.28	-77.68
southeast	oats	-65.27	-73.42	-23.82
southeast	silage	-1.45	-10.47	-12.17
southeast	hay	-34.97	-14.61	43.68
southeast	POTATOES	9.10	-10.80	-9.48
southeast	tomatofrsh	-17.58	-16.58	12.78
southeast	orangefrsh	51.31	51.31	138.56

southeast	orangeproc	51.31	51.31	138.56
southeast	grpfrtfrsh	51.31	51.31	138.56
southeast	grpfrtproc	51.31	51.31	138.56
southeast	PASTURE	8.23	0.00	0.00
deltastate	cotton	66.48	99.93	48.00
deltastate	corn	2.14	-11.53	-16.71
deltastate	soybeans	-28.79	21.74	48.74
deltastate	SOFT	-17.92	-19.28	-12.52
deltastate	sorghum	-32.36	-12.66	23.56
deltastate	rice	-12.02	-12.02	17.21
deltastate	oats	-63.76	-72.00	-147.36
deltastate	silage	2.92	-12.32	-16.42
deltastate	hay	-25.83	-7.74	29.34
deltastate	SUGARCANE	-16.49	-16.49	11.79
deltastate	tomatofrsh	-4.51	-13.05	8.96
deltastate	PASTURE	8.16	0.00	0.00
southplain	cotton	46.78	52.43	48.00
southplain	corn	7.31	-16.75	-0.82
southplain	soybeans	-39.46	7.37	55.83
southplain	HRWW	3.41	-10.83	-0.85
southplain	sorghum	-0.20	4.67	-4.54
southplain	rice	-10.24	-10.24	13.34
southplain	barley	21.00	-40.90	-13.37
southplain	oats	-22.03	-59.75	76.08
southplain	silage	11.27	-17.90	-2.68
southplain	hay	97.20	6.67	6.67
southplain	SUGARBEET	172.27	13.10	-15.30
southplain	POTATOES	-6.13	-22.05	-5.25
southplain	tomatofrsh	-4.51	-13.05	8.96
southplain	orangefrsh	59.18	59.18	1.50
southplain	orangeproc	59.18	59.18	1.50
southplain	grpfrtfrsh	59.18	59.18	1.50
southplain	grpfrtproc	59.17	59.17	1.50
southplain	PASTURE	13.84	0.00	0.00
mountain	cotton	9.34	125.44	48.00
mountain	corn	45.38	551.91	14.09
mountain	HRSW	61.41	7.24	-39.14
mountain	HRWW	35.03	3.04	-18.03
mountain	DURW	25.16	5.85	-34.44
mountain	sorghum	98.92	124.52	-5.38
mountain	barley	308.55	27.68	-137.37

mountain	oats	337.71	23.35	-126.13
mountain	silage	37.94	231.72	3.72
mountain	hay	33.11	46.41	21.97
mountain	SUGARBEET	38.36	67.84	24.19
mountain	POTATOES	-16.18	-22.62	4.68
mountain	orangefrsh	90.75	90.75	3.52
mountain	orangeproc	90.75	90.75	3.52
mountain	grpfrtfrsh	90.75	90.75	3.52
mountain	grpfrtproc	90.75	90.75	3.52
mountain	PASTURE	35.29	0.00	0.00
pacific	cotton	47.21	66.17	48.00
pacific	corn	-3.86	56.86	-2.88
pacific	HRSW	69.36	18.02	-45.57
pacific	HRWW	85.58	18.44	-43.49
pacific	DURW	374.94	0.39	-36.79
pacific	sorghum	-53.92	-4.85	-4.62
pacific	rice	-16.75	-16.75	1.73
pacific	barley	262.60	59.82	-146.58
pacific	oats	322.50	57.09	-125.33
pacific	silage	-3.86	6.06	-1.57
pacific	hay	64.26	72.09	23.67
pacific	SUGARBEET	72.32	65.26	18.91
pacific	POTATOES	-1.75	-2.55	7.28
pacific	tomatofrsh	865.22	-13.92	-0.13
pacific	tomatoproc	865.22	-13.92	-0.13
pacific	orangefrsh	57.64	57.64	-26.73
pacific	orangeproc	57.64	57.64	-26.73
pacific	grpfrtfrsh	44.67	44.67	-7.66
pacific	grpfrtproc	44.65	44.65	-7.63
pacific	PASTURE	75.26	0.00	0.00



Table B1.6 Ten Region Level Aggregate of Data Set for REGCM Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	-14.73	-11.55	5.50
northeast	soybeans	-23.82	50.24	115.16
northeast	SOFT	-5.45	-11.78	-48.09
northeast	barley	-18.29	-42.27	-147.78
northeast	oats	-53.72	-60.22	-193.45
northeast	silage	-7.66	-10.26	-13.54
northeast	hay	9.59	29.69	-3.63
northeast	POTATOES	9.51	-2.20	-2.12
northeast	tomatofrsh	27.25	25.25	-18.14
northeast	tomatoproc	27.88	26.24	-18.31
northeast	PASTURE	15.24	0.00	0.00
lakestates	corn	-8.25	-14.70	-33.13
lakestates	soybeans	65.56	70.86	6.09
lakestates	HRSW	8.53	10.40	-19.80
lakestates	HRWW	2.87	3.30	-24.68
lakestates	SOFT	3.14	-3.81	-18.87
lakestates	DURW	8.62	10.51	-19.72
lakestates	barley	28.99	34.10	-82.81
lakestates	oats	10.49	8.95	-97.26
lakestates	silage	-12.04	-15.83	-34.11
lakestates	hay	23.67	49.30	12.45
lakestates	SUGARBEET	13.77	48.98	19.19
lakestates	POTATOES	16.34	-7.78	-10.47
lakestates	tomatofrsh	49.03	41.09	-11.51
lakestates	tomatoproc	49.03	41.09	-11.51
lakestates	PASTURE	22.94	0.00	0.00
cornbelt	cotton	74.46	67.82	48.00
cornbelt	corn	-14.49	-21.28	-6.68
cornbelt	soybeans	-4.67	33.53	45.71
cornbelt	SOFT	-9.12	-10.42	-56.34
cornbelt	sorghum	28.97	23.50	10.20
cornbelt	rice	-12.96	-12.96	45.52
cornbelt	oats	-20.26	-23.15	-206.34
cornbelt	silage	-13.98	-21.01	-3.71
cornbelt	hay	23.72	30.86	-17.86
cornbelt	SUGARBEET	19.44	33.79	8.74
cornbelt	POTATOES	-12.14	-23.80	-5.40

cornbelt	tomatofrsh	5.14	-1.62	-46.27
cornbelt	tomatoproc	5.09	-1.66	-46.23
cornbelt	PASTURE	18.49	0.00	0.00
northplain	corn	57.62	-15.41	-26.55
northplain	soybeans	111.57	41.79	10.08
northplain	HRSW	32.72	10.33	-31.36
northplain	HRWW	96.19	0.84	-42.40
northplain	DURW	35.75	11.04	-31.43
northplain	sorghum	100.78	35.52	-14.97
northplain	barley	137.15	41.86	-125.71
northplain	oats	132.12	27.04	-127.98
northplain	silage	78.01	-12.60	-26.79
northplain	hay	9.38	32.16	18.59
northplain	SUGARBEET	3.76	38.40	27.52
northplain	POTATOES	-6.91	-8.34	4.40
northplain	PASTURE	13.27	0.00	0.00
appalachia	cotton	44.94	80.28	48.00
appalachia	corn	-19.60	-11.33	38.70
appalachia	soybeans	-37.24	33.11	102.62
appalachia	SOFT	-10.78	-17.49	-49.49
appalachia	sorghum	-31.25	6.59	73.79
appalachia	barley	15.94	-69.72	-179.71
appalachia	oats	-51.21	-72.69	-157.77
appalachia	silage	-24.05	-11.52	36.51
appalachia	hay	-0.85	12.66	3.84
appalachia	POTATOES	9.10	-10.80	-9.48
appalachia	tomatofrsh	11.66	0.63	-13.87
appalachia	tomatoproc	11.66	0.63	-13.87
appalachia	PASTURE	5.46	0.00	0.00
southeast	cotton	44.54	100.50	48.00
southeast	corn	-1.07	-8.45	-0.97
southeast	soybeans	-68.89	18.60	116.11
southeast	SOFT	-18.01	-20.81	-10.67
southeast	sorghum	-53.96	-10.10	80.27
southeast	barley	-69.64	-82.20	-86.32
southeast	oats	-68.00	-77.81	-42.60
southeast	silage	0.14	-8.50	-2.42
southeast	hay	-34.97	-14.61	43.68
southeast	POTATOES	9.10	-10.80	-9.48
southeast	tomatofrsh	-17.58	-16.58	12.78
southeast	orangefrsh	51.31	51.31	138.56

southeast	orangeproc	51.31	51.31	138.56
southeast	grpfrtfrsh	51.31	51.31	138.56
southeast	grpfrtproc	51.31	51.31	138.56
southeast	PASTURE	8.23	0.00	0.00
deltastate	cotton	68.65	104.77	48.00
deltastate	corn	6.45	-9.50	-17.71
deltastate	soybeans	-42.22	13.73	65.45
deltastate	SOFT	-14.86	-16.73	-36.70
deltastate	sorghum	-34.09	-14.89	37.39
deltastate	rice	-12.64	-12.64	28.92
deltastate	oats	-46.20	-57.08	-210.52
deltastate	silage	6.75	-9.63	-14.89
deltastate	hay	-25.83	-7.74	29.34
deltastate	SUGARCANE	-13.76	-13.76	6.11
deltastate	tomatofrsh	-4.51	-13.05	8.96
deltastate	PASTURE	8.16	0.00	0.00
southplain	cotton	67.34	59.62	48.00
southplain	corn	34.18	-12.74	-1.50
southplain	soybeans	37.93	9.41	29.68
southplain	HRWW	41.47	-4.99	-29.60
southplain	sorghum	34.06	17.71	-9.22
southplain	rice	-7.24	-7.24	15.32
southplain	barley	167.43	-18.79	-107.72
southplain	oats	103.76	-35.23	-76.00
southplain	silage	26.57	-13.58	-0.63
southplain	hay	97.20	6.67	6.67
southplain	SUGARBEET	172.27	13.10	-15.30
southplain	POTATOES	-6.13	-22.05	-5.25
southplain	tomatofrsh	-4.51	-13.05	8.96
southplain	orangefrsh	59.18	59.18	1.50
southplain	orangeproc	59.18	59.18	1.50
southplain	grpfrtfrsh	59.18	59.18	1.50
southplain	grpfrtproc	59.17	59.17	1.50
southplain	PASTURE	13.84	0.00	0.00
mountain	cotton	45.93	137.03	48.00
mountain	corn	43.30	526.32	8.56
mountain	HRSW	22.80	-2.53	-23.46
mountain	HRWW	41.32	-2.78	-13.14
mountain	DURW	9.88	-3.80	-20.30
mountain	sorghum	181.85	191.16	-0.90
mountain	barley	177.06	-7.58	-90.88

mountain	oats	203.70	-2.85	-81.29
mountain	silage	44.56	219.95	0.17
mountain	hay	33.11	46.41	21.97
mountain	SUGARBEET	38.36	67.84	24.19
mountain	POTATOES	-16.18	-22.62	4.68
mountain	orangefrsh	90.75	90.75	3.52
mountain	orangeproc	90.75	90.75	3.52
mountain	grpfrtfrsh	90.75	90.75	3.52
mountain	grpfrtproc	90.75	90.75	3.52
mountain	PASTURE	35.29	0.00	0.00
pacific	cotton	27.59	81.15	48.00
pacific	corn	2.52	68.99	-1.12
pacific	HRSW	70.90	22.67	-40.90
pacific	HRWW	82.69	22.35	-39.30
pacific	DURW	211.17	-3.23	-16.69
pacific	sorghum	22.55	-2.43	-0.69
pacific	rice	-14.34	-14.34	9.09
pacific	barley	256.83	73.71	-131.71
pacific	oats	294.58	66.28	-113.77
pacific	silage	2.52	21.97	3.33
pacific	hay	64.26	72.09	23.67
pacific	SUGARBEET	72.32	65.26	18.91
pacific	POTATOES	-1.75	-2.55	7.28
pacific	tomatofrsh	865.22	-13.92	-0.13
pacific	tomatoproc	865.22	-13.92	-0.13
pacific	orangefrsh	57.64	57.64	-26.73
pacific	orangeproc	57.64	57.64	-26.73
pacific	grpfrtfrsh	44.67	44.67	-7.66
pacific	grpfrtproc	44.65	44.65	-7.63
pacific	PASTURE	75.26	0.00	0.00

Table B1.7 Ten Region Level Aggregate of Data Set for Hadley PNNL Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	27.04	28.59	63.35
northeast	soybeans	30.95	10.96	-14.75
northeast	SOFT	57.07	1.90	-16.30
northeast	sorghum	8.58	-3.70	-25.38
northeast	barley	218.34	1.90	-16.30
northeast	oats	217.01	1.90	-16.30
northeast	silage	29.47	32.01	81.24
northeast	hay	41.25	43.53	58.66
northeast	POTATOES	13.02	0.32	-1.96
northeast	tomatofrsh	22.85	20.49	-30.85
northeast	tomatoproc	23.07	20.99	-31.62
northeast	PASTURE	19.19	0.00	0.00
lakestates	corn	21.96	30.01	76.65
lakestates	soybeans	24.52	32.03	-17.57
lakestates	HRSW	40.15	4.90	-17.40
lakestates	HRWW	50.00	4.90	-17.40
lakestates	SOFT	56.67	4.90	-17.40
lakestates	DURW	40.00	4.90	-17.40
lakestates	barley	170.56	19.01	-67.52
lakestates	oats	204.60	16.75	-59.50
lakestates	silage	25.62	32.91	95.51
lakestates	hay	36.16	49.36	91.32
lakestates	SUGARBEET	26.61	44.93	79.00
lakestates	POTATOES	22.93	0.00	-9.25
lakestates	tomatofrsh	41.26	29.50	-17.99
lakestates	tomatoproc	41.26	29.50	-17.99
lakestates	PASTURE	21.41	0.00	0.00
cornbelt	cotton	38.99	42.99	36.19
cornbelt	corn	14.59	15.86	48.48
cornbelt	soybeans	6.54	14.44	-14.51
cornbelt	SOFT	62.25	3.25	-11.29
cornbelt	sorghum	10.41	-2.94	-16.33
cornbelt	rice	2.32	2.32	-3.22
cornbelt	oats	230.86	4.72	-28.92
cornbelt	silage	14.11	16.47	48.87
cornbelt	hay	32.14	35.23	42.45
cornbelt	SUGARBEET	37.50	39.76	55.09

cornbelt	POTATOES	8.45	-5.00	-6.06
cornbelt	tomatofrsh	13.24	7.15	-36.02
cornbelt	tomatoproc	13.23	7.14	-35.92
cornbelt	PASTURE	19.74	0.00	0.00
northplain	corn	-4.90	27.43	38.84
northplain	soybeans	-5.50	23.29	-1.76
northplain	HRSW	11.49	4.75	-18.39
northplain	HRWW	21.84	7.78	-8.49
northplain	DURW	7.00	5.63	-17.47
northplain	sorghum	20.57	5.43	-9.13
northplain	barley	39.37	20.91	-71.07
northplain	oats	88.30	19.63	-65.24
northplain	silage	-8.47	25.79	39.82
northplain	hay	9.93	43.11	52.61
northplain	SUGARBEET	0.14	42.24	57.22
northplain	POTATOES	18.92	1.55	-6.31
northplain	PASTURE	20.93	0.00	0.00
appalachia	cotton	27.99	48.30	36.19
appalachia	corn	7.99	12.18	73.49
appalachia	soybeans	9.39	12.03	-13.70
appalachia	SOFT	54.07	2.70	-13.29
appalachia	sorghum	20.31	-3.38	-24.05
appalachia	barley	187.46	2.36	-14.56
appalachia	oats	190.84	3.31	-10.98
appalachia	silage	9.91	13.35	70.91
appalachia	hay	28.53	30.15	42.96
appalachia	POTATOES	22.10	-3.90	-13.50
appalachia	tomatofrsh	17.34	8.24	-11.76
appalachia	tomatoproc	17.34	8.24	-11.76
appalachia	PASTURE	16.17	0.00	0.00
southeast	cotton	31.80	68.50	36.19
southeast	corn	7.14	11.51	219.92
southeast	soybeans	6.42	8.80	-4.45
southeast	SOFT	42.33	4.10	-8.00
southeast	sorghum	5.83	-2.97	-13.74
southeast	barley	151.72	4.10	-8.00
southeast	oats	170.80	4.10	-8.00
southeast	silage	5.85	10.23	223.70
southeast	hay	13.27	14.15	24.35
southeast	SUGARCANE	-0.99	-0.99	-11.03
southeast	POTATOES	22.10	-3.90	-13.50

southeast	tomatofrsh	-0.27	0.26	1.37
southeast	orangefrsh	25.37	25.37	14.67
southeast	orangeproc	25.37	25.37	14.67
southeast	grpfrtfrsh	25.37	25.37	14.67
southeast	grpfrtproc	25.37	25.37	14.67
southeast	PASTURE	24.80	0.00	0.00
deltastate	cotton	38.09	72.77	36.19
deltastate	corn	11.17	20.76	136.27
deltastate	soybeans	1.22	11.32	-3.41
deltastate	SOFT	59.54	4.10	-8.00
deltastate	sorghum	10.25	-2.44	-14.29
deltastate	rice	2.33	2.33	-3.38
deltastate	oats	250.00	4.10	-8.00
deltastate	silage	7.53	18.14	118.37
deltastate	hay	13.27	14.15	24.35
deltastate	SUGARCANE	2.32	2.32	-3.22
deltastate	tomatofrsh	8.54	3.26	-3.77
deltastate	PASTURE	22.29	0.00	0.00
southplain	cotton	32.17	39.83	36.19
southplain	corn	1.84	9.80	21.90
southplain	soybeans	-12.24	12.68	-3.94
southplain	HRWW	30.34	4.40	-4.24
southplain	sorghum	10.22	-3.30	-5.29
southplain	rice	0.84	0.84	2.16
southplain	barley	121.02	16.52	-14.62
southplain	oats	108.28	11.32	-16.07
southplain	silage	1.83	9.39	21.78
southplain	hay	202.15	25.29	-0.41
southplain	SUGARBEET	313.33	28.75	-19.31
southplain	POTATOES	-8.50	-1.00	7.70
southplain	tomatofrsh	8.54	3.26	-3.77
southplain	orangefrsh	46.90	46.90	-7.30
southplain	orangeproc	46.90	46.90	-7.30
southplain	grpfrtfrsh	46.90	46.90	-7.30
southplain	grpfrtproc	46.90	46.90	-7.30
southplain	PASTURE	15.35	0.00	0.00
mountain	cotton	15.58	93.31	36.19
mountain	corn	-31.33	51.26	64.92
mountain	HRSW	17.80	-1.22	-13.26
mountain	HRWW	22.26	3.31	-9.76
mountain	DURW	35.62	-0.48	-15.88

mountain	sorghum	35.01	16.21	-7.82
mountain	barley	50.63	-8.26	-47.64
mountain	oats	77.33	0.82	-38.94
mountain	silage	-36.41	40.27	41.30
mountain	hay	25.69	44.59	38.63
mountain	SUGARBEET	23.79	41.83	31.54
mountain	POTATOES	-7.16	-7.12	4.34
mountain	orangefrsh	69.90	69.90	3.30
mountain	orangeproc	69.90	69.90	3.30
mountain	grpfrtfrsh	69.90	69.90	3.30
mountain	grpfrtproc	69.90	69.90	3.30
mountain	PASTURE	19.50	0.00	0.00
pacific	cotton	21.09	52.37	36.19
pacific	corn	-12.96	10.80	13.95
pacific	HRSW	18.10	4.60	-11.60
pacific	HRWW	20.58	1.17	-17.96
pacific	DURW	32.00	-16.20	-50.20
pacific	sorghum	35.01	16.21	-7.82
pacific	rice	6.29	6.29	-0.24
pacific	barley	85.84	-1.87	-74.97
pacific	oats	92.71	-10.52	-81.96
pacific	silage	-13.58	1.08	9.43
pacific	hay	30.99	32.33	24.82
pacific	SUGARBEET	34.69	30.16	22.38
pacific	POTATOES	5.21	0.35	3.22
pacific	tomatofrsh	60.87	-9.06	0.13
pacific	tomatoproc	60.87	-9.06	0.13
pacific	orangefrsh	42.77	42.77	-14.53
pacific	orangeproc	42.77	42.77	-14.53
pacific	grpfrtfrsh	37.10	37.10	-3.53
pacific	grpfrtproc	37.09	37.09	-3.52
pacific	PASTURE	58.83	0.00	0.00



Table B1.8 Ten Region Level Aggregate of Data Set for Hadley PNNL Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	30.61	32.08	73.70
northeast	soybeans	26.37	20.49	-12.90
northeast	SOFT	83.49	8.50	-48.00
northeast	sorghum	8.73	-7.19	-38.07
northeast	barley	324.98	8.50	-48.00
northeast	oats	311.63	8.50	-48.00
northeast	silage	32.98	34.97	82.43
northeast	hay	43.75	35.29	55.18
northeast	POTATOES	18.44	-1.06	-8.50
northeast	tomatofrsh	39.03	36.84	-39.67
northeast	tomatoproc	39.63	37.61	-41.48
northeast	PASTURE	26.68	0.00	0.00
lakestates	corn	39.05	42.63	76.23
lakestates	soybeans	44.62	68.85	-22.38
lakestates	HRSW	50.08	11.50	-20.00
lakestates	HRWW	55.00	11.50	-20.00
lakestates	SOFT	70.00	11.50	-20.00
lakestates	DURW	50.00	11.50	-20.00
lakestates	barley	206.95	44.63	-77.61
lakestates	oats	227.06	39.32	-68.39
lakestates	silage	43.12	46.97	89.39
lakestates	hay	43.62	49.85	90.00
lakestates	SUGARBEET	37.18	47.03	82.25
lakestates	POTATOES	29.68	0.74	-13.45
lakestates	tomatofrsh	70.69	57.64	-22.30
lakestates	tomatoproc	70.69	57.64	-22.30
lakestates	PASTURE	32.29	0.00	0.00
cornbelt	cotton	99.33	77.93	59.81
cornbelt	corn	16.60	16.15	23.58
cornbelt	soybeans	8.27	30.51	-37.13
cornbelt	SOFT	71.15	8.73	-45.90
cornbelt	sorghum	27.25	-4.60	-47.58
cornbelt	rice	9.85	9.85	-5.47
cornbelt	oats	242.53	15.16	-76.68
cornbelt	silage	16.13	16.42	24.97
cornbelt	hay	41.64	38.76	27.76
cornbelt	SUGARBEET	40.00	38.55	37.41

cornbelt	POTATOES	15.33	-7.72	-12.43
cornbelt	tomatofrsh	21.41	12.72	-58.42
cornbelt	tomatoproc	21.41	12.74	-58.41
cornbelt	PASTURE	30.87	0.00	0.00
northplain	corn	-0.56	22.65	33.72
northplain	soybeans	-2.38	40.99	-10.35
northplain	HRSW	15.33	6.94	-21.13
northplain	HRWW	48.97	16.29	-31.52
northplain	DURW	13.47	6.90	-19.15
northplain	sorghum	68.28	4.01	-35.69
northplain	barley	60.07	28.52	-81.21
northplain	oats	101.63	40.14	-97.70
northplain	silage	-7.61	21.75	34.55
northplain	hay	18.20	45.76	63.29
northplain	SUGARBEET	8.99	41.95	65.09
northplain	POTATOES	7.73	-2.54	-3.01
northplain	PASTURE	26.63	0.00	0.00
appalachia	cotton	71.30	87.56	59.81
appalachia	corn	11.02	9.87	21.65
appalachia	soybeans	3.57	22.81	-21.10
appalachia	SOFT	69.17	8.65	-46.88
appalachia	sorghum	36.55	-3.75	-49.08
appalachia	barley	268.77	8.58	-47.35
appalachia	oats	252.15	8.76	-46.01
appalachia	silage	11.83	11.10	21.37
appalachia	hay	31.23	29.10	17.02
appalachia	POTATOES	21.90	-7.80	-16.70
appalachia	tomatofrsh	24.40	17.65	5.04
appalachia	tomatoproc	24.40	17.65	5.04
appalachia	PASTURE	20.31	0.00	0.00
southeast	cotton	81.00	124.19	59.81
southeast	corn	6.34	9.15	107.34
southeast	soybeans	7.48	14.62	-14.38
southeast	SOFT	53.78	8.90	-44.90
southeast	sorghum	9.46	-6.29	-32.55
southeast	barley	220.69	8.90	-44.90
southeast	oats	204.67	8.90	-44.90
southeast	silage	3.87	6.72	122.42
southeast	hay	29.59	29.25	19.14
southeast	SUGARCANE	6.51	6.51	2.07
southeast	POTATOES	21.90	-7.80	-16.70

southeast	tomatofrsh	-17.24	-11.61	23.79
southeast	orangefrsh	44.97	44.97	29.43
southeast	orangeproc	44.97	44.97	29.43
southeast	grpfrtfrsh	44.97	44.97	29.43
southeast	grpfrtproc	44.97	44.97	29.43
southeast	PASTURE	46.94	0.00	0.00
deltastate	cotton	97.04	131.93	59.81
deltastate	corn	0.87	4.82	61.75
deltastate	soybeans	-15.55	19.73	-7.20
deltastate	SOFT	58.84	8.90	-44.90
deltastate	sorghum	16.27	-5.22	-32.47
deltastate	rice	10.48	10.48	-6.08
deltastate	oats	262.50	8.90	-44.90
deltastate	silage	-1.33	3.69	45.31
deltastate	hay	29.59	29.25	19.14
deltastate	SUGARCANE	9.85	9.85	-5.47
deltastate	tomatofrsh	3.36	-2.08	7.55
deltastate	PASTURE	55.48	0.00	0.00
southplain	cotton	81.95	72.22	59.81
southplain	corn	-4.72	-4.74	11.37
southplain	soybeans	-20.47	23.09	-14.63
southplain	HRWW	28.27	15.56	-28.33
southplain	sorghum	87.07	-8.84	-31.99
southplain	rice	8.79	8.79	-0.43
southplain	barley	111.69	58.12	-108.70
southplain	oats	57.51	41.44	-63.99
southplain	silage	-3.06	-4.23	8.92
southplain	hay	249.62	35.34	5.68
southplain	SUGARBEET	380.00	35.00	-9.43
southplain	POTATOES	-5.60	-7.80	8.40
southplain	tomatofrsh	3.36	-2.08	7.55
southplain	orangefrsh	103.60	103.60	13.80
southplain	orangeproc	103.60	103.60	13.80
southplain	grpfrtfrsh	103.60	103.60	13.80
southplain	grpfrtproc	103.60	103.60	13.80
southplain	PASTURE	37.41	0.00	0.00
mountain	cotton	39.69	169.16	59.81
mountain	corn	3.50	65.91	70.67
mountain	HRSW	28.93	-1.41	-24.13
mountain	HRWW	44.95	7.94	-23.36
mountain	DURW	58.97	0.47	-31.38

mountain	sorghum	106.99	20.88	-33.88
mountain	barley	146.50	-7.11	-84.24
mountain	oats	171.10	6.55	-71.94
mountain	silage	-3.35	49.33	45.24
mountain	hay	38.77	46.47	55.81
mountain	SUGARBEET	33.41	51.22	54.94
mountain	POTATOES	-28.15	-29.72	12.75
mountain	orangefrsh	111.60	111.60	3.90
mountain	orangeproc	111.60	111.60	3.90
mountain	grpfrtfrsh	111.60	111.60	3.90
mountain	grpfrtproc	111.60	111.60	3.90
mountain	PASTURE	49.27	0.00	0.00
pacific	cotton	53.71	94.95	59.81
pacific	corn	108.93	27.54	20.36
pacific	HRSW	35.10	11.75	-21.50
pacific	HRWW	35.83	5.15	-30.09
pacific	DURW	40.00	-28.30	-73.60
pacific	sorghum	106.99	20.88	-33.88
pacific	rice	5.47	5.47	2.26
pacific	barley	144.79	6.66	-121.94
pacific	oats	145.52	-11.29	-128.74
pacific	silage	136.06	15.64	15.05
pacific	hay	58.39	33.46	33.98
pacific	SUGARBEET	67.14	30.33	28.73
pacific	POTATOES	-5.03	-6.95	16.27
pacific	tomatofrsh	1413.04	-19.65	1.84
pacific	tomatoproc	1413.04	-19.65	1.84
pacific	orangefrsh	73.03	73.03	-19.01
pacific	orangeproc	73.03	73.03	-19.01
pacific	grpfrtfrsh	59.70	59.70	-3.11
pacific	grpfrtproc	59.68	59.68	-3.09
pacific	PASTURE	92.55	0.00	0.00

Table B2.1 Ten Region Level Aggregate of Data Set for Canadian Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	0.30	-8.70	-45.80
northeast	soybeans	27.46	11.51	16.13
northeast	SOFT	3.10	1.20	-12.20
northeast	sorghum	27.54	15.72	-8.12
northeast	barley	3.10	1.20	-12.20
northeast	oats	3.10	1.20	-12.20
northeast	silage	0.30	-8.70	-45.80
northeast	hay	-10.05	7.85	8.83
northeast	POTATOES	28.95	-0.79	-12.68
northeast	tomatofrsh	28.35	25.78	-17.68
northeast	tomatoproc	28.52	26.50	-17.04
northeast	PASTURE	3.29	0.00	0.00
lakestates	corn	61.46	53.04	-19.75
lakestates	soybeans	92.93	49.10	-13.94
lakestates	HRSW	7.00	-11.40	-24.20
lakestates	HRWW	7.00	-11.40	-24.20
lakestates	SOFT	7.00	-11.40	-24.20
lakestates	DURW	7.00	-11.40	-24.20
lakestates	barley	27.16	-44.24	-93.91
lakestates	oats	23.94	-38.98	-82.75
lakestates	silage	41.85	35.26	-29.30
lakestates	hay	-2.79	12.67	-30.61
lakestates	SUGARBEET	-6.27	13.79	-36.51
lakestates	POTATOES	24.00	-12.75	-14.06
lakestates	tomatofrsh	42.13	37.50	-7.19
lakestates	tomatoproc	42.13	37.50	-7.19
lakestates	PASTURE	15.59	0.00	0.00
cornbelt	cotton	21.69	27.45	-10.54
cornbelt	corn	11.85	-7.27	-35.66
cornbelt	soybeans	33.64	18.02	7.82
cornbelt	SOFT	-4.00	-4.80	6.96
cornbelt	sorghum	31.19	11.18	-8.48
cornbelt	rice	6.34	6.34	-3.22
cornbelt	oats	11.23	-3.34	-17.02
cornbelt	silage	9.44	-7.91	-37.66
cornbelt	hay	-10.91	1.49	-19.88
cornbelt	SUGARBEET	-6.03	4.83	-7.77

cornbelt	POTATOES	-19.41	-17.63	5.27
cornbelt	tomatofrsh	-0.63	-4.29	-31.83
cornbelt	tomatoproc	-0.71	-4.36	-31.85
cornbelt	PASTURE	2.92	0.00	0.00
northplain	corn	20.66	-9.89	-37.08
northplain	soybeans	64.15	27.16	37.44
northplain	HRSW	19.99	1.16	-8.98
northplain	HRWW	-8.83	2.62	10.17
northplain	DURW	18.33	2.41	-1.75
northplain	sorghum	38.18	26.81	10.14
northplain	barley	75.46	7.16	-21.50
northplain	oats	64.49	2.94	-47.91
northplain	silage	19.91	-5.57	-30.86
northplain	hay	-4.81	4.73	-1.07
northplain	SUGARBEET	2.73	13.09	-5.09
northplain	POTATOES	10.01	-2.94	-5.36
northplain	PASTURE	8.54	0.00	0.00
appalachia	cotton	15.57	30.84	-10.54
appalachia	corn	-5.91	-13.23	-32.08
appalachia	soybeans	21.15	15.10	30.97
appalachia	SOFT	-1.25	-2.35	-0.71
appalachia	sorghum	21.81	12.10	-3.33
appalachia	barley	0.58	-0.86	-5.55
appalachia	oats	-4.59	-5.08	8.12
appalachia	silage	-5.04	-12.75	-36.08
appalachia	hay	-21.25	-10.77	37.88
appalachia	POTATOES	21.80	-8.70	-11.80
appalachia	tomatofrsh	23.99	8.08	-33.61
appalachia	tomatoproc	23.99	8.08	-33.61
appalachia	PASTURE	-11.34	0.00	0.00
southeast	cotton	17.69	43.74	-10.54
southeast	corn	-8.20	-15.80	-39.10
southeast	soybeans	5.28	20.29	42.86
southeast	SOFT	-8.90	-8.60	19.50
southeast	sorghum	24.33	17.84	2.09
southeast	barley	-8.90	-8.60	19.50
southeast	oats	-8.90	-8.60	19.50
southeast	silage	-8.20	-15.80	-39.10
southeast	hay	-58.22	-24.57	45.66
southeast	SUGARCANE	4.94	4.94	-32.41
southeast	POTATOES	21.80	-8.70	-11.80

southeast	tomatofrsh	-10.45	-12.27	-8.78
southeast	orangefrsh	8.97	8.97	4.07
southeast	orangeproc	8.97	8.97	4.07
southeast	grpfrtfrsh	8.97	8.97	4.07
southeast	grpfrtproc	8.97	8.97	4.07
southeast	PASTURE	-42.87	0.00	0.00
deltastate	cotton	21.19	46.47	-10.54
deltastate	corn	-6.61	-15.62	-36.95
deltastate	soybeans	-2.34	23.41	68.18
deltastate	SOFT	-8.90	-8.60	19.50
deltastate	sorghum	25.95	19.37	6.06
deltastate	rice	6.55	6.55	3.72
deltastate	oats	-8.90	-8.60	19.50
deltastate	silage	-5.30	-15.48	-35.19
deltastate	hay	-56.55	-26.28	38.01
deltastate	SUGARCANE	6.34	6.34	-3.22
deltastate	tomatofrsh	4.04	-11.21	-6.29
deltastate	PASTURE	-49.41	0.00	0.00
southplain	cotton	17.89	25.44	-10.54
southplain	corn	5.03	-14.21	-28.35
southplain	soybeans	20.38	15.84	46.22
southplain	HRWW	-38.86	-9.64	19.18
southplain	sorghum	52.37	18.57	-2.18
southplain	rice	5.75	5.75	-14.66
southplain	barley	-150.18	-37.06	83.69
southplain	oats	-83.59	-21.45	3.11
southplain	silage	5.39	-14.21	-25.57
southplain	hay	-29.40	-18.94	7.90
southplain	SUGARBEET	-5.82	-2.84	-5.23
southplain	POTATOES	-17.00	-3.90	17.00
southplain	tomatofrsh	4.04	-11.21	-6.29
southplain	orangefrsh	45.50	45.50	-14.40
southplain	orangeproc	45.50	45.50	-14.40
southplain	grpfrtfrsh	45.50	45.50	-14.40
southplain	grpfrtproc	45.50	45.50	-14.40
southplain	PASTURE	4.67	0.00	0.00
mountain	cotton	8.67	59.58	-10.54
mountain	corn	24.00	-10.79	-41.55
mountain	HRSW	31.42	2.53	-14.48
mountain	HRWW	24.70	4.29	-3.22
mountain	DURW	18.34	-0.25	-15.18

mountain	sorghum	52.88	49.49	16.29
mountain	barley	172.83	11.94	-58.75
mountain	oats	97.64	8.66	-40.61
mountain	silage	21.61	-9.05	-38.34
mountain	hay	9.57	17.29	1.20
mountain	SUGARBEET	17.69	37.14	5.02
mountain	POTATOES	-1.17	-3.65	4.17
mountain	orangefrsh	66.90	66.90	7.60
mountain	orangeproc	66.90	66.90	7.60
mountain	grpfrtfrsh	66.90	66.90	7.60
mountain	grpfrtproc	66.90	66.90	7.60
mountain	PASTURE	20.90	0.00	0.00
pacific	cotton	11.73	33.44	-10.54
pacific	corn	19.20	-7.30	-35.10
pacific	HRSW	16.25	0.25	-5.20
pacific	HRWW	15.53	0.29	-6.01
pacific	DURW	11.90	0.50	-10.10
pacific	sorghum	52.88	49.49	16.29
pacific	rice	14.13	14.13	12.16
pacific	barley	53.89	1.11	-22.75
pacific	oats	45.20	1.07	-21.96
pacific	silage	19.20	-7.30	-35.10
pacific	hay	26.76	38.26	9.37
pacific	SUGARBEET	32.23	33.27	6.36
pacific	POTATOES	-3.29	2.27	-1.13
pacific	tomatofrsh	1652.17	9.57	6.82
pacific	tomatoproc	1652.17	9.57	6.82
pacific	orangefrsh	36.87	36.87	-31.71
pacific	orangeproc	36.87	36.87	-31.71
pacific	grpfrtfrsh	27.48	27.48	-8.81
pacific	grpfrtproc	27.47	27.47	-8.78
pacific	PASTURE	47.53	0.00	0.00



Table B2.2 Ten Region Level Aggregate of Data Set for Canadian Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	-1.30	-10.50	-58.70
northeast	soybeans	27.41	7.50	-17.97
northeast	SOFT	16.20	4.30	-42.60
northeast	sorghum	30.03	4.62	-41.12
northeast	barley	16.20	4.30	-42.60
northeast	oats	16.20	4.30	-42.60
northeast	silage	-1.30	-10.50	-58.70
northeast	hay	1.86	21.57	45.24
northeast	POTATOES	-17.48	-1.69	18.21
northeast	tomatofrsh	23.79	31.00	73.75
northeast	tomatoproc	25.00	33.18	78.12
northeast	PASTURE	11.81	0.00	0.00
lakestates	corn	78.35	68.84	-25.80
lakestates	soybeans	91.62	109.61	35.38
lakestates	HRSW	-0.20	-12.90	-26.20
lakestates	HRWW	-0.20	-12.90	-26.20
lakestates	SOFT	-0.20	-12.90	-26.20
lakestates	DURW	-0.20	-12.90	-26.20
lakestates	barley	-0.78	-50.06	-101.67
lakestates	oats	-0.68	-44.11	-89.59
lakestates	silage	51.97	45.63	-40.64
lakestates	hay	3.52	20.94	16.51
lakestates	SUGARBEET	-6.42	21.74	57.31
lakestates	POTATOES	-11.25	-19.05	-5.10
lakestates	tomatofrsh	58.30	50.05	42.45
lakestates	tomatoproc	58.30	50.05	42.45
lakestates	PASTURE	22.45	0.00	0.00
cornbelt	cotton	116.63	93.47	106.54
cornbelt	corn	13.19	-13.79	-62.22
cornbelt	soybeans	71.37	23.44	-30.23
cornbelt	SOFT	4.53	-2.70	-24.23
cornbelt	sorghum	41.76	1.82	-53.82
cornbelt	rice	1.25	1.25	50.16
cornbelt	oats	20.19	-2.55	-61.51
cornbelt	silage	9.90	-14.02	-61.30
cornbelt	hay	10.34	1.26	-20.99
cornbelt	SUGARBEET	1.39	9.01	20.00

cornbelt	POTATOES	-36.23	-26.78	0.38
cornbelt	tomatofrsh	3.80	-1.78	-53.37
cornbelt	tomatoproc	3.81	-1.76	-53.47
cornbelt	PASTURE	20.42	0.00	0.00
northplain	corn	24.45	-14.90	-62.29
northplain	soybeans	114.54	28.04	27.35
northplain	HRSW	5.06	-4.46	-11.33
northplain	HRWW	-8.77	-1.30	-2.32
northplain	DURW	2.21	-3.20	-2.93
northplain	sorghum	79.96	9.86	-22.02
northplain	barley	14.58	-15.19	-28.78
northplain	oats	24.81	-18.19	-62.89
northplain	silage	17.59	-14.10	-53.37
northplain	hay	-11.84	-12.61	21.18
northplain	SUGARBEET	-19.36	-0.85	48.96
northplain	POTATOES	-64.32	-29.44	32.29
northplain	PASTURE	-3.01	0.00	0.00
appalachia	cotton	83.72	105.02	106.54
appalachia	corn	-4.81	-12.48	-49.15
appalachia	soybeans	29.45	13.16	17.36
appalachia	SOFT	9.28	0.20	-31.72
appalachia	sorghum	42.34	3.14	-39.25
appalachia	barley	12.19	1.93	-36.31
appalachia	oats	3.96	-2.94	-23.37
appalachia	silage	-4.34	-11.75	-49.37
appalachia	hay	-10.69	-1.73	47.58
appalachia	POTATOES	-17.60	-9.30	12.70
appalachia	tomatofrsh	-6.15	-22.91	-34.45
appalachia	tomatoproc	-6.15	-22.91	-34.45
appalachia	PASTURE	-3.28	0.00	0.00
southeast	cotton	95.11	148.95	106.54
southeast	corn	-6.20	-10.60	-39.10
southeast	soybeans	-15.34	11.86	72.31
southeast	SOFT	-2.90	-7.00	-12.60
southeast	sorghum	16.76	5.16	1.83
southeast	barley	-2.90	-7.00	-12.60
southeast	oats	-2.90	-7.00	-12.60
southeast	silage	-6.20	-10.60	-39.10
southeast	hay	-38.38	-21.53	126.61
southeast	SUGARCANE	10.85	10.85	-60.00
southeast	POTATOES	-17.60	-9.30	12.70

southeast	tomatofrsh	-19.95	-21.22	13.06
southeast	orangefrsh	125.93	125.93	506.07
southeast	orangeproc	125.93	125.93	506.07
southeast	grpfrtfrsh	125.93	125.93	506.07
southeast	grpfrtproc	125.93	125.93	506.07
southeast	PASTURE	4.04	0.00	0.00
deltastate	cotton	113.94	158.23	106.54
deltastate	corn	-4.72	-12.14	-41.02
deltastate	soybeans	-13.93	15.32	151.52
deltastate	SOFT	-2.90	-7.00	-12.60
deltastate	sorghum	30.06	6.19	14.72
deltastate	rice	2.44	2.44	60.18
deltastate	oats	-2.90	-7.00	-12.60
deltastate	silage	-3.50	-13.40	-42.59
deltastate	hay	-37.30	-19.26	65.50
deltastate	SUGARCANE	1.25	1.25	50.16
deltastate	tomatofrsh	2.91	-19.77	-25.16
deltastate	PASTURE	4.29	0.00	0.00
southplain	cotton	96.22	86.61	106.54
southplain	corn	7.47	-19.17	-53.11
southplain	soybeans	48.18	11.82	58.17
southplain	HRWW	-23.56	1.09	4.40
southplain	sorghum	114.15	5.45	-14.64
southplain	rice	4.08	4.08	11.21
southplain	barley	-88.04	1.93	20.81
southplain	oats	-62.63	11.44	-5.60
southplain	silage	7.38	-20.88	-54.16
southplain	hay	-20.23	-23.20	36.08
southplain	SUGARBEET	-20.49	-34.58	15.10
southplain	POTATOES	6.60	-75.50	-54.10
southplain	tomatofrsh	2.91	-19.77	-25.16
southplain	orangefrsh	40.70	40.70	13.90
southplain	orangeproc	40.70	40.70	13.90
southplain	grpfrtfrsh	40.70	40.70	13.90
southplain	grpfrtproc	40.70	40.70	13.90
southplain	PASTURE	-2.05	0.00	0.00
mountain	cotton	46.61	202.89	106.54
mountain	corn	31.20	-14.04	-65.81
mountain	HRSW	39.63	-9.32	-17.35
mountain	HRWW	68.31	-3.28	-4.78
mountain	DURW	132.41	-15.13	-25.03

mountain	sorghum	107.46	26.69	-7.49
mountain	barley	277.41	-17.42	-73.12
mountain	oats	127.32	-19.32	-47.65
mountain	silage	23.38	-14.17	-65.86
mountain	hay	16.77	16.32	23.27
mountain	SUGARBEET	26.10	34.54	25.39
mountain	POTATOES	-16.82	-29.47	7.88
mountain	orangefrsh	114.60	114.60	-0.70
mountain	orangeproc	114.60	114.60	-0.70
mountain	grpfrtfrsh	114.60	114.60	-0.70
mountain	grpfrtproc	114.60	114.60	-0.70
mountain	PASTURE	51.49	0.00	0.00
pacific	cotton	63.07	113.88	106.54
pacific	corn	15.50	-14.30	-65.90
pacific	HRSW	137.90	7.25	-27.20
pacific	HRWW	111.75	4.19	-26.76
pacific	DURW	-20.80	-11.30	-24.50
pacific	sorghum	107.46	26.69	-7.49
pacific	rice	11.88	11.88	8.19
pacific	barley	350.72	9.50	-94.21
pacific	oats	238.48	0.38	-81.12
pacific	silage	15.50	-14.30	-65.90
pacific	hay	62.24	52.94	23.25
pacific	SUGARBEET	71.56	50.83	18.98
pacific	POTATOES	-3.91	-5.88	10.75
pacific	tomatofrsh	12634.78	48.20	-14.17
pacific	tomatoproc	12634.78	48.20	-14.17
pacific	orangefrsh	77.90	77.90	-41.66
pacific	orangeproc	77.90	77.90	-41.66
pacific	grpfrtfrsh	54.41	54.41	-15.18
pacific	grpfrtproc	54.37	54.37	-15.14
pacific	PASTURE	102.12	0.00	0.00

Table B2.3 Ten Region Level Aggregate of Data Set for Hadley Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	5.30	-3.80	-38.50
northeast	soybeans	32.18	19.93	18.43
northeast	SOFT	8.20	1.90	-16.30
northeast	sorghum	33.32	21.85	-7.11
northeast	barley	8.20	1.90	-16.30
northeast	oats	8.20	1.90	-16.30
northeast	silage	5.30	-3.80	-38.50
northeast	hay	2.83	26.64	-54.43
northeast	POTATOES	13.02	1.35	-0.35
northeast	tomatofrsh	33.40	30.27	-20.03
northeast	tomatoproc	33.15	30.70	-19.24
northeast	PASTURE	19.19	0.00	0.00
lakestates	corn	37.12	24.24	-34.11
lakestates	soybeans	73.26	39.11	-13.76
lakestates	HRSW	15.40	4.90	-17.40
lakestates	HRWW	15.40	4.90	-17.40
lakestates	SOFT	15.40	4.90	-17.40
lakestates	DURW	15.40	4.90	-17.40
lakestates	barley	59.76	19.01	-67.52
lakestates	oats	52.66	16.75	-59.50
lakestates	silage	23.89	14.62	-36.90
lakestates	hay	2.35	28.37	-56.20
lakestates	SUGARBEET	-2.23	30.49	-50.22
lakestates	POTATOES	22.93	0.00	-9.25
lakestates	tomatofrsh	41.26	30.15	-10.79
lakestates	tomatoproc	41.26	30.15	-10.79
lakestates	PASTURE	21.41	0.00	0.00
cornbelt	cotton	38.99	42.99	36.19
cornbelt	corn	11.76	-3.14	-28.21
cornbelt	soybeans	41.53	20.57	-5.32
cornbelt	SOFT	9.07	4.72	-9.92
cornbelt	sorghum	29.45	19.96	-8.15
cornbelt	rice	8.34	8.34	1.29
cornbelt	oats	22.69	6.20	-26.69
cornbelt	silage	10.45	-3.23	-29.36
cornbelt	hay	5.99	23.38	-44.95
cornbelt	SUGARBEET	2.46	21.50	-34.88

cornbelt	POTATOES	8.45	-5.00	-6.06
cornbelt	tomatofrsh	13.36	7.47	-38.28
cornbelt	tomatoproc	13.35	7.47	-38.26
cornbelt	PASTURE	19.74	0.00	0.00
northplain	corn	20.61	-4.88	-33.58
northplain	soybeans	71.63	24.57	1.35
northplain	HRSW	20.81	7.58	-10.78
northplain	HRWW	17.31	8.96	-6.71
northplain	DURW	20.15	9.18	-7.92
northplain	sorghum	37.22	24.61	0.00
northplain	barley	81.96	33.48	-37.31
northplain	oats	84.67	27.19	-46.67
northplain	silage	19.89	-3.11	-29.90
northplain	hay	3.90	26.14	-27.41
northplain	SUGARBEET	2.52	29.33	-28.07
northplain	POTATOES	18.92	1.55	-6.31
northplain	PASTURE	20.93	0.00	0.00
appalachia	cotton	27.99	48.30	36.19
appalachia	corn	5.31	-0.89	-44.06
appalachia	soybeans	49.25	21.42	12.32
appalachia	SOFT	8.64	3.57	-12.49
appalachia	sorghum	44.68	19.72	-15.91
appalachia	barley	8.45	2.87	-14.10
appalachia	oats	8.97	4.85	-9.57
appalachia	silage	5.02	-0.97	-44.32
appalachia	hay	-0.56	18.99	-39.35
appalachia	POTATOES	22.10	-1.40	-9.60
appalachia	tomatofrsh	39.63	19.69	-39.50
appalachia	tomatoproc	39.63	19.69	-39.50
appalachia	PASTURE	16.17	0.00	0.00
southeast	cotton	31.80	68.50	36.19
southeast	corn	3.60	2.10	-52.20
southeast	soybeans	21.70	18.75	18.58
southeast	SOFT	9.40	6.50	-5.80
southeast	sorghum	27.37	23.05	5.07
southeast	barley	9.40	6.50	-5.80
southeast	oats	9.40	6.50	-5.80
southeast	silage	3.60	2.10	-52.20
southeast	hay	-25.29	-8.86	10.31
southeast	SUGARCANE	6.19	6.19	-11.72
southeast	POTATOES	22.10	-1.40	-9.60

southeast	tomatofrsh	1.08	3.66	17.70
southeast	orangefrsh	25.37	25.37	14.67
southeast	orangeproc	25.37	25.37	14.67
southeast	grpfrtfrsh	25.37	25.37	14.67
southeast	grpfrtproc	25.37	25.37	14.67
southeast	PASTURE	24.80	0.00	0.00
deltastate	cotton	38.09	72.77	36.19
deltastate	corn	4.68	1.33	-47.90
deltastate	soybeans	37.24	19.97	22.35
deltastate	SOFT	9.40	6.50	-5.80
deltastate	sorghum	28.24	23.89	-2.60
deltastate	rice	8.60	8.60	2.18
deltastate	oats	9.40	6.50	-5.80
deltastate	silage	5.57	0.70	-44.36
deltastate	hay	-22.99	-6.68	6.42
deltastate	SUGARCANE	8.34	8.34	1.29
deltastate	tomatofrsh	13.98	4.65	-7.55
deltastate	PASTURE	22.29	0.00	0.00
southplain	cotton	32.17	39.83	36.19
southplain	corn	12.23	-3.21	-27.72
southplain	soybeans	44.75	19.17	13.76
southplain	HRWW	11.21	4.79	-3.77
southplain	sorghum	25.66	18.43	8.18
southplain	rice	7.02	7.02	14.66
southplain	barley	40.91	17.89	-12.98
southplain	oats	33.78	12.73	-14.37
southplain	silage	12.58	-3.73	-23.09
southplain	hay	-13.46	4.96	-2.23
southplain	SUGARBEET	0.99	17.55	-14.01
southplain	POTATOES	-8.50	-1.00	7.70
southplain	tomatofrsh	13.98	4.65	-7.55
southplain	orangefrsh	46.90	46.90	-7.30
southplain	orangeproc	46.90	46.90	-7.30
southplain	grpfrtfrsh	46.90	46.90	-7.30
southplain	grpfrtproc	46.90	46.90	-7.30
southplain	PASTURE	15.35	0.00	0.00
mountain	cotton	15.58	93.31	36.19
mountain	corn	22.83	-5.99	-37.88
mountain	HRSW	29.16	7.25	-10.05
mountain	HRWW	33.45	9.89	-5.27
mountain	DURW	43.12	3.90	-12.37

mountain	sorghum	45.81	28.10	-4.89
mountain	barley	133.50	29.85	-39.99
mountain	oats	90.08	24.26	-29.34
mountain	silage	20.23	-4.25	-32.71
mountain	hay	11.14	30.58	-16.37
mountain	SUGARBEET	18.74	55.50	-12.20
mountain	POTATOES	-5.09	-3.64	5.75
mountain	orangefrsh	69.90	69.90	3.30
mountain	orangeproc	69.90	69.90	3.30
mountain	grpfrtfrsh	69.90	69.90	3.30
mountain	grpfrtproc	69.90	69.90	3.30
mountain	PASTURE	19.50	0.00	0.00
pacific	cotton	21.09	52.37	36.19
pacific	corn	17.60	-2.50	-27.50
pacific	HRSW	65.75	5.35	-12.30
pacific	HRWW	58.29	5.37	-13.67
pacific	DURW	20.50	5.50	-20.60
pacific	sorghum	45.81	28.10	-4.89
pacific	rice	15.55	15.55	15.21
pacific	barley	193.84	19.13	-50.94
pacific	oats	149.95	16.77	-48.03
pacific	silage	17.60	-2.50	-27.50
pacific	hay	28.38	61.06	-2.56
pacific	SUGARBEET	29.51	51.93	-3.84
pacific	POTATOES	5.21	0.35	3.22
pacific	tomatofrsh	1404.35	8.97	1.18
pacific	tomatoproc	1404.35	8.97	1.18
pacific	orangefrsh	42.77	42.77	-14.53
pacific	orangeproc	42.77	42.77	-14.53
pacific	grpfrtfrsh	37.10	37.10	-3.53
pacific	grpfrtproc	37.09	37.09	-3.52
pacific	PASTURE	58.83	0.00	0.00



Table B2.4 Ten Region Level Aggregate of Data Set for Hadley Scenario run for 2090 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	6.20	-3.20	-70.80
northeast	soybeans	45.34	28.83	14.29
northeast	SOFT	23.60	8.50	-48.00
northeast	sorghum	37.39	20.53	-27.41
northeast	barley	23.60	8.50	-48.00
northeast	oats	23.60	8.50	-48.00
northeast	silage	6.20	-3.20	-70.80
northeast	hay	10.57	31.95	-58.55
northeast	POTATOES	18.44	2.04	-6.76
northeast	tomatofrsh	42.45	41.18	-21.35
northeast	tomatoproc	43.18	42.13	-22.42
northeast	PASTURE	26.68	0.00	0.00
lakestates	corn	86.94	61.56	-61.74
lakestates	soybeans	128.80	75.41	-19.57
lakestates	HRSW	22.30	11.50	-20.00
lakestates	HRWW	22.30	11.50	-20.00
lakestates	SOFT	22.30	11.50	-20.00
lakestates	DURW	22.30	11.50	-20.00
lakestates	barley	86.54	44.63	-77.61
lakestates	oats	76.25	39.32	-68.39
lakestates	silage	60.49	43.71	-64.75
lakestates	hay	11.81	36.01	-61.22
lakestates	SUGARBEET	6.19	37.96	-55.08
lakestates	POTATOES	29.68	0.74	-13.45
lakestates	tomatofrsh	70.69	57.64	-22.30
lakestates	tomatoproc	70.69	57.64	-22.30
lakestates	PASTURE	32.29	0.00	0.00
cornbelt	cotton	99.33	77.93	59.81
cornbelt	corn	25.58	-0.55	-62.99
cornbelt	soybeans	91.33	35.98	-34.37
cornbelt	SOFT	20.60	10.51	-47.21
cornbelt	sorghum	58.91	17.51	-45.53
cornbelt	rice	17.50	17.50	7.07
cornbelt	oats	50.02	16.87	-76.35
cornbelt	silage	21.63	-1.25	-63.76
cornbelt	hay	15.66	23.32	-55.85
cornbelt	SUGARBEET	2.46	21.50	-34.88

cornbelt	POTATOES	15.33	-7.72	-12.43
cornbelt	tomatofrsh	24.64	15.30	-56.68
cornbelt	tomatoproc	24.69	15.34	-56.80
cornbelt	PASTURE	30.87	0.00	0.00
northplain	corn	31.71	-3.60	-51.81
northplain	soybeans	137.54	41.90	-7.70
northplain	HRSW	29.26	9.92	-14.15
northplain	HRWW	54.41	17.35	-29.16
northplain	DURW	24.65	10.65	-10.38
northplain	sorghum	91.39	27.32	-29.95
northplain	barley	110.07	41.71	-49.74
northplain	oats	158.71	46.98	-73.45
northplain	silage	36.28	-1.72	-55.37
northplain	hay	22.12	21.52	-34.22
northplain	SUGARBEET	20.00	27.82	-28.04
northplain	POTATOES	7.73	-2.54	-3.01
northplain	PASTURE	26.63	0.00	0.00
appalachia	cotton	71.30	87.56	59.81
appalachia	corn	4.72	-2.53	-62.75
appalachia	soybeans	86.83	29.80	-1.16
appalachia	SOFT	21.71	9.70	-47.67
appalachia	sorghum	66.29	19.32	-47.68
appalachia	barley	22.51	9.19	-47.81
appalachia	oats	20.27	10.62	-47.42
appalachia	silage	4.11	-2.56	-63.49
appalachia	hay	4.57	19.16	-51.80
appalachia	POTATOES	21.90	-0.30	-12.50
appalachia	tomatofrsh	24.40	17.65	5.04
appalachia	tomatoproc	24.40	17.65	5.04
appalachia	PASTURE	20.31	0.00	0.00
southeast	cotton	81.00	124.19	59.81
southeast	corn	-0.60	-1.90	-57.50
southeast	soybeans	42.86	26.97	8.32
southeast	SOFT	18.40	11.80	-47.10
southeast	sorghum	35.03	19.01	-18.14
southeast	barley	18.40	11.80	-47.10
southeast	oats	18.40	11.80	-47.10
southeast	silage	-0.60	-1.90	-57.50
southeast	hay	-18.00	-3.46	-7.86
southeast	SUGARCANE	14.73	14.73	6.90
southeast	POTATOES	21.90	-0.30	-12.50

southeast	tomatofrsh	-3.57	2.84	37.37
southeast	orangefrsh	44.97	44.97	29.43
southeast	orangeproc	44.97	44.97	29.43
southeast	grpfrtfrsh	44.97	44.97	29.43
southeast	grpfrtproc	44.97	44.97	29.43
southeast	PASTURE	46.94	0.00	0.00
deltastate	cotton	97.04	131.93	59.81
deltastate	corn	2.44	-2.17	-56.95
deltastate	soybeans	66.31	27.18	7.95
deltastate	SOFT	18.40	11.80	-47.10
deltastate	sorghum	42.92	20.77	-27.27
deltastate	rice	18.13	18.13	7.00
deltastate	oats	18.40	11.80	-47.10
deltastate	silage	4.93	-2.39	-56.49
deltastate	hay	-9.52	-2.11	-15.95
deltastate	SUGARCANE	17.50	17.50	7.07
deltastate	tomatofrsh	20.49	10.06	5.03
deltastate	PASTURE	55.48	0.00	0.00
southplain	cotton	81.95	72.22	59.81
southplain	corn	20.04	-3.69	-53.09
southplain	soybeans	90.92	28.24	-2.30
southplain	HRWW	30.70	15.83	-27.27
southplain	sorghum	116.92	13.50	-20.88
southplain	rice	17.69	17.69	13.36
southplain	barley	115.01	59.08	-105.00
southplain	oats	80.51	42.43	-60.17
southplain	silage	22.22	-3.90	-52.90
southplain	hay	0.12	3.23	-20.34
southplain	SUGARBEET	21.06	8.53	-28.32
southplain	POTATOES	-5.60	-7.80	8.40
southplain	tomatofrsh	20.49	10.06	5.03
southplain	orangefrsh	103.60	103.60	13.80
southplain	orangeproc	103.60	103.60	13.80
southplain	grpfrtfrsh	103.60	103.60	13.80
southplain	grpfrtproc	103.60	103.60	13.80
southplain	PASTURE	37.41	0.00	0.00
mountain	cotton	39.69	169.16	59.81
mountain	corn	31.61	-4.21	-49.04
mountain	HRSW	58.67	8.57	-13.88
mountain	HRWW	86.37	14.89	-11.13
mountain	DURW	125.70	5.00	-19.35

mountain	sorghum	129.06	46.07	-25.73
mountain	barley	319.72	40.01	-62.75
mountain	oats	193.20	33.79	-43.86
mountain	silage	33.00	-3.56	-54.95
mountain	hay	30.50	33.00	-11.02
mountain	SUGARBEET	33.71	51.24	-7.77
mountain	POTATOES	-16.06	-16.72	20.03
mountain	orangefrsh	111.60	111.60	3.90
mountain	orangeproc	111.60	111.60	3.90
mountain	grpfrtfrsh	111.60	111.60	3.90
mountain	grpfrtproc	111.60	111.60	3.90
mountain	PASTURE	49.27	0.00	0.00
pacific	cotton	53.71	94.95	59.81
pacific	corn	34.40	-2.90	-60.90
pacific	HRSW	131.10	14.05	-22.90
pacific	HRWW	110.50	12.11	-24.55
pacific	DURW	6.10	2.30	-32.90
pacific	sorghum	129.06	46.07	-25.73
pacific	rice	15.22	15.22	6.53
pacific	barley	356.07	39.60	-90.06
pacific	oats	257.55	29.56	-82.92
pacific	silage	34.40	-2.90	-60.90
pacific	hay	50.29	70.33	5.81
pacific	SUGARBEET	54.16	64.50	3.02
pacific	POTATOES	-5.03	-6.95	16.27
pacific	tomatofrsh	4617.39	15.60	-0.26
pacific	tomatoproc	4617.39	15.60	-0.26
pacific	orangefrsh	73.03	73.03	-19.01
pacific	orangeproc	73.03	73.03	-19.01
pacific	grpfrtfrsh	59.70	59.70	-3.11
pacific	grpfrtproc	59.68	59.68	-3.09
pacific	PASTURE	92.55	0.00	0.00

Table B2.5 Ten Region Level Aggregate of Data Set for CSIRO Scenario run for 2060 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	-3.02	-6.69	-35.44
northeast	soybeans	20.78	45.80	28.87
northeast	SOFT	-0.89	-7.30	-64.48
northeast	barley	1.91	-22.43	-267.83
northeast	oats	-30.11	-36.66	-323.36
northeast	silage	-0.69	-5.71	-42.80
northeast	hay	9.59	29.69	-3.63
northeast	POTATOES	10.73	0.23	-0.39
northeast	tomatofrsh	32.00	32.06	3.67
northeast	tomatoproc	32.46	33.13	4.85
northeast	PASTURE	15.24	0.00	0.00
lakestates	corn	-4.35	-14.73	-33.74
lakestates	soybeans	80.93	68.11	-5.64
lakestates	HRSW	11.38	15.03	-10.06
lakestates	HRWW	10.65	11.92	-22.83
lakestates	SOFT	-9.27	-18.95	-60.38
lakestates	DURW	11.39	15.08	-9.86
lakestates	barley	42.00	52.87	-57.27
lakestates	oats	34.31	34.46	-109.09
lakestates	silage	-5.92	-13.78	-30.23
lakestates	hay	23.67	49.30	12.45
lakestates	SUGARBEET	13.77	48.98	19.19
lakestates	POTATOES	16.34	-7.78	-10.47
lakestates	tomatofrsh	53.09	43.83	0.54
lakestates	tomatoproc	53.09	43.83	0.54
lakestates	PASTURE	22.94	0.00	0.00
cornbelt	cotton	63.86	53.10	48.00
cornbelt	corn	-5.32	-18.28	-21.54
cornbelt	soybeans	25.91	37.74	21.60
cornbelt	SOFT	-6.69	-7.95	-59.03
cornbelt	sorghum	40.90	20.70	-11.37
cornbelt	rice	-5.65	-5.65	22.01
cornbelt	oats	5.12	4.71	-192.02
cornbelt	silage	-4.37	-17.75	-20.80
cornbelt	hay	23.72	30.86	-17.86
cornbelt	SUGARBEET	19.44	33.79	8.74
cornbelt	POTATOES	-7.96	-14.28	-3.21

cornbelt	tomatofrsh	10.29	4.18	-45.04
cornbelt	tomatoproc	10.28	4.18	-45.09
cornbelt	PASTURE	18.49	0.00	0.00
northplain	corn	43.76	-13.89	-19.02
northplain	soybeans	52.94	42.89	17.60
northplain	HRSW	19.44	14.42	-14.25
northplain	HRWW	44.88	-1.09	-23.99
northplain	DURW	18.28	13.33	-13.22
northplain	sorghum	54.31	31.72	1.21
northplain	barley	76.38	54.74	-56.73
northplain	oats	94.70	47.77	-85.00
northplain	silage	52.79	-12.05	-21.16
northplain	hay	9.38	32.16	18.59
northplain	SUGARBEET	3.76	38.40	27.52
northplain	POTATOES	-6.91	-8.34	4.40
northplain	PASTURE	13.27	0.00	0.00
appalachia	cotton	54.34	55.58	48.00
appalachia	corn	-7.24	-10.42	-2.84
appalachia	soybeans	-5.68	41.28	56.49
appalachia	SOFT	-10.37	-16.66	-55.89
appalachia	sorghum	-6.92	10.87	27.51
appalachia	barley	26.54	-52.34	-178.26
appalachia	oats	-48.14	-68.78	-182.78
appalachia	silage	-8.48	-8.38	1.01
appalachia	hay	-0.85	12.66	3.84
appalachia	POTATOES	12.05	-4.93	-5.30
appalachia	tomatofrsh	20.47	5.63	-25.63
appalachia	tomatoproc	20.47	5.63	-25.63
appalachia	PASTURE	5.46	0.00	0.00
southeast	cotton	68.25	92.19	48.00
southeast	corn	-1.34	-10.48	-12.31
southeast	soybeans	-17.35	29.40	46.30
southeast	SOFT	-17.17	-19.50	-6.49
southeast	sorghum	-21.40	-6.74	19.44
southeast	barley	-62.44	-73.28	-77.68
southeast	oats	-65.27	-73.42	-23.82
southeast	silage	-1.45	-10.47	-12.17
southeast	hay	-34.97	-14.61	43.68
southeast	POTATOES	12.05	-4.93	-5.30
southeast	tomatofrsh	-8.22	-6.75	14.84
southeast	orangefrsh	51.31	51.31	138.56

southeast	orangeproc	51.31	51.31	138.56
southeast	grpfrtfrsh	51.31	51.31	138.56
southeast	grpfrtproc	51.31	51.31	138.56
southeast	PASTURE	8.23	0.00	0.00
deltastate	cotton	66.48	99.93	48.00
deltastate	corn	2.14	-11.53	-16.71
deltastate	soybeans	-28.79	21.74	48.74
deltastate	SOFT	-17.92	-19.28	-12.52
deltastate	sorghum	-32.36	-12.66	23.56
deltastate	rice	-12.02	-12.02	17.21
deltastate	oats	-63.76	-72.00	-147.36
deltastate	silage	2.92	-12.32	-16.42
deltastate	hay	-25.83	-7.74	29.34
deltastate	SUGARCANE	-16.49	-16.49	11.79
deltastate	tomatofrsh	10.36	-4.07	-8.49
deltastate	PASTURE	8.16	0.00	0.00
southplain	cotton	46.78	52.43	48.00
southplain	corn	7.31	-16.75	-0.82
southplain	soybeans	-39.46	7.37	55.83
southplain	HRWW	3.41	-10.83	-0.85
southplain	sorghum	-0.20	4.67	-4.54
southplain	rice	-10.24	-10.24	13.34
southplain	barley	21.00	-40.90	-13.37
southplain	oats	-22.03	-59.75	76.08
southplain	silage	11.27	-17.90	-2.68
southplain	hay	97.20	6.67	6.67
southplain	SUGARBEET	172.27	13.10	-15.30
southplain	POTATOES	-6.13	-22.05	-5.25
southplain	tomatofrsh	10.36	-4.07	-8.49
southplain	orangefrsh	59.18	59.18	1.50
southplain	orangeproc	59.18	59.18	1.50
southplain	grpfrtfrsh	59.18	59.18	1.50
southplain	grpfrtproc	59.17	59.17	1.50
southplain	PASTURE	13.84	0.00	0.00
mountain	cotton	9.34	125.44	48.00
mountain	corn	45.38	551.91	14.09
mountain	HRSW	61.41	7.24	-39.14
mountain	HRWW	35.03	3.04	-18.03
mountain	DURW	25.16	5.85	-34.44
mountain	sorghum	98.92	124.52	-5.38
mountain	barley	308.55	27.68	-137.37

mountain	oats	337.71	23.35	-126.13
mountain	silage	37.94	231.72	3.72
mountain	hay	33.11	46.41	21.97
mountain	SUGARBEET	38.36	67.84	24.19
mountain	POTATOES	-9.79	-13.37	9.46
mountain	orangefrsh	90.75	90.75	3.52
mountain	orangeproc	90.75	90.75	3.52
mountain	grpfrtfrsh	90.75	90.75	3.52
mountain	grpfrtproc	90.75	90.75	3.52
mountain	PASTURE	35.29	0.00	0.00
pacific	cotton	47.21	66.17	48.00
pacific	corn	-3.86	56.86	-2.88
pacific	HRSW	69.36	18.02	-45.57
pacific	HRWW	85.58	18.44	-43.49
pacific	DURW	374.94	0.39	-36.79
pacific	sorghum	-53.92	-4.85	-4.62
pacific	rice	-16.75	-16.75	1.73
pacific	barley	262.60	59.82	-146.58
pacific	oats	322.50	57.09	-125.33
pacific	silage	-3.86	6.06	-1.57
pacific	hay	64.26	72.09	23.67
pacific	SUGARBEET	72.32	65.26	18.91
pacific	POTATOES	-1.75	-2.55	7.28
pacific	tomatofrsh	5077.17	20.59	-1.61
pacific	tomatoproc	5077.17	20.59	-1.61
pacific	orangefrsh	57.64	57.64	-26.73
pacific	orangeproc	57.64	57.64	-26.73
pacific	grpfrtfrsh	44.67	44.67	-7.66
pacific	grpfrtproc	44.65	44.65	-7.63
pacific	PASTURE	75.26	0.00	0.00



Table B2.6 Ten Region Level Aggregate of Data Set for REGCM Scenario run for 2060 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	-14.73	-11.55	5.50
northeast	soybeans	-23.82	50.24	115.16
northeast	SOFT	-5.45	-11.78	-48.09
northeast	barley	-18.29	-42.27	-147.78
northeast	oats	-53.72	-60.22	-193.45
northeast	silage	-7.66	-10.26	-13.54
northeast	hay	9.59	29.69	-3.63
northeast	POTATOES	10.73	0.23	-0.39
northeast	tomatofrsh	32.00	32.06	3.67
northeast	tomatoproc	32.46	33.13	4.85
northeast	PASTURE	15.24	0.00	0.00
lakestates	corn	-8.25	-14.70	-33.13
lakestates	soybeans	65.56	70.86	6.09
lakestates	HRSW	8.53	10.40	-19.80
lakestates	HRWW	2.87	3.30	-24.68
lakestates	SOFT	3.14	-3.81	-18.87
lakestates	DURW	8.62	10.51	-19.72
lakestates	barley	28.99	34.10	-82.81
lakestates	oats	10.49	8.95	-97.26
lakestates	silage	-12.04	-15.83	-34.11
lakestates	hay	23.67	49.30	12.45
lakestates	SUGARBEET	13.77	48.98	19.19
lakestates	POTATOES	16.34	-7.78	-10.47
lakestates	tomatofrsh	53.09	43.83	0.54
lakestates	tomatoproc	53.09	43.83	0.54
lakestates	PASTURE	22.94	0.00	0.00
cornbelt	cotton	74.46	67.82	48.00
cornbelt	corn	-14.49	-21.28	-6.68
cornbelt	soybeans	-4.67	33.53	45.71
cornbelt	SOFT	-9.12	-10.42	-56.34
cornbelt	sorghum	28.97	23.50	10.20
cornbelt	rice	-12.96	-12.96	45.52
cornbelt	oats	-20.26	-23.15	-206.34
cornbelt	silage	-13.98	-21.01	-3.71
cornbelt	hay	23.72	30.86	-17.86
cornbelt	SUGARBEET	19.44	33.79	8.74
cornbelt	POTATOES	-7.96	-14.28	-3.21

cornbelt	tomatofrsh	10.29	4.18	-45.04
cornbelt	tomatoproc	10.28	4.18	-45.09
cornbelt	PASTURE	18.49	0.00	0.00
northplain	corn	57.62	-15.41	-26.55
northplain	soybeans	111.57	41.79	10.08
northplain	HRSW	32.72	10.33	-31.36
northplain	HRWW	96.19	0.84	-42.40
northplain	DURW	35.75	11.04	-31.43
northplain	sorghum	100.78	35.52	-14.97
northplain	barley	137.15	41.86	-125.71
northplain	oats	132.12	27.04	-127.98
northplain	silage	78.01	-12.60	-26.79
northplain	hay	9.38	32.16	18.59
northplain	SUGARBEET	3.76	38.40	27.52
northplain	POTATOES	-6.91	-8.34	4.40
northplain	PASTURE	13.27	0.00	0.00
appalachia	cotton	44.94	80.28	48.00
appalachia	corn	-19.60	-11.33	38.70
appalachia	soybeans	-37.24	33.11	102.62
appalachia	SOFT	-10.78	-17.49	-49.49
appalachia	sorghum	-31.25	6.59	73.79
appalachia	barley	15.94	-69.72	-179.71
appalachia	oats	-51.21	-72.69	-157.77
appalachia	silage	-24.05	-11.52	36.51
appalachia	hay	-0.85	12.66	3.84
appalachia	POTATOES	12.05	-4.93	-5.30
appalachia	tomatofrsh	20.47	5.63	-25.63
appalachia	tomatoproc	20.47	5.63	-25.63
appalachia	PASTURE	5.46	0.00	0.00
southeast	cotton	44.54	100.50	48.00
southeast	corn	-1.07	-8.45	-0.97
southeast	soybeans	-68.89	18.60	116.11
southeast	SOFT	-18.01	-20.81	-10.67
southeast	sorghum	-53.96	-10.10	80.27
southeast	barley	-69.64	-82.20	-86.32
southeast	oats	-68.00	-77.81	-42.60
southeast	silage	0.14	-8.50	-2.42
southeast	hay	-34.97	-14.61	43.68
southeast	POTATOES	12.05	-4.93	-5.30
southeast	tomatofrsh	-8.22	-6.75	14.84
southeast	orangefrsh	51.31	51.31	138.56

southeast	orangeproc	51.31	51.31	138.56
southeast	grpfrtfrsh	51.31	51.31	138.56
southeast	grpfrtproc	51.31	51.31	138.56
southeast	PASTURE	8.23	0.00	0.00
deltastate	cotton	68.65	104.77	48.00
deltastate	corn	6.45	-9.50	-17.71
deltastate	soybeans	-42.22	13.73	65.45
deltastate	SOFT	-14.86	-16.73	-36.70
deltastate	sorghum	-34.09	-14.89	37.39
deltastate	rice	-12.64	-12.64	28.92
deltastate	oats	-46.20	-57.08	-210.52
deltastate	silage	6.75	-9.63	-14.89
deltastate	hay	-25.83	-7.74	29.34
deltastate	SUGARCANE	-13.76	-13.76	6.11
deltastate	tomatofrsh	10.36	-4.07	-8.49
deltastate	PASTURE	8.16	0.00	0.00
southplain	cotton	67.34	59.62	48.00
southplain	corn	34.18	-12.74	-1.50
southplain	soybeans	37.93	9.41	29.68
southplain	HRWW	41.47	-4.99	-29.60
southplain	sorghum	34.06	17.71	-9.22
southplain	rice	-7.24	-7.24	15.32
southplain	barley	167.43	-18.79	-107.72
southplain	oats	103.76	-35.23	-76.00
southplain	silage	26.57	-13.58	-0.63
southplain	hay	97.20	6.67	6.67
southplain	SUGARBEET	172.27	13.10	-15.30
southplain	POTATOES	-6.13	-22.05	-5.25
southplain	tomatofrsh	10.36	-4.07	-8.49
southplain	orangefrsh	59.18	59.18	1.50
southplain	orangeproc	59.18	59.18	1.50
southplain	grpfrtfrsh	59.18	59.18	1.50
southplain	grpfrtproc	59.17	59.17	1.50
southplain	PASTURE	13.84	0.00	0.00
mountain	cotton	45.93	137.03	48.00
mountain	corn	43.30	526.32	8.56
mountain	HRSW	22.80	-2.53	-23.46
mountain	HRWW	41.32	-2.78	-13.14
mountain	DURW	9.88	-3.80	-20.30
mountain	sorghum	181.85	191.16	-0.90
mountain	barley	177.06	-7.58	-90.88

mountain	oats	203.70	-2.85	-81.29
mountain	silage	44.56	219.95	0.17
mountain	hay	33.11	46.41	21.97
mountain	SUGARBEET	38.36	67.84	24.19
mountain	POTATOES	-9.79	-13.37	9.46
mountain	orangefrsh	90.75	90.75	3.52
mountain	orangeproc	90.75	90.75	3.52
mountain	grpfrtfrsh	90.75	90.75	3.52
mountain	grpfrtproc	90.75	90.75	3.52
mountain	PASTURE	35.29	0.00	0.00
pacific	cotton	27.59	81.15	48.00
pacific	corn	2.52	68.99	-1.12
pacific	HRSW	70.90	22.67	-40.90
pacific	HRWW	82.69	22.35	-39.30
pacific	DURW	211.17	-3.23	-16.69
pacific	sorghum	22.55	-2.43	-0.69
pacific	rice	-14.34	-14.34	9.09
pacific	barley	256.83	73.71	-131.71
pacific	oats	294.58	66.28	-113.77
pacific	silage	2.52	21.97	3.33
pacific	hay	64.26	72.09	23.67
pacific	SUGARBEET	72.32	65.26	18.91
pacific	POTATOES	-1.75	-2.55	7.28
pacific	tomatofrsh	5077.17	20.59	-1.61
pacific	tomatoproc	5077.17	20.59	-1.61
pacific	orangefrsh	57.64	57.64	-26.73
pacific	orangeproc	57.64	57.64	-26.73
pacific	grpfrtfrsh	44.67	44.67	-7.66
pacific	grpfrtproc	44.65	44.65	-7.63
pacific	PASTURE	75.26	0.00	0.00

Table B2.7 Ten Region Level Aggregate of Data Set for Hadley PNNL Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	27.04	28.59	63.35
northeast	soybeans	30.95	19.93	18.43
northeast	SOFT	57.07	1.90	-16.30
northeast	sorghum	33.32	21.85	-7.11
northeast	barley	218.34	1.90	-16.30
northeast	oats	217.01	1.90	-16.30
northeast	silage	29.47	32.01	81.24
northeast	hay	41.25	43.53	58.66
northeast	POTATOES	13.02	1.35	-0.35
northeast	tomatofrsh	33.40	30.27	-20.03
northeast	tomatoproc	33.15	30.70	-19.24
northeast	PASTURE	19.19	0.00	0.00
lakestates	corn	21.96	30.01	76.65
lakestates	soybeans	24.52	39.11	-13.76
lakestates	HRSW	40.15	4.90	-17.40
lakestates	HRWW	50.00	4.90	-17.40
lakestates	SOFT	56.67	4.90	-17.40
lakestates	DURW	40.00	4.90	-17.40
lakestates	barley	170.56	19.01	-67.52
lakestates	oats	204.60	16.75	-59.50
lakestates	silage	25.62	32.91	95.51
lakestates	hay	36.16	49.36	91.32
lakestates	SUGARBEET	26.61	44.93	79.00
lakestates	POTATOES	22.93	0.00	-9.25
lakestates	tomatofrsh	41.26	30.15	-10.79
lakestates	tomatoproc	41.26	30.15	-10.79
lakestates	PASTURE	21.41	0.00	0.00
cornbelt	cotton	38.99	42.99	36.19
cornbelt	corn	14.59	15.86	48.48
cornbelt	soybeans	6.54	20.57	-5.32
cornbelt	SOFT	62.25	4.72	-9.92
cornbelt	sorghum	29.45	19.96	-8.15
cornbelt	rice	8.34	8.34	1.29
cornbelt	oats	230.86	6.20	-26.69
cornbelt	silage	14.11	16.47	48.87
cornbelt	hay	32.14	35.23	42.45
cornbelt	SUGARBEET	37.50	39.76	55.09

cornbelt	POTATOES	8.45	-5.00	-6.06
cornbelt	tomatofrsh	13.36	7.47	-38.28
cornbelt	tomatoproc	13.35	7.47	-38.26
cornbelt	PASTURE	19.74	0.00	0.00
northplain	corn	-4.90	27.43	38.84
northplain	soybeans	-5.50	24.57	1.35
northplain	HRSW	11.49	7.58	-10.78
northplain	HRWW	21.84	8.96	-6.71
northplain	DURW	7.00	9.18	-7.92
northplain	sorghum	37.22	24.61	0.00
northplain	barley	39.37	33.48	-37.31
northplain	oats	88.30	27.19	-46.67
northplain	silage	-8.47	25.79	39.82
northplain	hay	9.93	43.11	52.61
northplain	SUGARBEET	0.14	42.24	57.22
northplain	POTATOES	18.92	1.55	-6.31
northplain	PASTURE	20.93	0.00	0.00
appalachia	cotton	27.99	48.30	36.19
appalachia	corn	7.99	12.18	73.49
appalachia	soybeans	9.39	21.42	12.32
appalachia	SOFT	54.07	3.57	-12.49
appalachia	sorghum	44.68	19.72	-15.91
appalachia	barley	187.46	2.87	-14.10
appalachia	oats	190.84	4.85	-9.57
appalachia	silage	9.91	13.35	70.91
appalachia	hay	28.53	30.15	42.96
appalachia	POTATOES	22.10	-1.40	-9.60
appalachia	tomatofrsh	39.63	19.69	-39.50
appalachia	tomatoproc	39.63	19.69	-39.50
appalachia	PASTURE	16.17	0.00	0.00
southeast	cotton	31.80	68.50	36.19
southeast	corn	7.14	11.51	219.92
southeast	soybeans	6.42	18.75	18.58
southeast	SOFT	42.33	6.50	-5.80
southeast	sorghum	27.37	23.05	5.07
southeast	barley	151.72	6.50	-5.80
southeast	oats	170.80	6.50	-5.80
southeast	silage	5.85	10.23	223.70
southeast	hay	13.27	14.15	24.35
southeast	SUGARCANE	6.19	6.19	-11.72
southeast	POTATOES	22.10	-1.40	-9.60

southeast	tomatofrsh	1.08	3.66	17.70
southeast	orangefrsh	25.37	25.37	14.67
southeast	orangeproc	25.37	25.37	14.67
southeast	grpfrtfrsh	25.37	25.37	14.67
southeast	grpfrtproc	25.37	25.37	14.67
southeast	PASTURE	24.80	0.00	0.00
deltastate	cotton	38.09	72.77	36.19
deltastate	corn	11.17	20.76	136.27
deltastate	soybeans	1.22	19.97	22.35
deltastate	SOFT	59.54	6.50	-5.80
deltastate	sorghum	28.24	23.89	-2.60
deltastate	rice	8.60	8.60	2.18
deltastate	oats	250.00	6.50	-5.80
deltastate	silage	7.53	18.14	118.37
deltastate	hay	13.27	14.15	24.35
deltastate	SUGARCANE	8.34	8.34	1.29
deltastate	tomatofrsh	13.98	4.65	-7.55
deltastate	PASTURE	22.29	0.00	0.00
southplain	cotton	32.17	39.83	36.19
southplain	corn	1.84	9.80	21.90
southplain	soybeans	-12.24	19.17	13.76
southplain	HRWW	30.34	4.79	-3.77
southplain	sorghum	25.66	18.43	8.18
southplain	rice	7.02	7.02	14.66
southplain	barley	121.02	17.89	-12.98
southplain	oats	108.28	12.73	-14.37
southplain	silage	1.83	9.39	21.78
southplain	hay	202.15	25.29	-0.41
southplain	SUGARBEET	313.33	28.75	-19.31
southplain	POTATOES	-8.50	-1.00	7.70
southplain	tomatofrsh	13.98	4.65	-7.55
southplain	orangefrsh	46.90	46.90	-7.30
southplain	orangeproc	46.90	46.90	-7.30
southplain	grpfrtfrsh	46.90	46.90	-7.30
southplain	grpfrtproc	46.90	46.90	-7.30
southplain	PASTURE	15.35	0.00	0.00
mountain	cotton	15.58	93.31	36.19
mountain	corn	-31.33	51.26	64.92
mountain	HRSW	17.80	7.25	-10.05
mountain	HRWW	22.26	9.89	-5.27
mountain	DURW	35.62	3.90	-12.37

mountain	sorghum	45.81	28.10	-4.89
mountain	barley	50.63	29.85	-39.99
mountain	oats	77.33	24.26	-29.34
mountain	silage	-36.41	40.27	41.30
mountain	hay	25.69	44.59	38.63
mountain	SUGARBEET	23.79	41.83	31.54
mountain	POTATOES	-5.09	-3.64	5.75
mountain	orangefrsh	69.90	69.90	3.30
mountain	orangeproc	69.90	69.90	3.30
mountain	grpfrtfrsh	69.90	69.90	3.30
mountain	grpfrtproc	69.90	69.90	3.30
mountain	PASTURE	19.50	0.00	0.00
pacific	cotton	21.09	52.37	36.19
pacific	corn	-12.96	10.80	13.95
pacific	HRSW	18.10	5.35	-12.30
pacific	HRWW	20.58	5.37	-13.67
pacific	DURW	32.00	5.50	-20.60
pacific	sorghum	45.81	28.10	-4.89
pacific	rice	15.55	15.55	15.21
pacific	barley	85.84	19.13	-50.94
pacific	oats	92.71	16.77	-48.03
pacific	silage	-13.58	1.08	9.43
pacific	hay	30.99	32.33	24.82
pacific	SUGARBEET	34.69	30.16	22.38
pacific	POTATOES	5.21	0.35	3.22
pacific	tomatofrsh	1404.35	8.97	1.18
pacific	tomatoproc	1404.35	8.97	1.18
pacific	orangefrsh	42.77	42.77	-14.53
pacific	orangeproc	42.77	42.77	-14.53
pacific	grpfrtfrsh	37.10	37.10	-3.53
pacific	grpfrtproc	37.09	37.09	-3.52
pacific	PASTURE	58.83	0.00	0.00



Table B2.8 Ten Region Level Aggregate of Data Set for Hadley PNNL Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
northeast	corn	30.61	32.08	73.70
northeast	soybeans	26.37	28.83	14.29
northeast	SOFT	83.49	8.50	-48.00
northeast	sorghum	37.39	20.53	-27.41
northeast	barley	324.98	8.50	-48.00
northeast	oats	311.63	8.50	-48.00
northeast	silage	32.98	34.97	82.43
northeast	hay	43.75	35.29	55.18
northeast	POTATOES	18.44	2.04	-6.76
northeast	tomatofrsh	42.45	41.18	-21.35
northeast	tomatoproc	43.18	42.13	-22.42
northeast	PASTURE	26.68	0.00	0.00
lakestates	corn	39.05	42.63	76.23
lakestates	soybeans	44.62	75.41	-19.57
lakestates	HRSW	50.08	11.50	-20.00
lakestates	HRWW	55.00	11.50	-20.00
lakestates	SOFT	70.00	11.50	-20.00
lakestates	DURW	50.00	11.50	-20.00
lakestates	barley	206.95	44.63	-77.61
lakestates	oats	227.06	39.32	-68.39
lakestates	silage	43.12	46.97	89.39
lakestates	hay	43.62	49.85	90.00
lakestates	SUGARBEET	37.18	47.03	82.25
lakestates	POTATOES	29.68	0.74	-13.45
lakestates	tomatofrsh	70.69	57.64	-22.30
lakestates	tomatoproc	70.69	57.64	-22.30
lakestates	PASTURE	32.29	0.00	0.00
cornbelt	cotton	99.33	77.93	59.81
cornbelt	corn	16.60	16.15	23.58
cornbelt	soybeans	8.27	35.98	-34.37
cornbelt	SOFT	71.15	10.51	-47.21
cornbelt	sorghum	58.91	17.51	-45.53
cornbelt	rice	17.50	17.50	7.07
cornbelt	oats	242.53	16.87	-76.35
cornbelt	silage	16.13	16.42	24.97
cornbelt	hay	41.64	38.76	27.76
cornbelt	SUGARBEET	40.00	38.55	37.41

cornbelt	POTATOES	15.33	-7.72	-12.43
cornbelt	tomatofrsh	24.64	15.30	-56.68
cornbelt	tomatoproc	24.69	15.34	-56.80
cornbelt	PASTURE	30.87	0.00	0.00
northplain	corn	-0.56	22.65	33.72
northplain	soybeans	-2.38	41.90	-7.70
northplain	HRSW	15.33	9.92	-14.15
northplain	HRWW	48.97	17.35	-29.16
northplain	DURW	13.47	10.65	-10.38
northplain	sorghum	91.39	27.32	-29.95
northplain	barley	60.07	41.71	-49.74
northplain	oats	101.63	46.98	-73.45
northplain	silage	-7.61	21.75	34.55
northplain	hay	18.20	45.76	63.29
northplain	SUGARBEET	8.99	41.95	65.09
northplain	POTATOES	7.73	-2.54	-3.01
northplain	PASTURE	26.63	0.00	0.00
appalachia	cotton	71.30	87.56	59.81
appalachia	corn	11.02	9.87	21.65
appalachia	soybeans	3.57	29.80	-1.16
appalachia	SOFT	69.17	9.70	-47.67
appalachia	sorghum	66.29	19.32	-47.68
appalachia	barley	268.77	9.19	-47.81
appalachia	oats	252.15	10.62	-47.42
appalachia	silage	11.83	11.10	21.37
appalachia	hay	31.23	29.10	17.02
appalachia	POTATOES	21.90	-0.30	-12.50
appalachia	tomatofrsh	24.40	17.65	5.04
appalachia	tomatoproc	24.40	17.65	5.04
appalachia	PASTURE	20.31	0.00	0.00
southeast	cotton	81.00	124.19	59.81
southeast	corn	6.34	9.15	107.34
southeast	soybeans	7.48	26.97	8.32
southeast	SOFT	53.78	11.80	-47.10
southeast	sorghum	35.03	19.01	-18.14
southeast	barley	220.69	11.80	-47.10
southeast	oats	204.67	11.80	-47.10
southeast	silage	3.87	6.72	122.42
southeast	hay	29.59	29.25	19.14
southeast	SUGARCANE	14.73	14.73	6.90
southeast	POTATOES	21.90	-0.30	-12.50

southeast	tomatofrsh	-3.57	2.84	37.37
southeast	orangefrsh	44.97	44.97	29.43
southeast	orangeproc	44.97	44.97	29.43
southeast	grpfrtfrsh	44.97	44.97	29.43
southeast	grpfrtproc	44.97	44.97	29.43
southeast	PASTURE	46.94	0.00	0.00
deltastate	cotton	97.04	131.93	59.81
deltastate	corn	0.87	4.82	61.75
deltastate	soybeans	-15.55	27.18	7.95
deltastate	SOFT	58.84	11.80	-47.10
deltastate	sorghum	42.92	20.77	-27.27
deltastate	rice	18.13	18.13	7.00
deltastate	oats	262.50	11.80	-47.10
deltastate	silage	-1.33	3.69	45.31
deltastate	hay	29.59	29.25	19.14
deltastate	SUGARCANE	17.50	17.50	7.07
deltastate	tomatofrsh	20.49	10.06	5.03
deltastate	PASTURE	55.48	0.00	0.00
southplain	cotton	81.95	72.22	59.81
southplain	corn	-4.72	-4.74	11.37
southplain	soybeans	-20.47	28.24	-2.30
southplain	HRWW	28.27	15.83	-27.27
southplain	sorghum	116.92	13.50	-20.88
southplain	rice	17.69	17.69	13.36
southplain	barley	111.69	59.08	-105.00
southplain	oats	57.51	42.43	-60.17
southplain	silage	-3.06	-4.23	8.92
southplain	hay	249.62	35.34	5.68
southplain	SUGARBEET	380.00	35.00	-9.43
southplain	POTATOES	-5.60	-7.80	8.40
southplain	tomatofrsh	20.49	10.06	5.03
southplain	orangefrsh	103.60	103.60	13.80
southplain	orangeproc	103.60	103.60	13.80
southplain	grpfrtfrsh	103.60	103.60	13.80
southplain	grpfrtproc	103.60	103.60	13.80
southplain	PASTURE	37.41	0.00	0.00
mountain	cotton	39.69	169.16	59.81
mountain	corn	3.50	65.91	70.67
mountain	HRSW	28.93	8.57	-13.88
mountain	HRWW	44.95	14.89	-11.13
mountain	DURW	58.97	5.00	-19.35

mountain	sorghum	129.06	46.07	-25.73
mountain	barley	146.50	40.01	-62.75
mountain	oats	171.10	33.79	-43.86
mountain	silage	-3.35	49.33	45.24
mountain	hay	38.77	46.47	55.81
mountain	SUGARBEET	33.41	51.22	54.94
mountain	POTATOES	-16.06	-16.72	20.03
mountain	orangefrsh	111.60	111.60	3.90
mountain	orangeproc	111.60	111.60	3.90
mountain	grpfrtfrsh	111.60	111.60	3.90
mountain	grpfrtproc	111.60	111.60	3.90
mountain	PASTURE	49.27	0.00	0.00
pacific	cotton	53.71	94.95	59.81
pacific	corn	108.93	27.54	20.36
pacific	HRSW	35.10	14.05	-22.90
pacific	HRWW	35.83	12.11	-24.55
pacific	DURW	40.00	2.30	-32.90
pacific	sorghum	129.06	46.07	-25.73
pacific	rice	15.22	15.22	6.53
pacific	barley	144.79	39.60	-90.06
pacific	oats	145.52	29.56	-82.92
pacific	silage	136.06	15.64	15.05
pacific	hay	58.39	33.46	33.98
pacific	SUGARBEET	67.14	30.33	28.73
pacific	POTATOES	-5.03	-6.95	16.27
pacific	tomatofrsh	4617.39	15.60	-0.26
pacific	tomatoproc	4617.39	15.60	-0.26
pacific	orangefrsh	73.03	73.03	-19.01
pacific	orangeproc	73.03	73.03	-19.01
pacific	grpfrtfrsh	59.70	59.70	-3.11
pacific	grpfrtproc	59.68	59.68	-3.09
pacific	PASTURE	92.55	0.00	0.00

Appendix C Crop Simulator Data Sets for Scenarios Run

Table C1.1 Raw Crop Simulator Generated Data for Canadian Scenario run for 2030 without Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston, SC	csc	soybeans	-6.54	10.78	20.97
Charleston, SC	csc	sorghum	-7.01	-7.86	-4.76
Charleston, SC	csc	hay	-64.88	-29.45	50.34
Charleston, SC	csc	GRASS	-55.83	0.00	0.00
Charleston, SC	csc	tomat	-8.71	-14.75	0.63
louisville, KY	lKy	soybeans	-7.35	12.13	24.51
louisville, KY	lKy	sorghum	-8.16	-11.93	-5.58
louisville, KY	lKy	hay	-16.10	-7.33	37.04
louisville, KY	lKy	GRASS	-8.74	0.00	0.00
Raleigh, NC	rNc	soybeans	22.87	7.52	-5.99
Raleigh, NC	rNc	sorghum	2.68	-10.62	-30.96
Raleigh, NC	rNc	hay	-22.58	-8.18	-17.59
Raleigh, NC	rNc	GRASS	-4.81	0.00	0.00
Raleigh, NC	rNc	tomat	11.46	0.00	-18.49
Abilene, TX	ABTX	wheat	-19.00	-5.50	-45.60
Abilene, TX	ABTX	sorghum	26.76	-3.69	-14.20
Abilene, TX	ABTX	hay	-5.82	-2.84	-5.23
Abilene, TX	ABTX	GRASS	9.92	0.00	0.00
Alamosa, CO	ALCO	hay	-2.13	8.69	-4.73
Alamosa, CO	ALCO	POTATOES	-17.00	-3.90	17.00
Alamosa, CO	ALCO	GRASS	3.25	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	-6.94	5.09
Bakersfield, CA	BACA	hay	48.45	103.83	12.39
Bakersfield, CA	BACA	GRASS	90.61	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	26.00	-5.20
Boise, ID	BOID	wheat	36.60	-16.90	-31.50
Boise, ID	BOID	hay	30.72	57.70	11.80
Boise, ID	BOID	POTATOES	1.80	-6.90	-2.60
Boise, ID	BOID	GRASS	58.66	0.00	0.00
Buffalo, NY	BUNY	hay	-9.79	7.74	15.15
Buffalo, NY	BUNY	POTATOES	20.30	-13.30	-15.30
Buffalo, NY	BUNY	GRASS	1.77	0.00	0.00
Buffalo, NY	BUNY	tomat	25.95	25.18	-25.40
Caribou, ME	CAME	hay	-5.31	19.43	-53.04
Caribou, ME	CAME	POTATOES	34.00	4.80	-13.30

Caribou, ME	CAME	GRASS	13.43	0.00	0.00
Corpus Christi, TX	CCTX	hay	-25.27	-20.24	7.06
Corpus Christi, TX	CCTX	GRASS	15.39	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	45.50	-14.40
Columbus, OH	COOH	corn	0.30	-10.90	-46.10
Columbus, OH	COOH	wheat	3.10	1.20	-12.20
Columbus, OH	COOH	hay	-6.03	4.83	-7.77
Columbus, OH	COOH	GRASS	6.06	0.00	0.00
Columbus, OH	COOH	tomat	1.36	-6.08	-55.17
Daytona Beach, FL	DBFL	hay	-32.42	-26.38	16.85
Daytona Beach, FL	DBFL	GRASS	-11.25	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	20.00	-33.20
Dodge City, KS	DCKS	wheat	-38.80	-0.20	17.00
Dodge City, KS	DCKS	hay	-30.73	-20.57	2.67
Dodge City, KS	DCKS	GRASS	-24.49	0.00	0.00
Des Moines, IA	DEIA	corn	18.40	-11.70	-44.80
Des Moines, IA	DEIA	soybeans	25.30	7.50	-49.67
Des Moines, IA	DEIA	hay	-31.44	5.01	-97.55
Des Moines, IA	DEIA	GRASS	0.62	0.00	0.00
Duluth, MN	DUMN	corn	29.20	9.50	-18.30
Duluth, MN	DUMN	soybeans	111.55	75.00	-11.90
Duluth, MN	DUMN	hay	-7.10	19.61	-45.07
Duluth, MN	DUMN	GRASS	13.97	0.00	0.00
El Paso, TX	EPTX	sorghum	28.53	-5.98	-11.37
El Paso, TX	EPTX	rice	0.00	-0.92	4.45
El Paso, TX	EPTX	hay	4.99	-3.02	1.93
El Paso, TX	EPTX	GRASS	6.72	0.00	0.00
El Paso, TX	EPTX	tomat	115.03	-17.57	5.30
El Paso, TX	EPTX	oranges	0.00	30.10	-0.20
Fargo, ND	FAND	corn	24.90	8.30	-16.00
Fargo, ND	FAND	wheat	14.80	-9.60	-26.70
Fargo, ND	FAND	hay	12.84	22.16	-13.30
Fargo, ND	FAND	POTATOES	11.40	-2.50	-6.00
Fargo, ND	FAND	GRASS	30.28	0.00	0.00
Fresno, CA	FRCA	wheat	11.90	-24.10	-61.30
Fresno, CA	FRCA	rice	0.00	7.14	0.23
Fresno, CA	FRCA	hay	62.90	32.12	0.60
Fresno, CA	FRCA	GRASS	70.15	0.00	0.00
Fresno, CA	FRCA	tomat	39.13	-19.75	1.71
Glasgow, MT	GLMT	wheat	7.00	-17.50	-29.70
Glasgow, MT	GLMT	hay	4.51	20.37	10.28

Glasgow, MT	GLMT	GRASS	11.62	0.00	0.00
Goodland, KS	GOKS	wheat	-17.10	13.10	3.70
Goodland, KS	GOKS	sorghum	-2.52	-4.07	7.46
Goodland, KS	GOKS	hay	-32.01	-24.36	-8.27
Goodland, KS	GOKS	GRASS	-23.83	0.00	0.00
Indianapolis, IN	ININ	corn	-5.30	-15.20	-26.70
Indianapolis, IN	ININ	soybeans	13.03	12.20	8.81
Indianapolis, IN	ININ	hay	-14.84	-3.27	29.10
Indianapolis, IN	ININ	POTATOES	-33.20	-36.10	4.20
Indianapolis, IN	ININ	GRASS	-4.96	0.00	0.00
Indianapolis, IN	ININ	tomat	-12.27	-16.48	-31.78
Las Vegas, NV	LVNV	hay	26.24	-10.36	-5.00
Las Vegas, NV	LVNV	GRASS	36.37	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	58.20	-0.30
Madison, WI	MAWI	corn	-2.00	-5.80	-52.70
Madison, WI	MAWI	soybeans	49.27	16.78	-28.50
Madison, WI	MAWI	hay	1.94	12.00	-27.05
Madison, WI	MAWI	POTATOES	23.50	-12.70	-16.00
Madison, WI	MAWI	GRASS	19.52	0.00	0.00
Medford, OR	MEOR	hay	15.63	38.67	10.17
Medford, OR	MEOR	POTATOES	-5.60	-2.00	3.60
Medford, OR	MEOR	GRASS	26.64	0.00	0.00
Memphis, TN	METN	corn	-8.20	-16.40	-26.70
Memphis, TN	METN	soybeans	-33.91	9.20	35.64
Memphis, TN	METN	hay	-25.37	-16.30	83.30
Memphis, TN	METN	GRASS	-19.17	0.00	0.00
Miami, FL	MIFL	rice	0.00	-5.38	-26.90
Miami, FL	MIFL	hay	-27.86	-29.03	69.23
Miami, FL	MIFL	GRASS	-6.88	0.00	0.00
Miami, FL	MIFL	oranges	0.00	12.20	-69.30
Montgomery, AL	MOAL	soybeans	-46.99	15.83	50.00
Montgomery, AL	MOAL	sorghum	-4.54	-3.82	5.19
Montgomery, AL	MOAL	rice	0.00	1.90	35.78
Montgomery, AL	MOAL	hay	-62.10	-24.47	58.05
Montgomery, AL	MOAL	GRASS	-53.48	0.00	0.00
Montgomery, AL	MOAL	tomat	-1.90	-11.27	4.40
Montgomery, AL	MOAL	oranges	0.00	30.70	312.10
Muskegon, MI	MUMI	soybeans	76.71	27.39	-6.46
Muskegon, MI	MUMI	hay	-8.72	8.04	-6.48
Muskegon, MI	MUMI	POTATOES	25.50	-12.90	-8.30
Muskegon, MI	MUMI	GRASS	11.35	0.00	0.00

Muskegon, MI	MUMI	tomat	42.13	37.50	-7.19
North Platte, NE	npne	corn	24.70	-11.30	-42.50
North Platte, NE	npne	soybeans	5.68	28.23	16.07
North Platte, NE	npne	wheat	-17.10	5.90	11.90
North Platte, NE	npne	sorghum	28.82	23.14	6.84
North Platte, NE	npne	hay	-18.76	-4.67	21.93
North Platte, NE	npne	GRASS	1.20	0.00	0.00
Oklahoma City, OK	OKOK	wheat	-52.30	-12.30	60.90
Oklahoma City, OK	OKOK	sorghum	-9.62	-18.98	4.86
Oklahoma City, OK	OKOK	hay	-33.68	-22.89	27.77
Oklahoma City, OK	OKOK	GRASS	-25.70	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	-4.15	-18.53
Port Arthur, TX	PATX	hay	-36.59	-21.85	-5.72
Port Arthur, TX	PATX	GRASS	-2.51	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	60.30	194.20
Peoria, IL	PEIL	corn	18.50	-9.30	-31.80
Peoria, IL	PEIL	soybeans	42.21	12.57	-12.70
Peoria, IL	PEIL	sorghum	18.16	-6.35	-22.75
Peoria, IL	PEIL	hay	-5.30	9.04	-4.02
Peoria, IL	PEIL	GRASS	5.40	0.00	0.00
Pendleton, OR	PEOR	hay	10.64	70.57	25.40
Pendleton, OR	PEOR	POTATOES	-9.90	-1.00	1.20
Pendleton, OR	PEOR	GRASS	31.51	0.00	0.00
Pierre, SD	PISD	wheat	26.50	-3.70	-37.30
Pierre, SD	PISD	sorghum	48.61	11.38	-7.31
Pierre, SD	PISD	hay	-0.74	9.14	2.30
Pierre, SD	PISD	GRASS	6.80	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	8.36	3.39
Red Bluff, CA	RBCA	hay	27.64	18.66	0.50
Red Bluff, CA	RBCA	GRASS	49.60	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	41.70	-43.50
Savannah, GA	SAGA	soybeans	1.32	14.06	23.03
Savannah, GA	SAGA	sorghum	0.00	-6.44	-14.20
Savannah, GA	SAGA	hay	-59.70	-21.82	34.16
Savannah, GA	SAGA	GRASS	-45.06	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	17.80	53.50
Scottsbluff, NE	SBNE	hay	-13.64	-0.70	3.84
Scottsbluff, NE	SBNE	POTATOES	-9.90	-9.30	3.80
Scottsbluff, NE	SBNE	GRASS	-3.04	0.00	0.00
St. Cloud, MN	SCMN	corn	131.90	131.20	-2.60
St. Cloud, MN	SCMN	soybeans	60.95	23.02	-21.33



St. Cloud, MN	SCMN	wheat	7.00	-11.40	-24.20
St. Cloud, MN	SCMN	hay	-3.08	13.50	-56.86
St. Cloud, MN	SCMN	GRASS	17.82	0.00	0.00
Sioux Falls, SD	SFSD	corn	19.20	-7.30	-35.10
Sioux Falls, SD	SFSD	sorghum	70.33	25.22	-26.86
Sioux Falls, SD	SFSD	hay	5.96	12.87	-12.53
Sioux Falls, SD	SFSD	GRASS	26.00	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	-3.46	-17.04
Shreveport, LA	SHLA	hay	-53.74	-27.19	27.85
Shreveport, LA	SHLA	GRASS	-47.37	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	66.30	194.20
Spokane, WA	SPWA	wheat	16.25	0.25	-5.40
Spokane, WA	SPWA	hay	4.11	22.28	14.81
Spokane, WA	SPWA	GRASS	14.35	0.00	0.00
Tallahassee, FL	TAFL	hay	-53.10	-25.00	12.62
Tallahassee, FL	TAFL	GRASS	-33.19	0.00	0.00
Tallahassee, FL	TAFL	tomat	-12.30	-12.67	-10.48
Tallahassee, FL	TAFL	oranges	0.00	-5.30	114.70
Topeka, KS	TOKS	corn	3.60	-14.50	-23.20
Topeka, KS	TOKS	soybeans	17.12	5.03	11.83
Topeka, KS	TOKS	wheat	-11.30	-10.60	20.10
Topeka, KS	TOKS	sorghum	7.59	-11.56	-17.83
Topeka, KS	TOKS	hay	-2.66	-3.12	4.21
Topeka, KS	TOKS	GRASS	13.46	0.00	0.00
Tuscon, AZ	TUAZ	wheat	43.80	-5.80	-21.90
Tuscon, AZ	TUAZ	hay	-10.55	4.71	3.85
Tuscon, AZ	TUAZ	GRASS	-8.37	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	66.90	7.60
Yakima, WA	YAWA	hay	11.44	38.23	13.13
Yakima, WA	YAWA	POTATOES	-0.30	4.80	-3.50
Yakima, WA	YAWA	GRASS	6.73	0.00	0.00

Table C1.2 Raw Crop Simulator Generated Data for Canadian Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	-23.78	5.70	30.71
Charleston,SC	csc	sorghum	-12.57	-22.61	-19.05
Charleston,SC	csc	hay	-34.65	-22.61	53.62
Charleston,SC	csc	GRASS	1.24	0.00	0.00
Charleston,SC	csc	tomat	-22.46	-31.65	8.23
louisville,KY	lKy	soybeans	32.80	19.20	0.00
louisville,KY	lKy	sorghum	15.37	-19.21	-43.78
louisville,KY	lKy	hay	-0.88	0.16	23.48
louisville,KY	lKy	GRASS	4.69	0.00	0.00
Raleigh,NC	rNc	soybeans	24.56	7.50	-17.97
Raleigh,NC	rNc	sorghum	-0.93	-19.63	-50.25
Raleigh,NC	rNc	hay	-10.61	-3.96	-32.83
Raleigh,NC	rNc	GRASS	1.53	0.00	0.00
Raleigh,NC	rNc	tomat	-6.56	-23.33	-30.25
Abilene, TX	ABTX	wheat	-31.80	6.00	-29.80
Abilene, TX	ABTX	sorghum	13.68	-19.55	-17.44
Abilene, TX	ABTX	hay	-20.49	-34.58	15.10
Abilene, TX	ABTX	GRASS	-12.55	0.00	0.00
Alamosa, CO	ALCO	hay	-14.75	16.31	40.96
Alamosa, CO	ALCO	POTATOES	6.60	-75.50	-54.10
Alamosa, CO	ALCO	GRASS	-10.13	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	-25.51	3.47
Bakersfield, CA	BACA	hay	104.78	147.88	22.27
Bakersfield, CA	BACA	GRASS	160.44	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	50.70	-11.00
Boise, ID	BOID	wheat	40.50	-26.10	-43.80
Boise, ID	BOID	hay	51.67	61.24	29.91
Boise, ID	BOID	POTATOES	-35.00	-41.60	12.00
Boise, ID	BOID	GRASS	108.41	0.00	0.00
Buffalo, NY	BUNY	hay	3.57	21.99	40.08
Buffalo, NY	BUNY	POTATOES	-27.90	-18.20	7.60
Buffalo, NY	BUNY	GRASS	14.58	0.00	0.00
Buffalo, NY	BUNY	tomat	30.18	32.77	33.33
Caribou, ME	CAME	hay	-11.50	32.71	159.75
Caribou, ME	CAME	POTATOES	-17.40	3.70	22.10
Caribou, ME	CAME	GRASS	5.85	0.00	0.00
Corpus Christi, TX	CCTX	hay	-26.27	-22.62	15.48

Corpus Christi, TX	CCTX	GRASS	-11.16	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	40.70	13.90
Columbus, OH	COOH	corn	-1.30	-10.50	-58.70
Columbus, OH	COOH	wheat	16.20	4.30	-42.60
Columbus, OH	COOH	hay	1.39	9.01	20.00
Columbus, OH	COOH	GRASS	10.69	0.00	0.00
Columbus, OH	COOH	tomat	-8.81	-14.77	-37.93
Daytona Beach, FL	DBFL	hay	-22.29	-33.61	87.64
Daytona Beach, FL	DBFL	GRASS	6.95	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	75.20	219.40
Dodge City, KS	DCKS	wheat	-31.80	-1.30	2.90
Dodge City, KS	DCKS	hay	-30.28	-36.87	5.28
Dodge City, KS	DCKS	GRASS	-31.33	0.00	0.00
Des Moines, IA	DEIA	corn	16.70	-15.20	-67.50
Des Moines, IA	DEIA	soybeans	41.05	21.37	-52.98
Des Moines, IA	DEIA	hay	12.36	-0.64	-52.81
Des Moines, IA	DEIA	GRASS	27.32	0.00	0.00
Duluth, MN	DUMN	corn	11.40	-8.40	-19.70
Duluth, MN	DUMN	soybeans	56.61	170.85	52.98
Duluth, MN	DUMN	hay	-16.35	36.72	147.57
Duluth, MN	DUMN	GRASS	3.19	0.00	0.00
El Paso, TX	EPTX	sorghum	14.41	-21.86	-15.37
El Paso, TX	EPTX	rice	0.00	-52.03	31.94
El Paso, TX	EPTX	hay	-5.64	-18.33	6.00
El Paso, TX	EPTX	GRASS	-7.13	0.00	0.00
El Paso, TX	EPTX	tomat	-35.26	-74.85	52.65
El Paso, TX	EPTX	oranges	0.00	306.10	4.40
Fargo, ND	FAND	corn	10.60	-9.50	-20.70
Fargo, ND	FAND	wheat	-16.20	-19.60	-10.90
Fargo, ND	FAND	hay	-23.36	12.26	67.21
Fargo, ND	FAND	POTATOES	-63.90	-28.00	33.60
Fargo, ND	FAND	GRASS	-9.18	0.00	0.00
Fresno, CA	FRCA	wheat	-20.80	-46.50	-73.60
Fresno, CA	FRCA	rice	0.00	0.30	0.11
Fresno, CA	FRCA	hay	125.53	51.05	8.80
Fresno, CA	FRCA	GRASS	131.26	0.00	0.00
Fresno, CA	FRCA	tomat	1947.83	-7.21	-4.20
Glasgow, MT	GLMT	wheat	-24.10	-31.10	-27.40
Glasgow, MT	GLMT	hay	-20.97	-9.13	25.86
Glasgow, MT	GLMT	GRASS	-22.76	0.00	0.00
Goodland, KS	GOKS	wheat	-37.80	2.70	1.50

Goodland, KS	GOKS	sorghum	23.63	-21.92	-20.51
Goodland, KS	GOKS	hay	-35.32	-40.62	5.45
Goodland, KS	GOKS	GRASS	-34.77	0.00	0.00
Indianapolis, IN	ININ	corn	-3.90	-17.90	-60.00
Indianapolis, IN	ININ	soybeans	62.61	22.29	-28.19
Indianapolis, IN	ININ	hay	2.38	2.79	-2.75
Indianapolis, IN	ININ	POTATOES	-47.40	-51.20	-5.40
Indianapolis, IN	ININ	GRASS	13.71	0.00	0.00
Indianapolis, IN	ININ	tomat	-17.10	-22.53	-53.27
Las Vegas, NV	LVNV	hay	119.41	36.72	2.86
Las Vegas, NV	LVNV	GRASS	131.35	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	197.10	1.30
Madison, WI	MAWI	corn	-3.10	-4.90	-70.60
Madison, WI	MAWI	soybeans	77.25	40.76	-34.50
Madison, WI	MAWI	hay	13.70	19.76	-25.61
Madison, WI	MAWI	POTATOES	-9.20	-19.20	-7.20
Madison, WI	MAWI	GRASS	31.69	0.00	0.00
Medford, OR	MEOR	hay	49.88	46.46	22.69
Medford, OR	MEOR	POTATOES	10.90	-9.80	8.40
Medford, OR	MEOR	GRASS	73.71	0.00	0.00
Memphis, TN	METN	corn	-14.10	-23.30	-32.80
Memphis, TN	METN	soybeans	-81.96	5.16	83.39
Memphis, TN	METN	hay	-20.62	-1.82	136.41
Memphis, TN	METN	GRASS	-12.09	0.00	0.00
Miami, FL	MIFL	rice	0.00	0.57	-24.83
Miami, FL	MIFL	hay	-37.66	-40.12	56.41
Miami, FL	MIFL	GRASS	-21.45	0.00	0.00
Miami, FL	MIFL	oranges	0.00	10.60	-5.30
Montgomery, AL	MOAL	soybeans	-86.45	14.76	129.92
Montgomery, AL	MOAL	sorghum	-14.45	-15.20	9.96
Montgomery, AL	MOAL	rice	0.00	-1.36	86.24
Montgomery, AL	MOAL	hay	-35.21	-15.84	128.60
Montgomery, AL	MOAL	GRASS	20.04	0.00	0.00
Montgomery, AL	MOAL	tomat	-28.02	-42.12	27.67
Montgomery, AL	MOAL	oranges	0.00	258.50	916.30
Muskegon, MI	MUMI	soybeans	108.77	51.52	-12.93
Muskegon, MI	MUMI	hay	12.11	23.10	-16.37
Muskegon, MI	MUMI	POTATOES	-17.30	-18.60	1.10
Muskegon, MI	MUMI	GRASS	33.99	0.00	0.00
Muskegon, MI	MUMI	tomat	42.03	39.74	1.44
North Platte, NE	npne	corn	33.50	-14.00	-65.80

North Platte, NE	npne	soybeans	-7.57	29.64	25.89
North Platte, NE	npne	wheat	-33.60	-6.40	14.40
North Platte, NE	npne	sorghum	71.06	3.69	-22.15
North Platte, NE	npne	hay	-11.61	-21.04	31.89
North Platte, NE	npne	GRASS	5.84	0.00	0.00
Oklahoma City, OK	OKOK	wheat	-20.70	-6.90	19.80
Oklahoma City, OK	OKOK	sorghum	-38.01	-37.31	6.99
Oklahoma City, OK	OKOK	hay	-16.35	-23.11	27.25
Oklahoma City, OK	OKOK	GRASS	-7.83	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	-4.04	30.17
Port Arthur, TX	PATX	hay	-22.79	-18.64	58.58
Port Arthur, TX	PATX	GRASS	27.53	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	197.20	403.70
Peoria, IL	PEIL	corn	24.80	-10.50	-60.30
Peoria, IL	PEIL	soybeans	85.82	24.76	-36.48
Peoria, IL	PEIL	sorghum	22.25	-9.58	-53.08
Peoria, IL	PEIL	hay	12.72	11.17	-38.12
Peoria, IL	PEIL	GRASS	24.50	0.00	0.00
Pendleton, OR	PEOR	hay	27.01	71.87	45.00
Pendleton, OR	PEOR	POTATOES	-11.00	-15.30	9.40
Pendleton, OR	PEOR	GRASS	64.94	0.00	0.00
Pierre, SD	PISD	wheat	16.20	-9.40	-44.20
Pierre, SD	PISD	sorghum	41.09	-3.25	-13.78
Pierre, SD	PISD	hay	-11.89	-22.53	8.09
Pierre, SD	PISD	GRASS	-9.10	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	7.47	6.54
Red Bluff, CA	RBCA	hay	57.56	27.15	5.45
Red Bluff, CA	RBCA	GRASS	86.25	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	90.00	-55.30
Savannah, GA	SAGA	soybeans	-40.25	7.51	103.29
Savannah, GA	SAGA	sorghum	-10.73	-16.73	-11.73
Savannah, GA	SAGA	hay	-45.36	-23.08	138.51
Savannah, GA	SAGA	GRASS	-2.20	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	315.40	354.00
Scottsbluff, NE	SBNE	hay	-9.48	-31.62	0.00
Scottsbluff, NE	SBNE	POTATOES	-70.30	-50.10	13.50
Scottsbluff, NE	SBNE	GRASS	-0.79	0.00	0.00
St. Cloud, MN	SCMN	corn	196.70	191.30	-3.00
St. Cloud, MN	SCMN	soybeans	38.14	51.90	17.06
St. Cloud, MN	SCMN	wheat	-0.20	-12.90	-26.20
St. Cloud, MN	SCMN	hay	-14.32	5.44	37.96

St. Cloud, MN	SCMN	GRASS	0.19	0.00	0.00
Sioux Falls, SD	SFSD	corn	8.20	-22.90	-54.50
Sioux Falls, SD	SFSD	sorghum	71.04	19.59	-38.84
Sioux Falls, SD	SFSD	hay	8.21	3.40	6.68
Sioux Falls, SD	SFSD	GRASS	24.22	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	-10.89	37.30
Shreveport, LA	SHLA	hay	-38.36	-20.99	33.52
Shreveport, LA	SHLA	GRASS	-3.59	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	299.00	202.90
Spokane, WA	SPWA	wheat	137.90	4.80	-26.35
Spokane, WA	SPWA	hay	41.21	63.49	44.35
Spokane, WA	SPWA	GRASS	96.62	0.00	0.00
Tallahassee, FL	T AFL	hay	-43.73	-25.74	333.01
Tallahassee, FL	T AFL	GRASS	5.73	0.00	0.00
Tallahassee, FL	T AFL	tomat	-44.39	-43.11	37.14
Tallahassee, FL	T AFL	oranges	0.00	292.00	1304.10
Topeka, KS	TOKS	corn	4.80	-22.00	-53.30
Topeka, KS	TOKS	soybeans	37.20	4.91	-11.47
Topeka, KS	TOKS	wheat	-4.40	-9.70	-21.00
Topeka, KS	TOKS	sorghum	6.36	-22.01	-45.65
Topeka, KS	TOKS	hay	13.41	-3.93	-17.79
Topeka, KS	TOKS	GRASS	27.28	0.00	0.00
Tuscon, AZ	TUAZ	wheat	604.50	-14.90	-59.40
Tuscon, AZ	TUAZ	hay	63.89	34.83	0.00
Tuscon, AZ	TUAZ	GRASS	59.62	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	114.60	-0.70
Yakima, WA	YAWA	hay	25.79	44.63	32.54
Yakima, WA	YAWA	POTATOES	-6.50	-1.40	12.00
Yakima, WA	YAWA	GRASS	43.30	0.00	0.00

Table C1.3 Raw Crop Simulator Generated Data for Hadley Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	18.47	9.00	-6.74
Charleston,SC	csc	sorghum	8.05	-3.18	-13.33
Charleston,SC	csc	hay	-25.92	-15.05	-2.58
Charleston,SC	csc	GRASS	28.10	0.00	0.00
Charleston,SC	csc	tomat	11.27	3.87	-11.39
louisville,KY	lKy	soybeans	50.26	13.61	-15.02
louisville,KY	lKy	sorghum	24.26	-3.27	-23.61
louisville,KY	lKy	hay	4.35	19.67	-32.05
louisville,KY	lKy	GRASS	16.89	0.00	0.00
Raleigh,NC	rNc	soybeans	32.18	10.96	-14.75
Raleigh,NC	rNc	sorghum	8.58	-3.70	-25.38
Raleigh,NC	rNc	hay	-5.21	19.13	-64.61
Raleigh,NC	rNc	GRASS	18.52	0.00	0.00
Raleigh,NC	rNc	tomat	17.34	8.24	-11.76
Abilene, TX	ABTX	wheat	18.40	4.70	-11.90
Abilene, TX	ABTX	sorghum	10.39	-3.12	-5.27
Abilene, TX	ABTX	hay	0.99	17.55	-14.01
Abilene, TX	ABTX	GRASS	19.40	0.00	0.00
Alamosa, CO	ALCO	hay	6.24	23.48	-14.89
Alamosa, CO	ALCO	POTATOES	-8.50	-1.00	7.70
Alamosa, CO	ALCO	GRASS	12.76	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	0.45	1.85
Bakersfield, CA	BACA	hay	32.50	107.84	0.00
Bakersfield, CA	BACA	GRASS	70.88	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	36.20	-1.80
Boise, ID	BOID	wheat	19.50	-7.40	-11.20
Boise, ID	BOID	hay	27.77	82.17	0.49
Boise, ID	BOID	POTATOES	-7.00	-8.40	3.70
Boise, ID	BOID	GRASS	58.99	0.00	0.00
Buffalo, NY	BUNY	hay	3.75	27.00	-55.04
Buffalo, NY	BUNY	POTATOES	22.10	-3.90	-13.50
Buffalo, NY	BUNY	GRASS	20.54	0.00	0.00
Buffalo, NY	BUNY	tomat	24.02	23.10	-34.92
Caribou, ME	CAME	hay	-3.47	26.99	-40.37
Caribou, ME	CAME	POTATOES	6.60	3.30	6.20
Caribou, ME	CAME	GRASS	14.11	0.00	0.00
Corpus Christi, TX	CCTX	hay	-21.33	-15.75	-16.50

Corpus Christi, TX	CCTX	GRASS	16.60	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	46.90	-7.30
Columbus, OH	COOH	corn	5.30	-5.30	-39.50
Columbus, OH	COOH	wheat	8.20	1.90	-16.30
Columbus, OH	COOH	hay	2.46	21.50	-34.88
Columbus, OH	COOH	GRASS	13.36	0.00	0.00
Columbus, OH	COOH	tomat	13.64	7.50	-39.08
Daytona Beach, FL	DBFL	hay	-20.24	-16.86	13.48
Daytona Beach, FL	DBFL	GRASS	11.52	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	24.60	11.60
Dodge City, KS	DCKS	wheat	16.50	7.50	-5.70
Dodge City, KS	DCKS	hay	3.17	22.34	-19.73
Dodge City, KS	DCKS	GRASS	20.52	0.00	0.00
Des Moines, IA	DEIA	corn	11.60	-5.30	-24.70
Des Moines, IA	DEIA	soybeans	18.21	12.62	-13.91
Des Moines, IA	DEIA	hay	3.63	23.54	-49.38
Des Moines, IA	DEIA	GRASS	22.48	0.00	0.00
Duluth, MN	DUMN	corn	25.20	-0.30	-31.20
Duluth, MN	DUMN	soybeans	72.79	53.92	-13.10
Duluth, MN	DUMN	hay	-8.40	31.99	-47.72
Duluth, MN	DUMN	GRASS	13.09	0.00	0.00
El Paso, TX	EPTX	sorghum	11.18	-5.31	-4.78
El Paso, TX	EPTX	rice	0.00	1.13	4.31
El Paso, TX	EPTX	hay	2.87	12.18	-18.99
El Paso, TX	EPTX	GRASS	7.56	0.00	0.00
El Paso, TX	EPTX	tomat	-25.43	-14.86	8.21
El Paso, TX	EPTX	oranges	0.00	32.30	1.00
Fargo, ND	FAND	corn	24.00	-0.10	-28.60
Fargo, ND	FAND	wheat	19.30	5.70	-17.40
Fargo, ND	FAND	hay	2.39	31.08	-30.61
Fargo, ND	FAND	POTATOES	20.70	2.10	-6.90
Fargo, ND	FAND	GRASS	21.99	0.00	0.00
Fresno, CA	FRCA	wheat	20.50	-16.20	-50.20
Fresno, CA	FRCA	rice	0.00	7.64	-1.71
Fresno, CA	FRCA	hay	32.76	37.38	-6.74
Fresno, CA	FRCA	GRASS	45.08	0.00	0.00
Fresno, CA	FRCA	tomat	60.87	-9.06	0.13
Glasgow, MT	GLMT	wheat	16.10	0.20	-14.00
Glasgow, MT	GLMT	hay	13.97	22.29	-23.47
Glasgow, MT	GLMT	GRASS	19.90	0.00	0.00
Goodland, KS	GOKS	wheat	22.20	12.00	-10.10



Goodland, KS	GOKS	sorghum	11.74	2.03	-2.56
Goodland, KS	GOKS	hay	-5.31	8.50	-23.44
Goodland, KS	GOKS	GRASS	7.01	0.00	0.00
Indianapolis, IN	ININ	corn	6.50	-4.10	-34.70
Indianapolis, IN	ININ	soybeans	45.09	14.61	-22.47
Indianapolis, IN	ININ	hay	3.35	24.90	-32.77
Indianapolis, IN	ININ	POTATOES	7.40	-5.50	-5.80
Indianapolis, IN	ININ	GRASS	17.13	0.00	0.00
Indianapolis, IN	ININ	tomat	12.33	6.35	-28.97
Las Vegas, NV	LVNV	hay	2.80	9.14	2.24
Las Vegas, NV	LVNV	GRASS	8.82	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	67.10	1.40
Madison, WI	MAWI	corn	-1.30	-3.70	-42.20
Madison, WI	MAWI	soybeans	43.79	17.94	-19.50
Madison, WI	MAWI	hay	7.38	26.11	-64.47
Madison, WI	MAWI	POTATOES	19.50	0.20	-8.80
Madison, WI	MAWI	GRASS	24.40	0.00	0.00
Medford, OR	MEOR	hay	27.81	82.66	-1.85
Medford, OR	MEOR	POTATOES	5.60	-1.80	4.20
Medford, OR	MEOR	GRASS	55.64	0.00	0.00
Memphis, TN	METN	corn	1.60	-0.90	-28.10
Memphis, TN	METN	soybeans	34.41	12.17	-10.03
Memphis, TN	METN	hay	-1.76	18.20	-26.39
Memphis, TN	METN	GRASS	13.45	0.00	0.00
Miami, FL	MIFL	rice	0.00	-0.99	-11.03
Miami, FL	MIFL	hay	-16.69	-22.08	33.33
Miami, FL	MIFL	GRASS	3.51	0.00	0.00
Miami, FL	MIFL	oranges	0.00	6.30	-20.00
Montgomery, AL	MOAL	soybeans	18.56	11.32	-3.41
Montgomery, AL	MOAL	sorghum	10.25	-2.44	-14.29
Montgomery, AL	MOAL	rice	0.00	2.36	-4.59
Montgomery, AL	MOAL	hay	-22.85	-4.93	7.20
Montgomery, AL	MOAL	GRASS	32.93	0.00	0.00
Montgomery, AL	MOAL	tomat	8.54	3.26	-3.77
Montgomery, AL	MOAL	oranges	0.00	28.50	-10.50
Muskegon, MI	MUMI	soybeans	87.67	22.45	-19.77
Muskegon, MI	MUMI	hay	3.78	27.30	-45.01
Muskegon, MI	MUMI	POTATOES	33.10	-0.80	-10.60
Muskegon, MI	MUMI	GRASS	23.64	0.00	0.00
Muskegon, MI	MUMI	tomat	41.26	29.50	-17.99
North Platte, NE	npne	corn	23.60	-6.50	-39.40

North Platte, NE	npne	soybeans	29.34	26.61	-0.89
North Platte, NE	npne	wheat	20.50	11.70	-2.10
North Platte, NE	npne	sorghum	35.01	16.21	-7.82
North Platte, NE	npne	hay	1.07	31.97	-25.58
North Platte, NE	npne	GRASS	21.92	0.00	0.00
Oklahoma City, OK	OKOK	wheat	6.20	4.20	0.70
Oklahoma City, OK	OKOK	sorghum	7.98	-5.73	-5.47
Oklahoma City, OK	OKOK	hay	-3.55	18.97	-16.70
Oklahoma City, OK	OKOK	GRASS	19.00	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	0.84	2.16
Port Arthur, TX	PATX	hay	-27.77	-9.63	20.30
Port Arthur, TX	PATX	GRASS	11.50	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	41.20	324.20
Peoria, IL	PEIL	corn	16.30	-4.20	-21.40
Peoria, IL	PEIL	soybeans	34.67	16.24	-12.70
Peoria, IL	PEIL	sorghum	13.81	0.39	-17.06
Peoria, IL	PEIL	hay	4.89	25.67	-53.71
Peoria, IL	PEIL	GRASS	20.44	0.00	0.00
Pendleton, OR	PEOR	hay	21.51	93.34	2.79
Pendleton, OR	PEOR	POTATOES	12.30	-2.70	2.00
Pendleton, OR	PEOR	GRASS	56.95	0.00	0.00
Pierre, SD	PISD	wheat	23.40	1.30	-22.00
Pierre, SD	PISD	sorghum	48.36	11.20	-10.02
Pierre, SD	PISD	hay	6.71	26.85	-17.31
Pierre, SD	PISD	GRASS	15.81	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	6.03	0.85
Red Bluff, CA	RBCA	hay	26.07	32.98	-9.20
Red Bluff, CA	RBCA	GRASS	60.78	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	45.70	-20.20
Savannah, GA	SAGA	soybeans	8.52	7.62	-2.63
Savannah, GA	SAGA	sorghum	3.33	-3.16	-13.58
Savannah, GA	SAGA	hay	-28.94	-7.65	16.15
Savannah, GA	SAGA	GRASS	27.28	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	8.40	-10.70
Scottsbluff, NE	SBNE	hay	4.58	22.54	-18.37
Scottsbluff, NE	SBNE	POTATOES	-6.70	-6.30	2.20
Scottsbluff, NE	SBNE	GRASS	16.09	0.00	0.00
St. Cloud, MN	SCMN	corn	74.80	67.50	-31.60
St. Cloud, MN	SCMN	soybeans	45.63	18.84	-20.38
St. Cloud, MN	SCMN	wheat	15.40	4.90	-17.40
St. Cloud, MN	SCMN	hay	-1.85	32.07	-57.73

St. Cloud, MN	SCMN	GRASS	19.29	0.00	0.00
Sioux Falls, SD	SFSD	corn	17.60	-4.60	-27.00
Sioux Falls, SD	SFSD	sorghum	42.61	19.17	-15.70
Sioux Falls, SD	SFSD	hay	6.70	25.97	-39.88
Sioux Falls, SD	SFSD	GRASS	30.13	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	2.32	-3.22
Shreveport, LA	SHLA	hay	-23.07	-7.56	6.02
Shreveport, LA	SHLA	GRASS	16.97	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	13.00	10.20
Spokane, WA	SPWA	wheat	65.75	4.60	-11.60
Spokane, WA	SPWA	hay	30.48	44.37	2.91
Spokane, WA	SPWA	GRASS	63.14	0.00	0.00
Tallahassee, FL	T AFL	hay	-32.66	-12.90	4.85
Tallahassee, FL	T AFL	GRASS	17.66	0.00	0.00
Tallahassee, FL	T AFL	tomat	-2.01	-0.31	2.86
Tallahassee, FL	T AFL	oranges	0.00	45.20	52.40
Topeka, KS	TOKS	corn	11.60	-3.60	-20.30
Topeka, KS	TOKS	soybeans	27.19	13.61	-4.30
Topeka, KS	TOKS	wheat	7.30	4.10	-8.00
Topeka, KS	TOKS	sorghum	8.69	-4.42	-16.09
Topeka, KS	TOKS	hay	9.43	23.09	-45.99
Topeka, KS	TOKS	GRASS	31.78	0.00	0.00
Tuscon, AZ	TUAZ	wheat	122.40	-2.90	-22.60
Tuscon, AZ	TUAZ	hay	-0.87	45.44	2.17
Tuscon, AZ	TUAZ	GRASS	3.81	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	69.90	3.30
Yakima, WA	YAWA	hay	30.34	87.18	2.50
Yakima, WA	YAWA	POTATOES	2.70	2.10	3.30
Yakima, WA	YAWA	GRASS	47.27	0.00	0.00

Table C1.4 Raw Crop Simulator Generated Data for Hadley Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	38.32	14.67	-13.11
Charleston,SC	csc	sorghum	13.03	-8.53	-34.76
Charleston,SC	csc	hay	-12.63	-9.04	-23.92
Charleston,SC	csc	GRASS	58.75	0.00	0.00
Charleston,SC	csc	tomat	19.37	12.72	6.96
louisville,KY	lKy	soybeans	110.74	27.92	-31.62
louisville,KY	lKy	sorghum	45.93	-2.59	-52.79
louisville,KY	lKy	hay	10.96	21.23	-55.10
louisville,KY	lKy	GRASS	27.07	0.00	0.00
Raleigh,NC	rNc	soybeans	41.97	20.49	-12.90
Raleigh,NC	rNc	sorghum	8.73	-7.19	-38.07
Raleigh,NC	rNc	hay	-0.44	18.25	-55.97
Raleigh,NC	rNc	GRASS	19.86	0.00	0.00
Raleigh,NC	rNc	tomat	24.40	17.65	5.04
Abilene, TX	ABTX	wheat	34.90	18.60	-17.50
Abilene, TX	ABTX	sorghum	89.94	-8.51	-32.05
Abilene, TX	ABTX	hay	21.06	8.53	-28.32
Abilene, TX	ABTX	GRASS	39.02	0.00	0.00
Alamosa, CO	ALCO	hay	16.16	29.24	1.11
Alamosa, CO	ALCO	POTATOES	-5.60	-7.80	8.40
Alamosa, CO	ALCO	GRASS	24.60	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	-12.89	5.66
Bakersfield, CA	BACA	hay	79.86	145.48	10.06
Bakersfield, CA	BACA	GRASS	131.54	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	57.60	-0.60
Boise, ID	BOID	wheat	38.00	-7.30	-17.20
Boise, ID	BOID	hay	45.29	72.47	7.68
Boise, ID	BOID	POTATOES	-32.90	-34.30	13.70
Boise, ID	BOID	GRASS	83.20	0.00	0.00
Buffalo, NY	BUNY	hay	11.74	32.32	-60.45
Buffalo, NY	BUNY	POTATOES	21.90	-7.80	-16.70
Buffalo, NY	BUNY	GRASS	28.97	0.00	0.00
Buffalo, NY	BUNY	tomat	42.16	40.93	-49.21
Caribou, ME	CAME	hay	2.94	36.18	-36.44
Caribou, ME	CAME	POTATOES	16.00	3.70	-2.70
Caribou, ME	CAME	GRASS	20.89	0.00	0.00
Corpus Christi, TX	CCTX	hay	-5.19	-16.33	0.17

Corpus Christi, TX	CCTX	GRASS	47.29	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	103.60	13.80
Columbus, OH	COOH	corn	6.20	-5.80	-71.30
Columbus, OH	COOH	wheat	23.60	8.50	-48.00
Columbus, OH	COOH	hay	2.46	21.50	-34.88
Columbus, OH	COOH	GRASS	13.36	0.00	0.00
Columbus, OH	COOH	tomat	21.14	12.11	-58.62
Daytona Beach, FL	DBFL	hay	-18.62	-11.28	14.61
Daytona Beach, FL	DBFL	GRASS	17.70	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	52.00	-1.20
Dodge City, KS	DCKS	wheat	72.50	16.70	-28.00
Dodge City, KS	DCKS	hay	14.37	9.32	-26.19
Dodge City, KS	DCKS	GRASS	27.00	0.00	0.00
Des Moines, IA	DEIA	corn	27.60	-3.30	-61.00
Des Moines, IA	DEIA	soybeans	47.91	29.85	-43.05
Des Moines, IA	DEIA	hay	16.84	27.96	-64.82
Des Moines, IA	DEIA	GRASS	40.05	0.00	0.00
Duluth, MN	DUMN	corn	59.00	6.20	-57.90
Duluth, MN	DUMN	soybeans	141.91	111.76	-13.69
Duluth, MN	DUMN	hay	-0.38	43.24	-49.41
Duluth, MN	DUMN	GRASS	20.88	0.00	0.00
El Paso, TX	EPTX	sorghum	65.29	-12.84	-18.48
El Paso, TX	EPTX	rice	0.00	-6.09	9.97
El Paso, TX	EPTX	hay	14.95	-16.53	-17.99
El Paso, TX	EPTX	GRASS	14.32	0.00	0.00
El Paso, TX	EPTX	tomat	-22.54	-51.56	18.63
El Paso, TX	EPTX	oranges	0.00	215.70	-0.10
Fargo, ND	FAND	corn	52.70	4.20	-56.80
Fargo, ND	FAND	wheat	21.80	6.90	-19.00
Fargo, ND	FAND	hay	13.21	33.84	-25.14
Fargo, ND	FAND	POTATOES	10.90	-0.80	-3.80
Fargo, ND	FAND	GRASS	32.17	0.00	0.00
Fresno, CA	FRCA	wheat	6.10	-28.30	-73.60
Fresno, CA	FRCA	rice	0.00	8.46	-0.34
Fresno, CA	FRCA	hay	67.29	47.13	-4.20
Fresno, CA	FRCA	GRASS	76.78	0.00	0.00
Fresno, CA	FRCA	tomat	1413.04	-19.65	1.84
Glasgow, MT	GLMT	wheat	24.20	-0.30	-26.10
Glasgow, MT	GLMT	hay	17.84	20.15	-14.06
Glasgow, MT	GLMT	GRASS	21.05	0.00	0.00
Goodland, KS	GOKS	wheat	81.40	23.60	-29.90

Goodland, KS	GOKS	sorghum	61.91	-6.06	-26.81
Goodland, KS	GOKS	hay	5.88	-0.78	-22.34
Goodland, KS	GOKS	GRASS	17.81	0.00	0.00
Indianapolis, IN	ININ	corn	11.40	-5.70	-67.20
Indianapolis, IN	ININ	soybeans	92.72	31.84	-41.41
Indianapolis, IN	ININ	hay	12.74	28.88	-54.30
Indianapolis, IN	ININ	POTATOES	14.30	-8.60	-12.30
Indianapolis, IN	ININ	GRASS	28.49	0.00	0.00
Indianapolis, IN	ININ	tomat	22.02	14.12	-57.94
Las Vegas, NV	LVNV	hay	75.93	28.55	0.24
Las Vegas, NV	LVNV	GRASS	84.04	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	139.50	1.80
Madison, WI	MAWI	corn	7.40	5.50	-74.10
Madison, WI	MAWI	soybeans	84.47	39.78	-36.00
Madison, WI	MAWI	hay	17.86	34.11	-70.05
Madison, WI	MAWI	POTATOES	26.20	1.50	-13.80
Madison, WI	MAWI	GRASS	36.79	0.00	0.00
Medford, OR	MEOR	hay	48.34	83.99	11.32
Medford, OR	MEOR	POTATOES	6.40	-11.60	13.90
Medford, OR	MEOR	GRASS	83.28	0.00	0.00
Memphis, TN	METN	corn	-0.60	-1.90	-57.50
Memphis, TN	METN	soybeans	82.12	21.07	-24.22
Memphis, TN	METN	hay	2.19	17.81	-45.13
Memphis, TN	METN	GRASS	17.39	0.00	0.00
Miami, FL	MIFL	rice	0.00	6.51	2.07
Miami, FL	MIFL	hay	-14.67	-24.27	71.79
Miami, FL	MIFL	GRASS	9.25	0.00	0.00
Miami, FL	MIFL	oranges	0.00	17.90	53.60
Montgomery, AL	MOAL	soybeans	47.06	19.73	-7.20
Montgomery, AL	MOAL	sorghum	16.27	-5.22	-32.47
Montgomery, AL	MOAL	rice	0.00	15.00	-10.55
Montgomery, AL	MOAL	hay	-13.46	0.32	-16.10
Montgomery, AL	MOAL	GRASS	59.75	0.00	0.00
Montgomery, AL	MOAL	tomat	3.36	-2.08	7.55
Montgomery, AL	MOAL	oranges	0.00	90.50	40.80
Muskegon, MI	MUMI	soybeans	154.34	44.97	-27.00
Muskegon, MI	MUMI	hay	14.30	33.63	-47.19
Muskegon, MI	MUMI	POTATOES	40.00	-1.50	-12.40
Muskegon, MI	MUMI	GRASS	35.26	0.00	0.00
Muskegon, MI	MUMI	tomat	70.69	57.64	-22.30
North Platte, NE	npne	corn	31.20	-4.40	-47.30

North Platte, NE	npne	soybeans	79.92	46.33	-7.14
North Platte, NE	npne	wheat	44.30	22.50	-18.50
North Platte, NE	npne	sorghum	106.99	20.88	-33.88
North Platte, NE	npne	hay	16.17	24.98	-47.51
North Platte, NE	npne	GRASS	36.05	0.00	0.00
Oklahoma City, OK	OKOK	wheat	28.00	13.60	-35.30
Oklahoma City, OK	OKOK	sorghum	48.03	-13.35	-31.31
Oklahoma City, OK	OKOK	hay	11.49	17.34	-38.16
Oklahoma City, OK	OKOK	GRASS	33.27	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	8.79	-0.43
Port Arthur, TX	PATX	hay	-18.91	-8.24	-4.06
Port Arthur, TX	PATX	GRASS	34.57	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	162.30	323.90
Peoria, IL	PEIL	corn	37.90	1.10	-59.60
Peoria, IL	PEIL	soybeans	90.25	32.24	-36.07
Peoria, IL	PEIL	sorghum	36.79	0.46	-54.03
Peoria, IL	PEIL	hay	16.34	30.43	-68.76
Peoria, IL	PEIL	GRASS	35.15	0.00	0.00
Pendleton, OR	PEOR	hay	31.81	87.24	14.68
Pendleton, OR	PEOR	POTATOES	8.80	-12.90	11.40
Pendleton, OR	PEOR	GRASS	64.71	0.00	0.00
Pierre, SD	PISD	wheat	47.30	7.10	-28.90
Pierre, SD	PISD	sorghum	149.58	10.38	-30.90
Pierre, SD	PISD	hay	17.32	19.23	-28.13
Pierre, SD	PISD	GRASS	24.59	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	5.90	4.24
Red Bluff, CA	RBCA	hay	53.22	40.28	-4.49
Red Bluff, CA	RBCA	GRASS	89.14	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	79.90	-27.20
Savannah, GA	SAGA	soybeans	24.33	12.57	-18.42
Savannah, GA	SAGA	sorghum	5.59	-6.29	-32.10
Savannah, GA	SAGA	hay	-24.38	-1.12	-6.21
Savannah, GA	SAGA	GRASS	49.29	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	83.80	-43.00
Scottsbluff, NE	SBNE	hay	57.03	9.52	-19.57
Scottsbluff, NE	SBNE	POTATOES	-37.80	-27.60	8.40
Scottsbluff, NE	SBNE	GRASS	-16.78	0.00	0.00
St. Cloud, MN	SCMN	corn	166.40	151.70	-59.70
St. Cloud, MN	SCMN	soybeans	82.28	46.11	-25.12
St. Cloud, MN	SCMN	wheat	22.30	11.50	-20.00
St. Cloud, MN	SCMN	hay	4.97	36.84	-68.33

St. Cloud, MN	SCMN	GRASS	28.74	0.00	0.00
Sioux Falls, SD	SFSD	corn	34.40	-3.20	-59.80
Sioux Falls, SD	SFSD	sorghum	93.91	29.45	-50.00
Sioux Falls, SD	SFSD	hay	23.81	28.54	-53.50
Sioux Falls, SD	SFSD	GRASS	46.36	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	9.85	-5.47
Shreveport, LA	SHLA	hay	-7.52	-3.34	-15.88
Shreveport, LA	SHLA	GRASS	53.35	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	138.60	29.90
Spokane, WA	SPWA	wheat	131.10	11.75	-21.50
Spokane, WA	SPWA	hay	45.09	94.49	17.37
Spokane, WA	SPWA	GRASS	103.07	0.00	0.00
Tallahassee, FL	T AFL	hay	-29.46	-8.30	-7.77
Tallahassee, FL	T AFL	GRASS	32.94	0.00	0.00
Tallahassee, FL	T AFL	tomat	-22.06	-14.41	26.67
Tallahassee, FL	T AFL	oranges	0.00	65.00	35.90
Topeka, KS	TOKS	corn	21.90	-3.90	-53.40
Topeka, KS	TOKS	soybeans	67.40	25.40	-19.71
Topeka, KS	TOKS	wheat	17.30	8.90	-44.90
Topeka, KS	TOKS	sorghum	22.49	-6.82	-45.22
Topeka, KS	TOKS	hay	20.47	18.42	-55.59
Topeka, KS	TOKS	GRASS	42.86	0.00	0.00
Tuscon, AZ	TUAZ	wheat	476.80	3.20	-50.20
Tuscon, AZ	TUAZ	hay	26.91	48.53	4.32
Tuscon, AZ	TUAZ	GRASS	26.29	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	111.60	3.90
Yakima, WA	YAWA	hay	36.25	77.05	10.57
Yakima, WA	YAWA	POTATOES	-13.50	-3.40	18.70
Yakima, WA	YAWA	GRASS	60.39	0.00	0.00



Table C1.5 Raw Crop Simulator Generated Data for CSIRO Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		cotton	64.79	0.00	0.00
alabama		corn	4.49	-11.21	-15.98
alabama		soybeans	-20.31	27.35	43.93
alabama		wheat	-20.46	-21.50	-15.96
alabama		sorghum	-23.40	-9.47	19.23
arizona		cotton	4.59	135.64	48.00
arizona		corn	0.00	-22.02	23.01
arkansas		cotton	69.81	99.93	48.00
arkansas		corn	7.36	-13.90	-11.90
arkansas		soybeans	-46.50	19.11	53.67
arkansas		wheat	-15.94	-18.00	-36.84
arkansas		sorghum	-41.55	-12.29	28.73
arkansas		rice	0.00	-10.22	21.26
CALIFORNIN		cotton	47.21	66.17	48.00
CALIFORNIN		corn	0.00	-33.25	0.70
CALIFORNIN		rice	0.00	-16.75	1.73
CALIFORNIS		cotton	47.21	66.17	48.00
CALIFORNIS		corn	0.00	-33.25	0.70
colorado		corn	0.00	687.18	17.29
colorado		wheat	-5.67	-3.00	8.63
colorado		sorghum	266.25	266.15	-6.21
delaware		corn	-11.69	-15.14	-4.88
delaware		soybeans	2.81	42.08	32.28
delaware		wheat	5.96	-5.84	-49.00
florida		cotton	57.05	0.00	0.00
florida		corn	-1.35	-9.41	-7.66
florida		soybeans	2.43	33.04	45.68
florida		sorghum	-14.04	-9.14	11.98
georgia		cotton	70.66	0.00	0.00
georgia		corn	-2.88	-10.70	-12.82
georgia		soybeans	-16.44	30.02	44.55
georgia		wheat	-17.49	-19.87	5.56
georgia		sorghum	-20.21	-5.71	18.36
idaho		corn	0.00	-9.20	0.80
idaho		wheat	76.10	7.80	-22.24
ILLINOISN		corn	-4.33	-16.97	-18.94
ILLINOISN		soybeans	27.51	31.67	20.28

ILLINOISN	wheat	1.72	1.43	-50.85
ILLINOISN	sorghum	41.53	22.90	-15.45
ILLINOISS	corn	8.75	-18.84	-17.11
ILLINOISS	soybeans	3.18	23.74	19.50
ILLINOISS	wheat	-15.50	-15.50	-66.67
ILLINOISS	sorghum	28.87	13.15	-10.56
INDIANAN	corn	-10.51	-18.21	-19.01
INDIANAN	soybeans	19.56	31.56	16.99
INDIANAN	wheat	-2.95	-2.95	-71.87
INDIANAS	corn	-16.35	-17.76	-12.82
INDIANAS	soybeans	2.08	30.02	66.94
INDIANAS	wheat	-13.13	-13.13	-90.91
IOWAW	corn	-1.56	-22.95	-28.66
IOWAW	soybeans	66.06	55.70	5.10
IOWAW	wheat	12.14	15.91	-19.83
IOWAW	sorghum	33.47	2.85	-32.84
IOWACENT	corn	-14.94	-19.68	-32.03
IOWACENT	soybeans	42.76	47.08	7.63
IOWACENT	wheat	11.76	11.08	-30.49
IOWACENT	sorghum	29.93	4.17	-32.87
IOWANE	corn	-13.39	-19.71	-25.60
IOWANE	soybeans	51.78	50.76	9.84
IOWANE	wheat	-1.02	-1.02	-51.56
IOWANE	sorghum	24.35	2.28	-33.33
IOWAS	corn	-4.83	-17.15	-16.67
IOWAS	soybeans	3.79	48.38	42.94
IOWAS	wheat	-1.22	-3.26	0.00
IOWAS	sorghum	42.40	19.55	-11.36
kansas	corn	55.12	-14.33	-2.74
kansas	soybeans	14.20	29.27	28.07
kansas	wheat	52.24	-3.47	-20.13
kansas	sorghum	45.48	25.87	9.73
kentucky	corn	-14.00	-14.01	-2.15
kentucky	soybeans	26.90	40.14	53.92
kentucky	wheat	-15.38	-15.38	-88.24
kentucky	sorghum	-16.37	-20.09	9.30
louisiana	cotton	45.63	0.00	0.00
louisiana	corn	1.05	-9.96	-16.67
louisiana	soybeans	-8.28	20.95	50.26
louisiana	wheat	-23.42	-23.16	79.69
louisiana	sorghum	-21.95	-11.61	22.83

louisiana	rice	0.00	-16.49	11.79
maryland	corn	-11.69	-15.14	-4.88
maryland	soybeans	2.81	42.08	32.28
maryland	wheat	5.96	-5.84	-49.00
michigan	corn	-4.93	-17.98	-31.17
michigan	soybeans	64.05	51.60	-1.46
michigan	wheat	-9.27	-18.95	-60.38
minnesota	corn	-2.29	-15.10	-38.61
minnesota	soybeans	87.11	71.15	-9.60
minnesota	wheat	11.39	15.08	-9.86
minnesota	sorghum	72.26	43.36	-31.29
mississippi	cotton	77.53	0.00	0.00
mississippi	corn	1.61	-12.39	-18.27
mississippi	soybeans	-10.53	27.03	38.83
mississippi	wheat	-20.92	-20.97	7.46
mississippi	sorghum	-22.80	-15.26	10.53
mississippi	rice	0.00	-10.94	9.13
missouri	cotton	63.86	53.10	48.00
missouri	corn	20.75	-16.37	-17.98
missouri	soybeans	7.92	35.22	35.34
missouri	wheat	-11.24	-14.81	-50.00
missouri	sorghum	42.17	21.17	-10.04
missouri	rice	0.00	-5.65	22.01
montana	corn	0.00	-5.83	-35.06
montana	wheat	55.70	7.31	-44.41
nebraska	corn	47.00	-14.04	-20.09
nebraska	soybeans	20.45	37.41	31.34
nebraska	wheat	18.31	-1.46	-50.98
nebraska	sorghum	68.11	39.98	-12.66
newjersey	corn	-22.65	-25.31	-14.71
newjersey	soybeans	48.19	42.58	9.09
newjersey	wheat	6.58	3.13	-38.95
newmexico	cotton	50.80	36.40	48.00
newmexico	corn	0.00	-11.53	13.26
newmexico	wheat	-83.81	0.65	1.13
newmexico	sorghum	-53.92	-4.85	-4.62
newyork	corn	-0.29	-8.65	-44.14
newyork	wheat	-12.19	-15.95	-70.73
northcarol	cotton	57.61	0.00	0.00
northcarol	corn	1.09	-7.23	-1.55
northcarol	soybeans	-19.84	42.51	63.64

northcarol	wheat	-17.17	-19.34	-35.45
northcarol	sorghum	-11.70	17.96	43.40
northdakot	corn	110.52	-4.08	-29.57
northdakot	soybeans	188.71	69.74	-10.38
northdakot	wheat	18.19	13.25	-13.14
OHIONW	corn	-10.15	-17.71	-14.81
OHIONW	soybeans	22.25	33.37	19.87
OHIONW	wheat	-2.31	-2.52	-64.86
OHIOS	corn	-10.63	-14.03	-16.67
OHIOS	soybeans	60.47	65.10	24.56
OHIOS	wheat	-13.01	-13.01	-74.51
OHIOS	sorghum	26.81	10.46	-34.17
OHIONE	corn	-5.83	-10.37	-18.18
OHIONE	soybeans	39.72	56.24	25.88
OHIONE	wheat	-10.54	-10.54	-70.31
oklahoma	cotton	97.20	96.28	48.00
oklahoma	corn	24.90	-17.65	1.79
oklahoma	soybeans	-43.33	6.90	69.35
oklahoma	wheat	-1.00	-8.88	-9.44
oklahoma	sorghum	-24.81	-7.72	29.82
oregon	corn	-3.86	-1.10	-17.26
oregon	wheat	131.12	19.63	-37.65
pennsylvan	corn	2.28	1.56	-50.75
pennsylvan	soybeans	54.16	56.45	0.00
pennsylvan	wheat	-6.03	-6.03	-88.89
southcarol	cotton	72.75	0.00	0.00
southcarol	corn	-3.62	-9.72	-9.39
southcarol	soybeans	-18.50	29.36	48.98
southcarol	wheat	-15.61	-18.32	-19.42
southcarol	sorghum	-22.72	-5.80	24.86
southdakot	corn	18.31	-15.02	-23.15
southdakot	soybeans	78.68	51.86	2.56
southdakot	wheat	23.98	18.69	-18.29
southdakot	sorghum	69.57	45.45	-11.30
tennessee	cotton	51.57	0.00	0.00
tennessee	corn	-1.87	-12.73	-18.44
tennessee	soybeans	-11.83	35.10	47.31
tennessee	wheat	-17.98	-19.14	-64.81
tennessee	sorghum	-2.31	16.24	25.64
TXHIPLAINS	cotton	49.66	43.84	48.00
TXHIPLAINS	corn	4.36	-20.34	-8.63

TXHIPLAINS	soybeans	-1.91	28.02	25.06
TXHIPLAINS	wheat	32.45	-8.88	-9.44
TXHIPLAINS	sorghum	13.32	18.34	-17.82
TXROLINGPL	cotton	53.22	70.14	48.00
TXROLINGPL	corn	0.00	-14.83	-1.81
TXROLINGPL	soybeans	61.21	1.93	29.90
TXROLINGPL	wheat	2.91	-14.36	17.14
TXROLINGPL	sorghum	46.05	9.66	-13.58
TXCNTBLACK	cotton	32.21	58.64	48.00
TXCNTBLACK	corn	36.18	-10.81	-6.22
TXCNTBLACK	soybeans	-81.38	-1.97	60.63
TXCNTBLACK	wheat	-14.77	-21.37	40.20
TXCNTBLACK	sorghum	17.80	7.55	-8.61
TXCNTBLACK	rice	0.00	-16.41	20.72
TXEAST	cotton	43.54	39.84	48.00
TXEAST	corn	7.50	-7.57	-3.97
TXEAST	soybeans	-10.64	8.18	41.09
TXEAST	sorghum	1.23	2.74	-12.81
TXEAST	rice	0.00	-17.82	15.94
TXEDPLAT	cotton	27.78	62.11	48.00
TXEDPLAT	corn	0.00	-18.59	3.87
TXEDPLAT	soybeans	-12.14	4.34	33.67
TXEDPLAT	wheat	-20.78	-18.43	48.01
TXEDPLAT	sorghum	5.43	1.64	-6.65
TXCOASTBE	cotton	7.75	25.91	48.00
TXCOASTBE	corn	-18.01	-14.19	3.75
TXCOASTBE	soybeans	-36.95	6.19	52.51
TXCOASTBE	sorghum	-2.11	-3.26	-1.55
TXCOASTBE	rice	0.00	-8.89	12.02
TXSOUTH	cotton	-1.68	22.77	48.00
TXSOUTH	corn	0.00	-19.47	24.03
TXSOUTH	soybeans	-32.35	-12.50	33.14
TXSOUTH	sorghum	-57.17	-4.30	6.92
TXTRANSPEC	cotton	37.82	91.73	48.00
TXTRANSPEC	corn	0.00	-16.72	9.45
TXTRANSPEC	soybeans	20.00	16.16	22.20
TXTRANSPEC	wheat	-52.63	-17.85	13.88
TXTRANSPEC	sorghum	169.23	6.95	-7.44
utah	corn	0.00	42.38	16.38
utah	wheat	374.94	0.39	-36.79
virginia	cotton	76.64	55.58	48.00

virginia	corn	-16.59	-5.15	16.09
virginia	soybeans	-31.32	52.38	60.57
virginia	wheat	19.76	-10.72	-37.41
washington	corn	0.00	215.21	-6.34
washington	wheat	54.65	17.64	-47.45
westvirgin	corn	-8.68	9.64	21.48
westvirgin	wheat	-7.53	-9.84	-70.83
wisconsin	corn	-8.42	-11.40	-25.00
wisconsin	soybeans	67.77	78.74	16.67
wisconsin	wheat	9.90	8.75	-35.80
wyoming	corn	47.00	3.30	-13.27
wyoming	wheat	116.87	14.13	-51.91

Table C1.6 Raw Crop Simulator Generated Data for REGCM Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		cotton	45.70	0.00	0.00
alabama		corn	9.30	-9.07	-13.24
alabama		soybeans	-66.08	17.95	94.86
alabama		wheat	-20.87	-22.09	-28.72
alabama		sorghum	-54.08	-12.87	70.19
arizona		cotton	43.59	147.42	48.00
arizona		corn	0.00	-1.19	29.94
arkansas		cotton	75.62	104.77	48.00
arkansas		corn	12.24	-6.26	-4.76
arkansas		soybeans	-38.68	11.62	54.83
arkansas		wheat	-11.55	-14.27	-52.63
arkansas		sorghum	-32.49	-16.18	30.22
arkansas		rice	0.00	-12.90	39.08
CALIFORNIN		cotton	27.59	81.15	48.00
CALIFORNIN		corn	0.00	-12.86	8.31
CALIFORNIN		rice	0.00	-14.34	9.09
CALIFORNIS		cotton	27.59	81.15	48.00
CALIFORNIS		corn	0.00	-12.86	8.31
colorado		corn	0.00	656.18	10.85
colorado		wheat	52.23	-3.33	1.89
colorado		sorghum	356.25	403.08	-1.13
delaware		corn	-36.38	-18.96	57.72
delaware		soybeans	-41.87	36.20	96.85
delaware		wheat	2.59	-8.83	-46.00
florida		cotton	51.43	0.00	0.00
florida		corn	10.06	-7.07	-10.64
florida		soybeans	-33.15	26.23	79.63
florida		sorghum	-29.71	-9.32	44.31
georgia		cotton	44.68	0.00	0.00
georgia		corn	-0.98	-9.17	-2.56
georgia		soybeans	-68.06	19.02	109.00
georgia		wheat	-17.72	-20.67	2.08
georgia		sorghum	-53.26	-9.04	78.74
idaho		corn	0.00	-14.45	-12.52
idaho		wheat	79.84	-2.29	-23.67
ILLINOISN		corn	-14.66	-21.67	-6.82
ILLINOISN		soybeans	-9.02	27.47	37.76

ILLINOISN	wheat	-3.66	-3.93	-40.68
ILLINOISN	sorghum	38.03	24.01	0.91
ILLINOISS	corn	-20.56	-22.67	14.97
ILLINOISS	soybeans	-68.27	13.52	75.50
ILLINOISS	wheat	-15.42	-15.42	-51.52
ILLINOISS	sorghum	10.08	13.87	32.30
INDIANAN	corn	-25.08	-24.23	-4.93
INDIANAN	soybeans	-30.57	24.67	58.82
INDIANAN	wheat	-2.06	-2.06	-56.25
INDIANAS	corn	-22.58	-21.97	15.38
INDIANAS	soybeans	-23.61	18.79	81.82
INDIANAS	wheat	-14.65	-14.65	-84.85
IOWAW	corn	2.13	-18.87	-21.34
IOWAW	soybeans	64.95	60.33	14.65
IOWAW	wheat	1.01	-0.47	-35.34
IOWAW	sorghum	43.00	7.39	-30.85
IOWACENT	corn	-14.92	-19.67	-21.09
IOWACENT	soybeans	39.45	48.08	20.34
IOWACENT	wheat	-3.80	-4.39	-40.24
IOWACENT	sorghum	26.93	2.55	-26.57
IOWANE	corn	-11.26	-22.51	-29.60
IOWANE	soybeans	53.94	50.69	11.48
IOWANE	wheat	-9.94	-9.94	-75.00
IOWANE	sorghum	37.45	6.16	-42.67
IOWAS	corn	-9.60	-18.01	-11.31
IOWAS	soybeans	-21.73	45.23	54.71
IOWAS	wheat	0.22	-1.85	0.00
IOWAS	sorghum	34.05	25.09	11.93
kansas	corn	168.69	-17.15	-18.84
kansas	soybeans	180.44	24.29	7.36
kansas	wheat	121.29	0.50	-46.54
kansas	sorghum	125.86	41.27	-9.12
kentucky	corn	-18.04	-16.61	49.46
kentucky	soybeans	5.62	34.27	91.18
kentucky	wheat	-15.36	-15.36	-74.51
kentucky	sorghum	-26.43	-20.86	46.51
louisiana	cotton	47.21	0.00	0.00
louisiana	corn	6.65	-8.70	-22.55
louisiana	soybeans	-30.45	15.66	67.88
louisiana	wheat	-21.30	-21.25	21.87
louisiana	sorghum	-28.52	-11.53	39.67



louisiana	rice	0.00	-13.76	6.11
maryland	corn	-36.38	-18.96	57.72
maryland	soybeans	-41.87	36.20	96.85
maryland	wheat	2.59	-8.83	-46.00
michigan	corn	-30.11	-15.36	17.53
michigan	soybeans	-27.42	57.69	63.50
michigan	wheat	3.14	-3.81	-18.87
minnesota	corn	1.69	-13.16	-44.30
minnesota	soybeans	89.43	73.63	-9.60
minnesota	wheat	8.62	10.51	-19.72
minnesota	sorghum	72.76	33.63	-31.29
mississippi	cotton	77.45	0.00	0.00
mississippi	corn	4.42	-11.36	-16.83
mississippi	soybeans	-56.49	16.24	83.01
mississippi	wheat	-21.72	-22.04	-22.39
mississippi	sorghum	-46.78	-16.39	53.59
mississippi	rice	0.00	-8.77	29.33
missouri	cotton	74.46	67.82	48.00
missouri	corn	2.24	-22.46	-9.21
missouri	soybeans	-18.84	27.20	44.83
missouri	wheat	-15.72	-19.38	-57.14
missouri	sorghum	28.48	24.66	10.92
missouri	rice	0.00	-12.96	45.52
montana	corn	0.00	-2.61	-23.37
montana	wheat	5.44	-2.64	-23.87
nebraska	corn	42.20	-16.51	-31.70
nebraska	soybeans	41.90	33.97	17.51
nebraska	wheat	5.45	-2.50	-26.80
nebraska	sorghum	59.38	21.51	-26.64
newjersey	corn	-38.26	-11.71	62.75
newjersey	soybeans	-40.34	54.55	118.18
newjersey	wheat	4.64	-1.66	-50.53
newmexico	cotton	66.40	46.31	48.00
newmexico	corn	0.00	-21.76	10.93
newmexico	wheat	25.71	-7.96	-7.55
newmexico	sorghum	22.55	-2.43	-0.69
newyork	corn	-2.32	-10.99	-31.53
newyork	wheat	-16.21	-19.81	-90.24
northcarol	cotton	38.44	0.00	0.00
northcarol	corn	-18.30	-4.28	41.75
northcarol	soybeans	-61.72	32.07	130.68

northcarol	wheat	-17.73	-19.74	-28.18
northcarol	sorghum	-42.58	13.01	110.69
northdakot	corn	156.75	-3.83	-43.48
northdakot	soybeans	340.32	74.57	-26.42
northdakot	wheat	35.98	11.09	-31.43
OHIONW	corn	-21.28	-23.02	7.41
OHIONW	soybeans	-17.69	29.48	56.29
OHIONW	wheat	-1.11	-1.33	-64.86
OHIOS	corn	-30.71	-19.72	53.51
OHIOS	soybeans	32.36	61.17	83.33
OHIOS	wheat	-11.62	-11.62	-66.67
OHIOS	sorghum	13.16	8.21	16.67
OHIONE	corn	-17.93	-13.18	26.26
OHIONE	soybeans	11.71	56.17	94.12
OHIONE	wheat	-11.35	-11.35	-67.19
oklahoma	cotton	124.68	95.44	48.00
oklahoma	corn	43.80	-9.41	-4.66
oklahoma	soybeans	44.72	11.55	27.98
oklahoma	wheat	35.04	-1.06	-36.05
oklahoma	sorghum	-15.48	-11.01	5.26
oregon	corn	2.52	-4.43	-15.64
oregon	wheat	115.78	21.44	-34.82
pennsylvan	corn	-7.37	-7.19	-7.46
pennsylvan	soybeans	28.26	83.54	159.65
pennsylvan	wheat	-13.17	-13.17	-25.93
southcarol	cotton	40.00	0.00	0.00
southcarol	corn	-14.23	-6.88	16.43
southcarol	soybeans	-73.49	17.89	134.18
southcarol	wheat	-17.41	-20.55	-21.58
southcarol	sorghum	-56.92	-9.18	108.29
southdakot	corn	18.88	-13.88	-15.28
southdakot	soybeans	60.97	54.69	15.38
southdakot	wheat	20.86	7.58	-31.10
southdakot	sorghum	66.11	45.74	0.00
tennessee	cotton	47.51	0.00	0.00
tennessee	corn	-12.00	-10.26	10.06
tennessee	soybeans	-49.74	28.48	87.43
tennessee	wheat	-15.38	-16.54	-59.26
tennessee	sorghum	-27.71	11.29	65.38
TXHIPLAINS	cotton	53.02	58.12	48.00
TXHIPLAINS	corn	-1.22	-17.23	2.79

TXHIPLAINS	soybeans	217.94	25.90	21.59
TXHIPLAINS	wheat	61.83	-9.06	-12.81
TXHIPLAINS	sorghum	15.27	22.02	-7.18
TXROLINGPL	cotton	118.83	72.42	48.00
TXROLINGPL	corn	0.00	-7.37	-25.34
TXROLINGPL	soybeans	46.67	-8.96	21.33
TXROLINGPL	wheat	77.61	-11.14	-32.38
TXROLINGPL	sorghum	180.23	40.25	-28.46
TXCNTBLACK	cotton	78.50	59.34	48.00
TXCNTBLACK	corn	102.45	-6.19	-17.30
TXCNTBLACK	soybeans	13.79	-3.52	26.57
TXCNTBLACK	wheat	8.39	-15.13	-23.12
TXCNTBLACK	sorghum	95.93	40.17	-11.94
TXCNTBLACK	rice	0.00	-16.90	14.70
TXEAST	cotton	61.24	46.12	48.00
TXEAST	corn	16.17	-5.98	-6.75
TXEAST	soybeans	9.66	6.96	37.45
TXEAST	sorghum	-6.78	-3.52	-16.75
TXEAST	rice	0.00	-14.90	14.78
TXEDPLAT	cotton	39.85	62.28	48.00
TXEDPLAT	corn	0.00	-24.87	-7.51
TXEDPLAT	soybeans	-22.33	-15.30	28.16
TXEDPLAT	wheat	-35.69	-6.97	51.32
TXEDPLAT	sorghum	25.56	-0.50	-16.62
TXCOASTBE	cotton	19.46	18.35	48.00
TXCOASTBE	corn	26.97	-8.62	-11.99
TXCOASTBE	soybeans	-2.77	9.46	32.82
TXCOASTBE	sorghum	30.00	9.90	-16.28
TXCOASTBE	rice	0.00	-5.32	15.45
TXSOUTH	cotton	-0.49	24.28	48.00
TXSOUTH	corn	0.00	-17.15	23.79
TXSOUTH	soybeans	-27.45	-9.49	37.48
TXSOUTH	sorghum	-53.54	-2.67	6.41
TXTRANSPEC	cotton	55.84	94.00	48.00
TXTRANSPEC	corn	0.00	-12.17	10.21
TXTRANSPEC	soybeans	-30.00	-4.11	21.89
TXTRANSPEC	wheat	-2.63	-13.98	13.88
TXTRANSPEC	sorghum	92.31	4.22	-4.13
utah	corn	0.00	43.94	14.97
utah	wheat	211.17	-3.23	-16.69
virginia	cotton	85.25	80.28	48.00

virginia	corn	-41.85	-15.64	45.40
virginia	soybeans	-46.83	42.02	82.29
virginia	wheat	15.82	-17.41	-43.54
washington	corn	0.00	216.37	-14.18
washington	wheat	60.22	22.96	-42.35
westvirgin	corn	-31.14	-4.54	15.56
westvirgin	wheat	-9.10	-11.38	-63.89
wisconsin	corn	-13.09	-17.57	-48.00
wisconsin	soybeans	72.85	76.68	9.09
wisconsin	wheat	-2.89	-3.91	-29.63
wyoming	corn	66.74	-0.41	-15.93
wyoming	wheat	56.13	9.15	-37.54

Table C1.7 Raw Crop Simulator Generated Data for Hadley PNNL Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		corn	23.81	29.69	146.41
alabama		soybeans	5.88	0.00	0.00
alabama		wheat	70.00	0.00	0.00
arizona		corn	0.00	16.39	5.94
arizona		soybeans	-16.67	0.00	0.00
arizona		wheat	66.67	0.00	0.00
arizona		hay	42.11	29.13	11.74
arkansas		corn	0.00	15.00	83.38
arkansas		soybeans	-5.26	0.00	0.00
arkansas		wheat	62.50	0.00	0.00
arkansas		hay	13.27	14.15	24.35
CALIFORNIN		corn	0.00	-7.69	5.55
CALIFORNIN		wheat	32.00	0.00	0.00
CALIFORNIN		hay	40.91	19.23	11.53
CALIFORNIS		corn	0.00	-7.69	5.55
CALIFORNIS		wheat	32.00	0.00	0.00
CALIFORNIS		hay	40.91	19.23	11.53
colorado		corn	-31.25	54.05	71.16
colorado		wheat	27.78	0.00	0.00
colorado		hay	30.30	59.74	67.92
conn		corn	25.58	29.55	198.21
conn		soybeans	30.77	0.00	0.00
conn		wheat	64.29	0.00	0.00
delaware		corn	16.00	16.00	76.38
delaware		soybeans	31.25	0.00	0.00
delaware		wheat	62.50	0.00	0.00
florida		corn	-3.57	1.75	313.64
florida		soybeans	6.67	0.00	0.00
florida		wheat	12.12	0.00	0.00
georgia		corn	1.92	5.77	214.71
georgia		wheat	40.00	0.00	0.00
idaho		corn	-55.56	15.00	3.97
idaho		soybeans	-20.00	0.00	0.00
idaho		wheat	-18.52	0.00	0.00
idaho		hay	24.53	36.00	18.68
ILLINOISN		corn	17.54	16.95	42.39
ILLINOISN		soybeans	10.53	0.00	0.00

ILLINOISN	wheat	68.00	0.00	0.00
ILLINOISN	hay	47.76	50.70	44.94
ILLINOISS	corn	17.54	16.95	42.39
ILLINOISS	soybeans	10.53	0.00	0.00
ILLINOISS	wheat	68.00	0.00	0.00
ILLINOISS	hay	47.76	50.70	44.94
INDIANAN	corn	7.69	7.58	43.76
INDIANAN	soybeans	4.55	0.00	0.00
INDIANAN	wheat	61.54	0.00	0.00
INDIANAN	hay	36.11	37.33	27.20
INDIANAS	corn	7.69	7.58	43.76
INDIANAS	soybeans	4.55	0.00	0.00
INDIANAS	wheat	61.54	0.00	0.00
INDIANAS	hay	36.11	37.33	27.20
IOWAW	corn	16.67	18.33	57.76
IOWAW	soybeans	5.26	0.00	0.00
IOWAW	wheat	51.72	0.00	0.00
IOWAW	hay	25.33	30.77	66.19
IOWACENT	corn	16.67	18.33	57.76
IOWACENT	soybeans	5.26	0.00	0.00
IOWACENT	wheat	51.72	0.00	0.00
IOWACENT	hay	25.33	30.77	66.19
IOWANE	corn	16.67	18.33	57.76
IOWANE	soybeans	5.26	0.00	0.00
IOWANE	wheat	51.72	0.00	0.00
IOWANE	hay	25.33	30.77	66.19
IOWAS	corn	16.67	18.33	57.76
IOWAS	soybeans	5.26	0.00	0.00
IOWAS	wheat	51.72	0.00	0.00
IOWAS	hay	25.33	30.77	66.19
kansas	corn	-17.31	14.52	38.28
kansas	soybeans	-17.65	0.00	0.00
kansas	wheat	17.65	0.00	0.00
kansas	hay	9.68	38.64	51.18
kentucky	corn	4.35	9.72	50.11
kentucky	wheat	62.50	0.00	0.00
kentucky	hay	26.88	28.42	40.90
louisiana	corn	19.05	26.23	171.58
louisiana	soybeans	11.76	0.00	0.00
louisiana	wheat	41.46	0.00	0.00
maine	corn	35.14	34.21	48.08

maine	soybeans	25.00	0.00	0.00
maine	wheat	53.57	0.00	0.00
maryland	corn	15.00	15.00	47.73
maryland	soybeans	23.08	0.00	0.00
maryland	wheat	57.14	0.00	0.00
mass	corn	24.39	32.56	74.22
mass	soybeans	23.08	0.00	0.00
mass	wheat	56.67	0.00	0.00
michigan	corn	36.36	42.22	68.91
michigan	soybeans	38.46	0.00	0.00
michigan	wheat	56.67	0.00	0.00
michigan	hay	41.94	49.23	59.36
minnesota	corn	14.00	23.53	55.71
minnesota	soybeans	20.00	0.00	0.00
minnesota	wheat	40.00	0.00	0.00
minnesota	hay	19.23	42.86	88.44
mississippi	corn	5.00	16.95	116.65
mississippi	wheat	61.76	0.00	0.00
missouri	corn	6.35	12.50	29.69
missouri	soybeans	-5.00	0.00	0.00
missouri	wheat	58.06	0.00	0.00
missouri	hay	28.41	30.93	26.60
montana	corn	-5.26	36.59	17.00
montana	soybeans	14.29	0.00	0.00
montana	wheat	26.92	0.00	0.00
montana	hay	26.67	46.99	31.51
nebraska	corn	-2.08	30.36	40.11
nebraska	soybeans	6.25	0.00	0.00
nebraska	wheat	42.86	0.00	0.00
nebraska	hay	20.00	47.37	49.31
nevada	corn	0.00	13.33	10.44
nevada	wheat	50.00	0.00	0.00
nevada	hay	36.84	8.49	-0.94
newhampshi	corn	30.95	39.53	36.60
newhampshi	soybeans	14.29	0.00	0.00
newhampshi	wheat	58.62	0.00	0.00
newjersey	corn	23.53	25.00	64.13
newjersey	soybeans	37.50	0.00	0.00
newjersey	wheat	72.73	0.00	0.00
newmexico	corn	-15.38	57.78	78.88
newmexico	soybeans	-14.29	0.00	0.00

newmexico	wheat	50.00	0.00	0.00
newmexico	hay	33.33	47.76	64.71
newyork	corn	27.27	29.55	78.61
newyork	soybeans	30.77	0.00	0.00
newyork	wheat	64.29	0.00	0.00
northcarol	corn	10.00	11.76	108.65
northcarol	soybeans	14.29	0.00	0.00
northcarol	wheat	43.75	0.00	0.00
northdakot	corn	-19.51	24.07	48.69
northdakot	soybeans	-7.69	0.00	0.00
northdakot	wheat	6.67	0.00	0.00
northdakot	hay	-9.26	40.26	61.13
OHIONW	corn	15.00	19.67	54.24
OHIONW	soybeans	15.00	0.00	0.00
OHIONW	wheat	62.07	0.00	0.00
OHIONW	hay	37.50	39.76	55.09
OHIOS	corn	15.00	19.67	54.24
OHIOS	soybeans	15.00	0.00	0.00
OHIOS	wheat	62.07	0.00	0.00
OHIOS	hay	37.50	39.76	55.09
OHIONE	corn	15.00	19.67	54.24
OHIONE	soybeans	15.00	0.00	0.00
OHIONE	wheat	62.07	0.00	0.00
OHIONE	hay	37.50	39.76	55.09
oklahoma	corn	1.75	7.35	21.20
oklahoma	soybeans	-11.76	0.00	0.00
oklahoma	wheat	34.21	0.00	0.00
oklahoma	hay	13.79	19.42	31.61
oregon	corn	-8.70	15.52	13.61
oregon	soybeans	42.86	0.00	0.00
oregon	wheat	20.00	0.00	0.00
oregon	hay	20.75	35.71	29.15
pennsylvan	corn	34.69	36.73	58.25
pennsylvan	soybeans	42.86	0.00	0.00
pennsylvan	wheat	48.28	0.00	0.00
pennsylvan	hay	41.25	43.53	58.66
rhodeislan	corn	28.57	26.32	11.55
rhodeislan	soybeans	7.69	0.00	0.00
rhodeislan	wheat	66.67	0.00	0.00
southcarol	corn	5.56	9.26	267.95
southcarol	soybeans	7.14	0.00	0.00



southcarol	wheat	37.93	0.00	0.00
southdakot	corn	-2.56	27.78	34.36
southdakot	wheat	29.03	0.00	0.00
southdakot	hay	14.58	43.94	50.40
tennessee	corn	7.35	15.71	77.69
tennessee	soybeans	5.00	0.00	0.00
tennessee	wheat	70.97	0.00	0.00
TXHIPLAINS	corn	1.85	10.00	21.96
TXHIPLAINS	soybeans	-12.50	0.00	0.00
TXHIPLAINS	wheat	24.32	0.00	0.00
TXHIPLAINS	hay	313.33	28.75	-19.31
TXROLINGPL	corn	1.85	10.00	21.96
TXROLINGPL	soybeans	-12.50	0.00	0.00
TXROLINGPL	wheat	24.32	0.00	0.00
TXROLINGPL	hay	313.33	28.75	-19.31
TXCNTBLACK	corn	1.85	10.00	21.96
TXCNTBLACK	soybeans	-12.50	0.00	0.00
TXCNTBLACK	wheat	24.32	0.00	0.00
TXCNTBLACK	hay	313.33	28.75	-19.31
TXEAST	corn	1.85	10.00	21.96
TXEAST	soybeans	-12.50	0.00	0.00
TXEAST	wheat	24.32	0.00	0.00
TXEAST	hay	313.33	28.75	-19.31
TXEDPLAT	corn	1.85	10.00	21.96
TXEDPLAT	soybeans	-12.50	0.00	0.00
TXEDPLAT	wheat	24.32	0.00	0.00
TXEDPLAT	hay	313.33	28.75	-19.31
TXCOASTBE	corn	1.85	10.00	21.96
TXCOASTBE	soybeans	-12.50	0.00	0.00
TXCOASTBE	wheat	24.32	0.00	0.00
TXCOASTBE	hay	313.33	28.75	-19.31
TXSOUTH	corn	1.85	10.00	21.96
TXSOUTH	soybeans	-12.50	0.00	0.00
TXSOUTH	wheat	24.32	0.00	0.00
TXSOUTH	hay	313.33	28.75	-19.31
TXTRANSPEC	corn	1.85	10.00	21.96
TXTRANSPEC	soybeans	-12.50	0.00	0.00
TXTRANSPEC	wheat	24.32	0.00	0.00
TXTRANSPEC	hay	313.33	28.75	-19.31
utah	corn	-75.00	30.77	23.22
utah	soybeans	-33.33	0.00	0.00

utah	wheat	33.33	0.00	0.00
utah	hay	20.83	38.83	30.10
vermont	corn	36.36	43.18	200.66
vermont	soybeans	88.89	0.00	0.00
vermont	wheat	42.86	0.00	0.00
virginia	corn	16.13	15.63	40.87
virginia	soybeans	15.79	0.00	0.00
virginia	wheat	44.83	0.00	0.00
washington	corn	-11.76	40.48	27.85
washington	soybeans	12.50	0.00	0.00
washington	wheat	17.65	0.00	0.00
washington	hay	24.59	52.94	44.65
westvirgin	corn	12.70	15.63	121.36
westvirgin	soybeans	14.29	0.00	0.00
westvirgin	wheat	45.95	0.00	0.00
westvirgin	hay	26.88	28.42	40.90
wisconsin	corn	28.26	34.78	128.85
wisconsin	soybeans	30.77	0.00	0.00
wisconsin	wheat	60.00	0.00	0.00
wisconsin	hay	46.27	54.41	109.50
wyoming	corn	-35.71	42.22	31.38
wyoming	wheat	10.00	0.00	0.00
wyoming	hay	13.33	45.83	49.76

Table C1.8 Raw Crop Simulator Generated Data for Hadley PNNL Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		corn	22.22	25.00	56.74
alabama		soybeans	11.76	0.00	0.00
alabama		wheat	70.00	0.00	0.00
arizona		corn	50.00	8.20	-0.84
arizona		soybeans	-16.67	0.00	0.00
arizona		wheat	173.33	0.00	0.00
arizona		hay	115.79	23.62	9.79
arkansas		corn	1.59	-1.67	17.44
arkansas		soybeans	-15.79	0.00	0.00
arkansas		wheat	65.62	0.00	0.00
arkansas		hay	29.59	29.25	19.14
CALIFORNIN		corn	166.67	5.77	11.05
CALIFORNIN		soybeans	66.67	0.00	0.00
CALIFORNIN		wheat	40.00	0.00	0.00
CALIFORNIN		hay	86.36	17.31	9.40
CALIFORNIS		corn	166.67	5.77	11.05
CALIFORNIS		soybeans	66.67	0.00	0.00
CALIFORNIS		wheat	40.00	0.00	0.00
CALIFORNIS		hay	86.36	17.31	9.40
colorado		corn	6.25	72.97	78.25
colorado		soybeans	20.00	0.00	0.00
colorado		wheat	55.56	0.00	0.00
colorado		hay	36.36	59.74	84.26
conn		corn	23.26	31.82	147.02
conn		soybeans	38.46	0.00	0.00
conn		wheat	100.00	0.00	0.00
delaware		corn	12.00	14.00	84.66
delaware		soybeans	12.50	0.00	0.00
delaware		wheat	95.83	0.00	0.00
florida		corn	-21.43	-15.79	346.36
florida		soybeans	-6.67	0.00	0.00
georgia		corn	1.92	3.85	99.02
georgia		soybeans	7.14	0.00	0.00
georgia		wheat	48.57	0.00	0.00
idaho		corn	44.44	40.00	17.78
idaho		soybeans	60.00	0.00	0.00
idaho		wheat	29.63	0.00	0.00

idaho	hay	39.62	56.00	48.82
ILLINOISN	corn	19.30	16.95	20.75
ILLINOISN	soybeans	10.53	0.00	0.00
ILLINOISN	wheat	68.00	0.00	0.00
ILLINOISN	hay	55.22	52.11	31.50
ILLINOISS	corn	19.30	16.95	20.75
ILLINOISS	soybeans	10.53	0.00	0.00
ILLINOISS	wheat	68.00	0.00	0.00
ILLINOISS	hay	55.22	52.11	31.50
INDIANAN	corn	7.69	7.58	15.84
INDIANAN	wheat	61.54	0.00	0.00
INDIANAN	hay	48.61	42.67	20.39
INDIANAS	corn	7.69	7.58	15.84
INDIANAS	wheat	61.54	0.00	0.00
INDIANAS	hay	48.61	42.67	20.39
IOWAW	corn	20.00	20.00	29.67
IOWAW	soybeans	10.53	0.00	0.00
IOWAW	wheat	48.28	0.00	0.00
IOWAW	hay	38.67	37.18	40.07
IOWACENT	corn	20.00	20.00	29.67
IOWACENT	soybeans	10.53	0.00	0.00
IOWACENT	wheat	48.28	0.00	0.00
IOWACENT	hay	38.67	37.18	40.07
IOWANE	corn	20.00	20.00	29.67
IOWANE	soybeans	10.53	0.00	0.00
IOWANE	wheat	48.28	0.00	0.00
IOWANE	hay	38.67	37.18	40.07
IOWAS	corn	20.00	20.00	29.67
IOWAS	soybeans	10.53	0.00	0.00
IOWAS	wheat	48.28	0.00	0.00
IOWAS	hay	38.67	37.18	40.07
kansas	corn	0.00	6.45	19.49
kansas	soybeans	-17.65	0.00	0.00
kansas	wheat	52.94	0.00	0.00
kansas	hay	25.81	52.27	57.95
kentucky	corn	11.59	8.33	6.12
kentucky	soybeans	-4.76	0.00	0.00
kentucky	wheat	75.00	0.00	0.00
kentucky	hay	27.96	27.37	6.17
louisiana	corn	6.35	6.56	94.86
louisiana	soybeans	-11.76	0.00	0.00

louisiana	wheat	29.27	0.00	0.00
maine	corn	32.43	31.58	13.57
maine	soybeans	87.50	0.00	0.00
maine	wheat	60.71	0.00	0.00
maryland	corn	15.00	17.50	111.36
maryland	soybeans	15.38	0.00	0.00
maryland	wheat	82.14	0.00	0.00
mass	corn	24.39	32.56	79.95
mass	soybeans	38.46	0.00	0.00
mass	wheat	76.67	0.00	0.00
michigan	corn	47.73	51.11	72.10
michigan	soybeans	53.85	0.00	0.00
michigan	wheat	70.00	0.00	0.00
michigan	hay	45.16	50.77	70.32
minnesota	corn	32.00	35.29	61.29
minnesota	soybeans	40.00	0.00	0.00
minnesota	wheat	50.00	0.00	0.00
minnesota	hay	33.33	45.24	87.99
mississippi	corn	-5.00	5.08	41.68
mississippi	soybeans	-17.65	0.00	0.00
mississippi	wheat	55.88	0.00	0.00
missouri	corn	7.94	7.81	2.50
missouri	soybeans	-5.00	0.00	0.00
missouri	wheat	70.97	0.00	0.00
missouri	hay	38.64	35.05	17.51
montana	corn	0.00	51.22	22.13
montana	soybeans	28.57	0.00	0.00
montana	wheat	26.92	0.00	0.00
montana	hay	15.56	44.58	49.71
nebraska	corn	6.25	25.00	36.06
nebraska	wheat	46.43	0.00	0.00
nebraska	hay	30.91	50.00	56.52
nevada	corn	100.00	3.33	-0.82
nevada	soybeans	50.00	0.00	0.00
nevada	wheat	160.00	0.00	0.00
nevada	hay	110.53	16.04	7.15
newhampshi	corn	28.57	37.21	54.12
newhampshi	soybeans	42.86	0.00	0.00
newhampshi	wheat	62.07	0.00	0.00
newjersey	corn	23.53	23.08	77.15
newjersey	soybeans	25.00	0.00	0.00

newjersey	wheat	113.64	0.00	0.00
newmexico	corn	-7.69	40.00	76.80
newmexico	wheat	78.57	0.00	0.00
newmexico	hay	72.22	0.00	0.00
newyork	corn	31.82	31.82	80.60
newyork	soybeans	46.15	0.00	0.00
newyork	wheat	89.29	0.00	0.00
northcarol	corn	8.00	7.84	43.27
northcarol	soybeans	7.14	0.00	0.00
northcarol	wheat	59.37	0.00	0.00
northdakot	corn	-14.63	20.37	41.96
northdakot	wheat	13.33	0.00	0.00
northdakot	hay	-1.85	37.66	69.37
OHIONW	corn	16.67	19.67	37.43
OHIONW	soybeans	10.00	0.00	0.00
OHIONW	wheat	79.31	0.00	0.00
OHIONW	hay	40.00	38.55	37.41
OHIOS	corn	16.67	19.67	37.43
OHIOS	soybeans	10.00	0.00	0.00
OHIOS	wheat	79.31	0.00	0.00
OHIOS	hay	40.00	38.55	37.41
OHIONE	corn	16.67	19.67	37.43
OHIONE	soybeans	10.00	0.00	0.00
OHIONE	wheat	79.31	0.00	0.00
OHIONE	hay	40.00	38.55	37.41
oklahoma	corn	5.26	0.00	-3.33
oklahoma	soybeans	-23.53	0.00	0.00
oklahoma	wheat	44.74	0.00	0.00
oklahoma	hay	28.74	35.92	31.28
oregon	corn	17.39	22.41	12.73
oregon	soybeans	57.14	0.00	0.00
oregon	wheat	34.29	0.00	0.00
oregon	hay	35.85	39.29	44.71
pennsylvan	corn	40.82	42.86	49.08
pennsylvan	soybeans	57.14	0.00	0.00
pennsylvan	wheat	72.41	0.00	0.00
pennsylvan	hay	43.75	35.29	55.18
rhodeislan	corn	34.29	28.95	-21.58
rhodeislan	soybeans	7.69	0.00	0.00
rhodeislan	wheat	112.12	0.00	0.00
southcarol	corn	9.26	12.96	94.87

southcarol	soybeans	7.14	0.00	0.00
southcarol	wheat	55.17	0.00	0.00
southdakot	corn	-17.95	25.93	34.14
southdakot	wheat	22.58	0.00	0.00
southdakot	hay	16.67	43.94	68.03
tennessee	corn	13.24	14.29	24.56
tennessee	soybeans	5.00	0.00	0.00
tennessee	wheat	80.65	0.00	0.00
TXHIPLAINS	corn	-5.56	-5.00	12.59
TXHIPLAINS	soybeans	-18.75	0.00	0.00
TXHIPLAINS	wheat	2.70	0.00	0.00
TXHIPLAINS	hay	380.00	35.00	-9.43
TXROLINGPL	corn	-5.56	-5.00	12.59
TXROLINGPL	soybeans	-18.75	0.00	0.00
TXROLINGPL	wheat	2.70	0.00	0.00
TXROLINGPL	hay	380.00	35.00	-9.43
TXCNTBLACK	corn	-5.56	-5.00	12.59
TXCNTBLACK	soybeans	-18.75	0.00	0.00
TXCNTBLACK	wheat	2.70	0.00	0.00
TXCNTBLACK	hay	380.00	35.00	-9.43
TXEAST	corn	-5.56	-5.00	12.59
TXEAST	soybeans	-18.75	0.00	0.00
TXEAST	wheat	2.70	0.00	0.00
TXEAST	hay	380.00	35.00	-9.43
TXEDPLAT	corn	-5.56	-5.00	12.59
TXEDPLAT	soybeans	-18.75	0.00	0.00
TXEDPLAT	wheat	2.70	0.00	0.00
TXEDPLAT	hay	380.00	35.00	-9.43
TXCOASTBE	corn	-5.56	-5.00	12.59
TXCOASTBE	soybeans	-18.75	0.00	0.00
TXCOASTBE	wheat	2.70	0.00	0.00
TXCOASTBE	hay	380.00	35.00	-9.43
TXSOUTH	corn	-5.56	-5.00	12.59
TXSOUTH	soybeans	-18.75	0.00	0.00
TXSOUTH	wheat	2.70	0.00	0.00
TXSOUTH	hay	380.00	35.00	-9.43
TXTRANSPEC	corn	-5.56	-5.00	12.59
TXTRANSPEC	soybeans	-18.75	0.00	0.00
TXTRANSPEC	wheat	2.70	0.00	0.00
TXTRANSPEC	hay	380.00	35.00	-9.43
utah	corn	-50.00	21.15	16.37

utah	soybeans	33.33	0.00	0.00
utah	wheat	150.00	0.00	0.00
utah	hay	83.33	33.98	35.75
vermont	corn	34.09	43.18	216.50
vermont	soybeans	122.22	0.00	0.00
vermont	wheat	50.00	0.00	0.00
virginia	corn	12.90	12.50	2.03
virginia	soybeans	10.53	0.00	0.00
virginia	wheat	68.97	0.00	0.00
washington	corn	29.41	64.29	37.01
washington	soybeans	25.00	0.00	0.00
washington	wheat	35.29	0.00	0.00
washington	hay	32.79	56.86	67.40
westvirgin	corn	17.46	17.19	73.89
westvirgin	soybeans	14.29	0.00	0.00
westvirgin	wheat	54.05	0.00	0.00
westvirgin	hay	27.96	27.37	6.17
wisconsin	corn	47.83	52.17	112.36
wisconsin	soybeans	61.54	0.00	0.00
wisconsin	wheat	60.00	0.00	0.00
wisconsin	hay	50.75	52.94	101.39
wyoming	corn	-28.57	37.78	27.86
wyoming	wheat	20.00	0.00	0.00
wyoming	hay	16.67	41.67	65.57



Table C2.1 Raw Crop Simulator Generated Data for Canadian Scenario run for 2030 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	1.33	13.35	30.71
Charleston,SC	csc	sorghum	22.24	19.09	11.90
Charleston,SC	csc	hay	-64.88	-29.45	50.34
Charleston,SC	csc	GRASS	-55.83	0.00	0.00
Charleston,SC	csc	tomat	-4.75	-8.43	10.13
louisville,KY	lKy	soybeans	14.26	22.09	40.32
louisville,KY	lKy	sorghum	19.87	10.89	-1.72
louisville,KY	lKy	hay	-16.10	-7.33	37.04
louisville,KY	lKy	GRASS	-8.74	0.00	0.00
Raleigh,NC	rNc	soybeans	27.46	11.51	16.13
Raleigh,NC	rNc	sorghum	27.54	15.72	-8.12
Raleigh,NC	rNc	hay	-22.58	-8.18	-17.59
Raleigh,NC	rNc	GRASS	-4.81	0.00	0.00
Raleigh,NC	rNc	tomat	23.99	8.08	-33.61
Abilene, TX	ABTX	wheat	-18.00	-5.50	-45.60
Abilene, TX	ABTX	sorghum	55.36	19.43	-2.23
Abilene, TX	ABTX	hay	-5.82	-2.84	-5.23
Abilene, TX	ABTX	GRASS	9.92	0.00	0.00
Alamosa, CO	ALCO	hay	-2.13	8.69	-4.73
Alamosa, CO	ALCO	POTATOES	-17.00	-3.90	17.00
Alamosa, CO	ALCO	GRASS	3.25	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	2.58	3.58
Bakersfield, CA	BACA	hay	48.45	103.83	12.39
Bakersfield, CA	BACA	GRASS	90.61	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	26.00	-5.20
Boise, ID	BOID	wheat	108.00	6.75	-20.85
Boise, ID	BOID	hay	30.72	57.70	11.80
Boise, ID	BOID	POTATOES	2.00	-3.60	1.60
Boise, ID	BOID	GRASS	58.66	0.00	0.00
Buffalo, NY	BUNY	hay	-9.79	7.74	15.15
Buffalo, NY	BUNY	POTATOES	21.80	-8.70	-11.80
Buffalo, NY	BUNY	GRASS	1.77	0.00	0.00
Buffalo, NY	BUNY	tomat	29.27	29.56	-14.29
Caribou, ME	CAME	hay	-5.31	19.43	-53.04
Caribou, ME	CAME	POTATOES	34.00	4.80	-13.30
Caribou, ME	CAME	GRASS	13.43	0.00	0.00
Corpus Christi, TX	CCTX	hay	-25.27	-20.24	7.06

Corpus Christi, TX	CCTX	GRASS	15.39	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	45.50	-14.40
Columbus, OH	COOH	corn	0.30	-8.70	-45.80
Columbus, OH	COOH	wheat	3.10	1.20	-12.20
Columbus, OH	COOH	hay	-6.03	4.83	-7.77
Columbus, OH	COOH	GRASS	6.06	0.00	0.00
Columbus, OH	COOH	tomat	1.93	-2.39	-31.03
Daytona Beach, FL	DBFL	hay	-32.42	-26.38	16.85
Daytona Beach, FL	DBFL	GRASS	-11.25	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	20.00	-33.20
Dodge City, KS	DCKS	wheat	-28.00	2.50	19.10
Dodge City, KS	DCKS	hay	-30.73	-20.57	2.67
Dodge City, KS	DCKS	GRASS	-24.49	0.00	0.00
Des Moines, IA	DEIA	corn	18.40	-4.40	-48.50
Des Moines, IA	DEIA	soybeans	30.44	17.15	-32.45
Des Moines, IA	DEIA	hay	-31.44	5.01	-97.55
Des Moines, IA	DEIA	GRASS	0.62	0.00	0.00
Duluth, MN	DUMN	corn	29.20	9.50	-18.30
Duluth, MN	DUMN	soybeans	115.66	77.33	-13.10
Duluth, MN	DUMN	hay	-7.10	19.61	-45.07
Duluth, MN	DUMN	GRASS	13.97	0.00	0.00
El Paso, TX	EPTX	sorghum	72.35	13.21	-0.26
El Paso, TX	EPTX	rice	0.00	5.28	15.77
El Paso, TX	EPTX	hay	4.99	-3.02	1.93
El Paso, TX	EPTX	GRASS	6.72	0.00	0.00
El Paso, TX	EPTX	tomat	158.96	-2.63	-26.15
El Paso, TX	EPTX	oranges	0.00	30.10	-0.20
Fargo, ND	FAND	corn	24.90	8.30	-16.00
Fargo, ND	FAND	wheat	18.20	2.50	-1.20
Fargo, ND	FAND	hay	12.84	22.16	-13.30
Fargo, ND	FAND	POTATOES	11.40	-2.50	-6.00
Fargo, ND	FAND	GRASS	30.28	0.00	0.00
Fresno, CA	FRCA	wheat	11.90	0.50	-10.10
Fresno, CA	FRCA	rice	0.00	14.49	11.76
Fresno, CA	FRCA	hay	62.90	32.12	0.60
Fresno, CA	FRCA	GRASS	70.15	0.00	0.00
Fresno, CA	FRCA	tomat	1652.17	9.57	6.82
Glasgow, MT	GLMT	wheat	11.20	1.30	-13.30
Glasgow, MT	GLMT	hay	4.51	20.37	10.28
Glasgow, MT	GLMT	GRASS	11.62	0.00	0.00
Goodland, KS	GOKS	wheat	-7.30	13.10	3.70

Goodland, KS	GOKS	sorghum	12.43	18.21	23.54
Goodland, KS	GOKS	hay	-32.01	-24.36	-8.27
Goodland, KS	GOKS	GRASS	-23.83	0.00	0.00
Indianapolis, IN	ININ	corn	-4.50	-11.00	-19.10
Indianapolis, IN	ININ	soybeans	17.81	22.55	39.65
Indianapolis, IN	ININ	hay	-14.84	-3.27	29.10
Indianapolis, IN	ININ	POTATOES	-23.50	-18.10	7.30
Indianapolis, IN	ININ	GRASS	-4.96	0.00	0.00
Indianapolis, IN	ININ	tomat	-6.50	-8.68	-33.64
Las Vegas, NV	LVNV	hay	26.24	-10.36	-5.00
Las Vegas, NV	LVNV	GRASS	36.37	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	58.20	-0.30
Madison, WI	MAWI	corn	4.50	1.40	-47.50
Madison, WI	MAWI	soybeans	60.17	28.62	-14.50
Madison, WI	MAWI	hay	1.94	12.00	-27.05
Madison, WI	MAWI	POTATOES	23.50	-12.70	-16.00
Madison, WI	MAWI	GRASS	19.52	0.00	0.00
Medford, OR	MEOR	hay	15.63	38.67	10.17
Medford, OR	MEOR	POTATOES	-5.60	-2.00	3.60
Medford, OR	MEOR	GRASS	26.64	0.00	0.00
Memphis, TN	METN	corn	-8.20	-15.80	-39.10
Memphis, TN	METN	soybeans	17.26	13.56	48.44
Memphis, TN	METN	hay	-25.37	-16.30	83.30
Memphis, TN	METN	GRASS	-19.17	0.00	0.00
Miami, FL	MIFL	rice	0.00	4.94	-32.41
Miami, FL	MIFL	hay	-27.86	-29.03	69.23
Miami, FL	MIFL	GRASS	-6.88	0.00	0.00
Miami, FL	MIFL	oranges	0.00	12.20	-69.30
Montgomery, AL	MOAL	soybeans	-2.34	23.41	68.18
Montgomery, AL	MOAL	sorghum	25.95	19.37	6.06
Montgomery, AL	MOAL	rice	0.00	8.07	54.13
Montgomery, AL	MOAL	hay	-62.10	-24.47	58.05
Montgomery, AL	MOAL	GRASS	-53.48	0.00	0.00
Montgomery, AL	MOAL	tomat	4.04	-11.21	-6.29
Montgomery, AL	MOAL	oranges	0.00	30.70	312.10
Muskegon, MI	MUMI	soybeans	101.10	38.54	0.38
Muskegon, MI	MUMI	hay	-8.72	8.04	-6.48
Muskegon, MI	MUMI	POTATOES	25.50	-12.90	-8.30
Muskegon, MI	MUMI	GRASS	11.35	0.00	0.00
Muskegon, MI	MUMI	tomat	42.13	37.50	-7.19
North Platte, NE	npne	corn	24.70	-11.30	-42.50

North Platte, NE	npne	soybeans	73.82	32.81	39.58
North Platte, NE	npne	wheat	-0.10	8.40	19.30
North Platte, NE	npne	sorghum	52.88	49.49	16.29
North Platte, NE	npne	hay	-18.76	-4.67	21.93
North Platte, NE	npne	GRASS	1.20	0.00	0.00
Oklahoma City, OK	OKOK	wheat	-52.30	-12.30	60.90
Oklahoma City, OK	OKOK	sorghum	11.52	6.98	-1.52
Oklahoma City, OK	OKOK	hay	-33.68	-22.89	27.77
Oklahoma City, OK	OKOK	GRASS	-25.70	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	5.75	-14.66
Port Arthur, TX	PATX	hay	-36.59	-21.85	-5.72
Port Arthur, TX	PATX	GRASS	-2.51	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	60.30	194.20
Peoria, IL	PEIL	corn	18.50	-6.60	-29.00
Peoria, IL	PEIL	soybeans	49.16	18.18	4.92
Peoria, IL	PEIL	sorghum	48.95	18.21	-20.38
Peoria, IL	PEIL	hay	-5.30	9.04	-4.02
Peoria, IL	PEIL	GRASS	5.40	0.00	0.00
Pendleton, OR	PEOR	hay	10.64	70.57	25.40
Pendleton, OR	PEOR	POTATOES	-9.90	-1.00	1.20
Pendleton, OR	PEOR	GRASS	31.51	0.00	0.00
Pierre, SD	PISD	wheat	26.50	-3.70	-37.30
Pierre, SD	PISD	sorghum	185.94	35.98	0.84
Pierre, SD	PISD	hay	-0.74	9.14	2.30
Pierre, SD	PISD	GRASS	6.80	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	15.92	14.16
Red Bluff, CA	RBCA	hay	27.64	18.66	0.50
Red Bluff, CA	RBCA	GRASS	49.60	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	41.70	-43.50
Savannah, GA	SAGA	soybeans	12.10	25.80	44.74
Savannah, GA	SAGA	sorghum	24.04	16.86	-1.85
Savannah, GA	SAGA	hay	-59.70	-21.82	34.16
Savannah, GA	SAGA	GRASS	-45.06	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	17.80	53.50
Scottsbluff, NE	SBNE	hay	-13.64	-0.70	3.84
Scottsbluff, NE	SBNE	POTATOES	-9.90	-9.30	3.80
Scottsbluff, NE	SBNE	GRASS	-3.04	0.00	0.00
St. Cloud, MN	SCMN	corn	131.90	131.20	-2.60
St. Cloud, MN	SCMN	soybeans	74.21	31.73	-22.27
St. Cloud, MN	SCMN	wheat	7.00	-11.40	-24.20
St. Cloud, MN	SCMN	hay	-3.08	13.50	-56.86

St. Cloud, MN	SCMN	GRASS	17.82	0.00	0.00
Sioux Falls, SD	SFSD	corn	19.20	-7.30	-35.10
Sioux Falls, SD	SFSD	sorghum	99.89	54.14	-24.79
Sioux Falls, SD	SFSD	hay	5.96	12.87	-12.53
Sioux Falls, SD	SFSD	GRASS	26.00	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	6.34	-3.22
Shreveport, LA	SHLA	hay	-53.74	-27.19	27.85
Shreveport, LA	SHLA	GRASS	-47.37	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	66.30	194.20
Spokane, WA	SPWA	wheat	16.25	0.25	-5.20
Spokane, WA	SPWA	hay	4.11	22.28	14.81
Spokane, WA	SPWA	GRASS	14.35	0.00	0.00
Tallahassee, FL	T AFL	hay	-53.10	-25.00	12.62
Tallahassee, FL	T AFL	GRASS	-33.19	0.00	0.00
Tallahassee, FL	T AFL	tomat	-12.30	-12.67	-10.48
Tallahassee, FL	T AFL	oranges	0.00	-5.30	114.70
Topeka, KS	TOKS	corn	3.60	-14.50	-23.20
Topeka, KS	TOKS	soybeans	35.94	10.66	31.18
Topeka, KS	TOKS	wheat	-8.90	-8.60	19.50
Topeka, KS	TOKS	sorghum	23.10	8.11	-3.91
Topeka, KS	TOKS	hay	-2.66	-3.12	4.21
Topeka, KS	TOKS	GRASS	13.46	0.00	0.00
Tuscon, AZ	TUAZ	wheat	43.80	-5.80	-21.90
Tuscon, AZ	TUAZ	hay	-10.55	4.71	3.85
Tuscon, AZ	TUAZ	GRASS	-8.37	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	66.90	7.60
Yakima, WA	YAWA	hay	11.44	38.23	13.13
Yakima, WA	YAWA	POTATOES	-0.30	4.80	-3.50
Yakima, WA	YAWA	GRASS	6.73	0.00	0.00

Table C2.2 Raw Crop Simulator Generated Data for Canadian Scenario run for 2090 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	-11.25	7.27	21.35
Charleston,SC	csc	sorghum	24.46	4.76	-10.95
Charleston,SC	csc	hay	-34.65	-22.61	53.62
Charleston,SC	csc	GRASS	1.24	0.00	0.00
Charleston,SC	csc	tomat	-22.46	-31.65	8.23
louisville,KY	lKy	soybeans	62.85	24.79	12.25
louisville,KY	lKy	sorghum	46.49	2.64	-38.63
louisville,KY	lKy	hay	-0.88	0.16	23.48
louisville,KY	lKy	GRASS	4.69	0.00	0.00
Raleigh,NC	rNc	soybeans	27.41	7.50	-17.97
Raleigh,NC	rNc	sorghum	30.03	4.62	-41.12
Raleigh,NC	rNc	hay	-10.61	-3.96	-32.83
Raleigh,NC	rNc	GRASS	1.53	0.00	0.00
Raleigh,NC	rNc	tomat	-6.15	-22.91	-34.45
Abilene, TX	ABTX	wheat	-28.00	13.50	-19.50
Abilene, TX	ABTX	sorghum	116.24	6.28	-12.37
Abilene, TX	ABTX	hay	-20.49	-34.58	15.10
Abilene, TX	ABTX	GRASS	-12.55	0.00	0.00
Alamosa, CO	ALCO	hay	-14.75	16.31	40.96
Alamosa, CO	ALCO	POTATOES	6.60	-75.50	-54.10
Alamosa, CO	ALCO	GRASS	-10.13	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	-3.79	3.12
Bakersfield, CA	BACA	hay	104.78	147.88	22.27
Bakersfield, CA	BACA	GRASS	160.44	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	50.70	-11.00
Boise, ID	BOID	wheat	188.00	11.35	-27.20
Boise, ID	BOID	hay	51.67	61.24	29.91
Boise, ID	BOID	POTATOES	-21.40	-20.10	20.40
Boise, ID	BOID	GRASS	108.41	0.00	0.00
Buffalo, NY	BUNY	hay	3.57	21.99	40.08
Buffalo, NY	BUNY	POTATOES	-17.60	-9.30	12.70
Buffalo, NY	BUNY	GRASS	14.58	0.00	0.00
Buffalo, NY	BUNY	tomat	30.18	42.50	96.83
Caribou, ME	CAME	hay	-11.50	32.71	159.75
Caribou, ME	CAME	POTATOES	-17.40	3.70	22.10
Caribou, ME	CAME	GRASS	5.85	0.00	0.00
Corpus Christi, TX	CCTX	hay	-26.27	-22.62	15.48

Corpus Christi, TX	CCTX	GRASS	-11.16	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	40.70	13.90
Columbus, OH	COOH	corn	-1.30	-10.50	-58.70
Columbus, OH	COOH	wheat	16.20	4.30	-42.60
Columbus, OH	COOH	hay	1.39	9.01	20.00
Columbus, OH	COOH	GRASS	10.69	0.00	0.00
Columbus, OH	COOH	tomat	3.38	-2.35	-50.57
Daytona Beach, FL	DBFL	hay	-22.29	-33.61	87.64
Daytona Beach, FL	DBFL	GRASS	6.95	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	75.20	219.40
Dodge City, KS	DCKS	wheat	-20.40	0.40	3.30
Dodge City, KS	DCKS	hay	-30.28	-36.87	5.28
Dodge City, KS	DCKS	GRASS	-31.33	0.00	0.00
Des Moines, IA	DEIA	corn	16.70	-15.20	-67.50
Des Moines, IA	DEIA	soybeans	41.13	23.06	-50.33
Des Moines, IA	DEIA	hay	12.36	-0.64	-52.81
Des Moines, IA	DEIA	GRASS	27.32	0.00	0.00
Duluth, MN	DUMN	corn	11.40	-8.40	-19.70
Duluth, MN	DUMN	soybeans	83.11	189.77	69.05
Duluth, MN	DUMN	hay	-16.35	36.72	147.57
Duluth, MN	DUMN	GRASS	3.19	0.00	0.00
El Paso, TX	EPTX	sorghum	129.12	15.35	-11.11
El Paso, TX	EPTX	rice	0.00	-11.61	-9.70
El Paso, TX	EPTX	hay	-5.64	-18.33	6.00
El Paso, TX	EPTX	GRASS	-7.13	0.00	0.00
El Paso, TX	EPTX	tomat	114.45	-6.24	20.34
El Paso, TX	EPTX	oranges	0.00	306.10	4.40
Fargo, ND	FAND	corn	10.60	-9.50	-20.70
Fargo, ND	FAND	wheat	2.00	-3.10	-2.30
Fargo, ND	FAND	hay	-23.36	12.26	67.21
Fargo, ND	FAND	POTATOES	-63.90	-28.00	33.60
Fargo, ND	FAND	GRASS	-9.18	0.00	0.00
Fresno, CA	FRCA	wheat	-20.80	-11.30	-24.50
Fresno, CA	FRCA	rice	0.00	11.21	5.94
Fresno, CA	FRCA	hay	125.53	51.05	8.80
Fresno, CA	FRCA	GRASS	131.26	0.00	0.00
Fresno, CA	FRCA	tomat	12634.78	48.20	-14.17
Glasgow, MT	GLMT	wheat	0.10	-15.20	-15.40
Glasgow, MT	GLMT	hay	-20.97	-9.13	25.86
Glasgow, MT	GLMT	GRASS	-22.76	0.00	0.00
Goodland, KS	GOKS	wheat	-16.20	2.70	1.50

Goodland, KS	GOKS	sorghum	66.80	0.44	-3.73
Goodland, KS	GOKS	hay	-35.32	-40.62	5.45
Goodland, KS	GOKS	GRASS	-34.77	0.00	0.00
Indianapolis, IN	ININ	corn	-3.90	-15.50	-60.00
Indianapolis, IN	ININ	soybeans	63.92	27.99	-14.54
Indianapolis, IN	ININ	hay	2.38	2.79	-2.75
Indianapolis, IN	ININ	POTATOES	-38.80	-27.50	1.10
Indianapolis, IN	ININ	GRASS	13.71	0.00	0.00
Indianapolis, IN	ININ	tomat	4.76	-0.45	-59.81
Las Vegas, NV	LVNV	hay	119.41	36.72	2.86
Las Vegas, NV	LVNV	GRASS	131.35	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	197.10	1.30
Madison, WI	MAWI	corn	1.70	1.40	-68.90
Madison, WI	MAWI	soybeans	87.35	51.56	-20.50
Madison, WI	MAWI	hay	13.70	19.76	-25.61
Madison, WI	MAWI	POTATOES	-9.20	-19.20	-7.20
Madison, WI	MAWI	GRASS	31.69	0.00	0.00
Medford, OR	MEOR	hay	49.88	46.46	22.69
Medford, OR	MEOR	POTATOES	10.90	-9.80	8.40
Medford, OR	MEOR	GRASS	73.71	0.00	0.00
Memphis, TN	METN	corn	-6.20	-10.60	-39.10
Memphis, TN	METN	soybeans	-7.37	9.97	92.39
Memphis, TN	METN	hay	-20.62	-1.82	136.41
Memphis, TN	METN	GRASS	-12.09	0.00	0.00
Miami, FL	MIFL	rice	0.00	10.85	-60.00
Miami, FL	MIFL	hay	-37.66	-40.12	56.41
Miami, FL	MIFL	GRASS	-21.45	0.00	0.00
Miami, FL	MIFL	oranges	0.00	10.60	-5.30
Montgomery, AL	MOAL	soybeans	-13.93	15.32	151.52
Montgomery, AL	MOAL	sorghum	30.06	6.19	14.72
Montgomery, AL	MOAL	rice	0.00	11.14	133.03
Montgomery, AL	MOAL	hay	-35.21	-15.84	128.60
Montgomery, AL	MOAL	GRASS	20.04	0.00	0.00
Montgomery, AL	MOAL	tomat	2.91	-19.77	-25.16
Montgomery, AL	MOAL	oranges	0.00	258.50	916.30
Muskegon, MI	MUMI	soybeans	166.58	61.89	7.60
Muskegon, MI	MUMI	hay	12.11	23.10	-16.37
Muskegon, MI	MUMI	POTATOES	-17.30	-18.60	1.10
Muskegon, MI	MUMI	GRASS	33.99	0.00	0.00
Muskegon, MI	MUMI	tomat	58.30	50.05	42.45
North Platte, NE	npne	corn	33.50	-14.00	-65.80



North Platte, NE	npne	soybeans	122.71	34.43	38.69
North Platte, NE	npne	wheat	-0.50	4.10	26.50
North Platte, NE	npne	sorghum	107.46	26.69	-7.49
North Platte, NE	npne	hay	-11.61	-21.04	31.89
North Platte, NE	npne	GRASS	5.84	0.00	0.00
Oklahoma City, OK	OKOK	wheat	-20.70	-6.90	19.80
Oklahoma City, OK	OKOK	sorghum	85.64	-5.88	-45.59
Oklahoma City, OK	OKOK	hay	-16.35	-23.11	27.25
Oklahoma City, OK	OKOK	GRASS	-7.83	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	4.08	11.21
Port Arthur, TX	PATX	hay	-22.79	-18.64	58.58
Port Arthur, TX	PATX	GRASS	27.53	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	197.20	403.70
Peoria, IL	PEIL	corn	24.80	-10.50	-60.30
Peoria, IL	PEIL	soybeans	95.67	26.13	-37.30
Peoria, IL	PEIL	sorghum	57.95	13.47	-51.18
Peoria, IL	PEIL	hay	12.72	11.17	-38.12
Peoria, IL	PEIL	GRASS	24.50	0.00	0.00
Pendleton, OR	PEOR	hay	27.01	71.87	45.00
Pendleton, OR	PEOR	POTATOES	-11.00	-15.30	9.40
Pendleton, OR	PEOR	GRASS	64.94	0.00	0.00
Pierre, SD	PISD	wheat	16.20	-9.40	-44.20
Pierre, SD	PISD	sorghum	309.33	18.80	-7.93
Pierre, SD	PISD	hay	-11.89	-22.53	8.09
Pierre, SD	PISD	GRASS	-9.10	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	15.48	11.38
Red Bluff, CA	RBCA	hay	57.56	27.15	5.45
Red Bluff, CA	RBCA	GRASS	86.25	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	90.00	-55.30
Savannah, GA	SAGA	soybeans	-19.87	14.97	90.79
Savannah, GA	SAGA	sorghum	9.04	4.78	-1.23
Savannah, GA	SAGA	hay	-45.36	-23.08	138.51
Savannah, GA	SAGA	GRASS	-2.20	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	315.40	354.00
Scottsbluff, NE	SBNE	hay	-9.48	-31.62	0.00
Scottsbluff, NE	SBNE	POTATOES	-70.30	-50.10	13.50
Scottsbluff, NE	SBNE	GRASS	-0.79	0.00	0.00
St. Cloud, MN	SCMN	corn	196.70	191.30	-3.00
St. Cloud, MN	SCMN	soybeans	61.23	69.73	30.81
St. Cloud, MN	SCMN	wheat	-0.20	-12.90	-26.20
St. Cloud, MN	SCMN	hay	-14.32	5.44	37.96

St. Cloud, MN	SCMN	GRASS	0.19	0.00	0.00
Sioux Falls, SD	SFSD	corn	15.50	-14.30	-65.90
Sioux Falls, SD	SFSD	sorghum	106.82	43.91	-33.47
Sioux Falls, SD	SFSD	hay	8.21	3.40	6.68
Sioux Falls, SD	SFSD	GRASS	24.22	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	1.25	50.16
Shreveport, LA	SHLA	hay	-38.36	-20.99	33.52
Shreveport, LA	SHLA	GRASS	-3.59	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	299.00	202.90
Spokane, WA	SPWA	wheat	137.90	7.25	-27.20
Spokane, WA	SPWA	hay	41.21	63.49	44.35
Spokane, WA	SPWA	GRASS	96.62	0.00	0.00
Tallahassee, FL	T AFL	hay	-43.73	-25.74	333.01
Tallahassee, FL	T AFL	GRASS	5.73	0.00	0.00
Tallahassee, FL	T AFL	tomat	-21.97	-20.56	17.14
Tallahassee, FL	T AFL	oranges	0.00	292.00	1304.10
Topeka, KS	TOKS	corn	4.80	-22.00	-53.30
Topeka, KS	TOKS	soybeans	90.70	9.42	-5.73
Topeka, KS	TOKS	wheat	-2.90	-7.00	-12.60
Topeka, KS	TOKS	sorghum	33.61	-2.96	-55.22
Topeka, KS	TOKS	hay	13.41	-3.93	-17.79
Topeka, KS	TOKS	GRASS	27.28	0.00	0.00
Tuscon, AZ	TUAZ	wheat	604.50	-14.90	-59.40
Tuscon, AZ	TUAZ	hay	63.89	34.83	0.00
Tuscon, AZ	TUAZ	GRASS	59.62	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	114.60	-0.70
Yakima, WA	YAWA	hay	25.79	44.63	32.54
Yakima, WA	YAWA	POTATOES	-6.50	-1.40	12.00
Yakima, WA	YAWA	GRASS	43.30	0.00	0.00

Table C2.3 Raw Crop Simulator Generated Data for Hadley Scenario run for 2030 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston,SC	csc	soybeans	20.67	13.90	3.00
Charleston,SC	csc	sorghum	36.25	23.10	-0.95
Charleston,SC	csc	hay	-25.92	-15.05	-2.58
Charleston,SC	csc	GRASS	28.10	0.00	0.00
Charleston,SC	csc	tomat	23.22	14.18	-5.06
louisville,KY	lKy	soybeans	67.20	27.19	10.67
louisville,KY	lKy	sorghum	48.51	19.00	-18.88
louisville,KY	lKy	hay	4.35	19.67	-32.05
louisville,KY	lKy	GRASS	16.89	0.00	0.00
Raleigh,NC	rNc	soybeans	32.18	19.93	18.43
Raleigh,NC	rNc	sorghum	33.32	21.85	-7.11
Raleigh,NC	rNc	hay	-5.21	19.13	-64.61
Raleigh,NC	rNc	GRASS	18.52	0.00	0.00
Raleigh,NC	rNc	tomat	39.63	19.69	-39.50
Abilene, TX	ABTX	wheat	19.00	5.70	-10.70
Abilene, TX	ABTX	sorghum	24.06	18.42	8.92
Abilene, TX	ABTX	hay	0.99	17.55	-14.01
Abilene, TX	ABTX	GRASS	19.40	0.00	0.00
Alamosa, CO	ALCO	hay	6.24	23.48	-14.89
Alamosa, CO	ALCO	POTATOES	-8.50	-1.00	7.70
Alamosa, CO	ALCO	GRASS	12.76	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	7.90	8.32
Bakersfield, CA	BACA	hay	32.50	107.84	0.00
Bakersfield, CA	BACA	GRASS	70.88	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	36.20	-1.80
Boise, ID	BOID	wheat	60.20	12.10	-13.05
Boise, ID	BOID	hay	27.77	82.17	0.49
Boise, ID	BOID	POTATOES	-4.50	-4.20	5.40
Boise, ID	BOID	GRASS	58.99	0.00	0.00
Buffalo, NY	BUNY	hay	3.75	27.00	-55.04
Buffalo, NY	BUNY	POTATOES	22.10	-1.40	-9.60
Buffalo, NY	BUNY	GRASS	20.54	0.00	0.00
Buffalo, NY	BUNY	tomat	32.07	32.53	-15.87
Caribou, ME	CAME	hay	-3.47	26.99	-40.37
Caribou, ME	CAME	POTATOES	6.60	3.30	6.20
Caribou, ME	CAME	GRASS	14.11	0.00	0.00
Corpus Christi, TX	CCTX	hay	-21.33	-15.75	-16.50

Corpus Christi, TX	CCTX	GRASS	16.60	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	46.90	-7.30
Columbus, OH	COOH	corn	5.30	-3.80	-38.50
Columbus, OH	COOH	wheat	8.20	1.90	-16.30
Columbus, OH	COOH	hay	2.46	21.50	-34.88
Columbus, OH	COOH	GRASS	13.36	0.00	0.00
Columbus, OH	COOH	tomat	13.64	7.50	-39.08
Daytona Beach, FL	DBFL	hay	-20.24	-16.86	13.48
Daytona Beach, FL	DBFL	GRASS	11.52	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	24.60	11.60
Dodge City, KS	DCKS	wheat	16.50	7.50	-5.70
Dodge City, KS	DCKS	hay	3.17	22.34	-19.73
Dodge City, KS	DCKS	GRASS	20.52	0.00	0.00
Des Moines, IA	DEIA	corn	11.60	-2.30	-26.10
Des Moines, IA	DEIA	soybeans	20.88	22.74	-1.32
Des Moines, IA	DEIA	hay	3.63	23.54	-49.38
Des Moines, IA	DEIA	GRASS	22.48	0.00	0.00
Duluth, MN	DUMN	corn	25.20	-0.30	-31.20
Duluth, MN	DUMN	soybeans	84.25	59.72	-8.93
Duluth, MN	DUMN	hay	-8.40	31.99	-47.72
Duluth, MN	DUMN	GRASS	13.09	0.00	0.00
El Paso, TX	EPTX	sorghum	87.35	17.26	-21.71
El Paso, TX	EPTX	rice	0.00	8.54	17.12
El Paso, TX	EPTX	hay	2.87	12.18	-18.99
El Paso, TX	EPTX	GRASS	7.56	0.00	0.00
El Paso, TX	EPTX	tomat	239.88	14.94	-30.43
El Paso, TX	EPTX	oranges	0.00	32.30	1.00
Fargo, ND	FAND	corn	24.00	-0.10	-28.60
Fargo, ND	FAND	wheat	20.10	9.30	-7.70
Fargo, ND	FAND	hay	2.39	31.08	-30.61
Fargo, ND	FAND	POTATOES	20.70	2.10	-6.90
Fargo, ND	FAND	GRASS	21.99	0.00	0.00
Fresno, CA	FRCA	wheat	20.50	5.50	-20.60
Fresno, CA	FRCA	rice	0.00	17.20	16.10
Fresno, CA	FRCA	hay	32.76	37.38	-6.74
Fresno, CA	FRCA	GRASS	45.08	0.00	0.00
Fresno, CA	FRCA	tomat	1404.35	8.97	1.18
Glasgow, MT	GLMT	wheat	20.90	5.80	-9.50
Glasgow, MT	GLMT	hay	13.97	22.29	-23.47
Glasgow, MT	GLMT	GRASS	19.90	0.00	0.00
Goodland, KS	GOKS	wheat	22.20	12.00	-10.10

Goodland, KS	GOKS	sorghum	26.89	23.43	11.66
Goodland, KS	GOKS	hay	-5.31	8.50	-23.44
Goodland, KS	GOKS	GRASS	7.01	0.00	0.00
Indianapolis, IN	ININ	corn	7.60	-4.10	-34.70
Indianapolis, IN	ININ	soybeans	55.16	22.55	-11.45
Indianapolis, IN	ININ	hay	3.35	24.90	-32.77
Indianapolis, IN	ININ	POTATOES	7.40	-5.50	-5.80
Indianapolis, IN	ININ	GRASS	17.13	0.00	0.00
Indianapolis, IN	ININ	tomat	12.70	7.40	-36.45
Las Vegas, NV	LVNV	hay	2.80	9.14	2.24
Las Vegas, NV	LVNV	GRASS	8.82	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	67.10	1.40
Madison, WI	MAWI	corn	-1.30	-3.70	-42.20
Madison, WI	MAWI	soybeans	48.32	24.19	-17.00
Madison, WI	MAWI	hay	7.38	26.11	-64.47
Madison, WI	MAWI	POTATOES	19.50	0.20	-8.80
Madison, WI	MAWI	GRASS	24.40	0.00	0.00
Medford, OR	MEOR	hay	27.81	82.66	-1.85
Medford, OR	MEOR	POTATOES	5.60	-1.80	4.20
Medford, OR	MEOR	GRASS	55.64	0.00	0.00
Memphis, TN	METN	corn	3.60	2.10	-52.20
Memphis, TN	METN	soybeans	60.56	17.25	2.42
Memphis, TN	METN	hay	-1.76	18.20	-26.39
Memphis, TN	METN	GRASS	13.45	0.00	0.00
Miami, FL	MIFL	rice	0.00	6.19	-11.72
Miami, FL	MIFL	hay	-16.69	-22.08	33.33
Miami, FL	MIFL	GRASS	3.51	0.00	0.00
Miami, FL	MIFL	oranges	0.00	6.30	-20.00
Montgomery, AL	MOAL	soybeans	37.24	19.97	22.35
Montgomery, AL	MOAL	sorghum	28.24	23.89	-2.60
Montgomery, AL	MOAL	rice	0.00	10.53	8.72
Montgomery, AL	MOAL	hay	-22.85	-4.93	7.20
Montgomery, AL	MOAL	GRASS	32.93	0.00	0.00
Montgomery, AL	MOAL	tomat	13.98	4.65	-7.55
Montgomery, AL	MOAL	oranges	0.00	28.50	-10.50
Muskegon, MI	MUMI	soybeans	95.16	29.84	-10.65
Muskegon, MI	MUMI	hay	3.78	27.30	-45.01
Muskegon, MI	MUMI	POTATOES	33.10	-0.80	-10.60
Muskegon, MI	MUMI	GRASS	23.64	0.00	0.00
Muskegon, MI	MUMI	tomat	41.26	30.15	-10.79
North Platte, NE	npne	corn	23.60	-6.50	-39.40

North Platte, NE	npne	soybeans	79.07	26.61	-0.89
North Platte, NE	npne	wheat	20.50	15.60	6.10
North Platte, NE	npne	sorghum	45.81	28.10	-4.89
North Platte, NE	npne	hay	1.07	31.97	-25.58
North Platte, NE	npne	GRASS	21.92	0.00	0.00
Oklahoma City, OK	OKOK	wheat	6.20	4.20	0.70
Oklahoma City, OK	OKOK	sorghum	47.05	18.59	-1.82
Oklahoma City, OK	OKOK	hay	-3.55	18.97	-16.70
Oklahoma City, OK	OKOK	GRASS	19.00	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	7.02	14.66
Port Arthur, TX	PATX	hay	-27.77	-9.63	20.30
Port Arthur, TX	PATX	GRASS	11.50	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	41.20	324.20
Peoria, IL	PEIL	corn	16.30	-3.30	-25.60
Peoria, IL	PEIL	soybeans	44.02	17.83	-9.43
Peoria, IL	PEIL	sorghum	41.83	22.63	-13.74
Peoria, IL	PEIL	hay	4.89	25.67	-53.71
Peoria, IL	PEIL	GRASS	20.44	0.00	0.00
Pendleton, OR	PEOR	hay	21.51	93.34	2.79
Pendleton, OR	PEOR	POTATOES	12.30	-2.70	2.00
Pendleton, OR	PEOR	GRASS	56.95	0.00	0.00
Pierre, SD	PISD	wheat	23.40	1.30	-22.00
Pierre, SD	PISD	sorghum	131.27	32.65	2.09
Pierre, SD	PISD	hay	6.71	26.85	-17.31
Pierre, SD	PISD	GRASS	15.81	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	15.32	15.62
Red Bluff, CA	RBCA	hay	26.07	32.98	-9.20
Red Bluff, CA	RBCA	GRASS	60.78	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	45.70	-20.20
Savannah, GA	SAGA	soybeans	16.63	22.98	32.24
Savannah, GA	SAGA	sorghum	25.03	22.66	9.88
Savannah, GA	SAGA	hay	-28.94	-7.65	16.15
Savannah, GA	SAGA	GRASS	27.28	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	8.40	-10.70
Scottsbluff, NE	SBNE	hay	4.58	22.54	-18.37
Scottsbluff, NE	SBNE	POTATOES	-6.70	-6.30	2.20
Scottsbluff, NE	SBNE	GRASS	16.09	0.00	0.00
St. Cloud, MN	SCMN	corn	74.80	67.50	-31.60
St. Cloud, MN	SCMN	soybeans	56.95	27.26	-19.43
St. Cloud, MN	SCMN	wheat	15.40	4.90	-17.40
St. Cloud, MN	SCMN	hay	-1.85	32.07	-57.73

St. Cloud, MN	SCMN	GRASS	19.29	0.00	0.00
Sioux Falls, SD	SFSD	corn	17.60	-2.50	-27.50
Sioux Falls, SD	SFSD	sorghum	63.62	45.40	-7.85
Sioux Falls, SD	SFSD	hay	6.70	25.97	-39.88
Sioux Falls, SD	SFSD	GRASS	30.13	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	8.34	1.29
Shreveport, LA	SHLA	hay	-23.07	-7.56	6.02
Shreveport, LA	SHLA	GRASS	16.97	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	13.00	10.20
Spokane, WA	SPWA	wheat	65.75	5.35	-12.30
Spokane, WA	SPWA	hay	30.48	44.37	2.91
Spokane, WA	SPWA	GRASS	63.14	0.00	0.00
Tallahassee, FL	TAFLL	hay	-32.66	-12.90	4.85
Tallahassee, FL	TAFLL	GRASS	17.66	0.00	0.00
Tallahassee, FL	TAFLL	tomat	-1.88	2.75	21.90
Tallahassee, FL	TAFLL	oranges	0.00	45.20	52.40
Topeka, KS	TOKS	corn	11.60	-3.60	-20.30
Topeka, KS	TOKS	soybeans	49.89	18.62	7.89
Topeka, KS	TOKS	wheat	9.40	6.50	-5.80
Topeka, KS	TOKS	sorghum	23.93	18.71	-6.09
Topeka, KS	TOKS	hay	9.43	23.09	-45.99
Topeka, KS	TOKS	GRASS	31.78	0.00	0.00
Tuscon, AZ	TUAZ	wheat	122.40	-2.90	-22.60
Tuscon, AZ	TUAZ	hay	-0.87	45.44	2.17
Tuscon, AZ	TUAZ	GRASS	3.81	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	69.90	3.30
Yakima, WA	YAWA	hay	30.34	87.18	2.50
Yakima, WA	YAWA	POTATOES	2.70	2.10	3.30
Yakima, WA	YAWA	GRASS	47.27	0.00	0.00

Table C2.4 Raw Crop Simulator Generated Data for Hadley Scenario run for 2090 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
Charleston, SC	csc	soybeans	43.71	18.38	-5.99
Charleston, SC	csc	sorghum	53.45	20.45	-20.00
Charleston, SC	csc	hay	-12.63	-9.04	-23.92
Charleston, SC	csc	GRASS	58.75	0.00	0.00
Charleston, SC	csc	tomat	19.37	12.72	6.96
louisville, KY	lKy	soybeans	138.49	37.16	-17.39
louisville, KY	lKy	sorghum	76.04	18.91	-54.51
louisville, KY	lKy	hay	10.96	21.23	-55.10
louisville, KY	lKy	GRASS	27.07	0.00	0.00
Raleigh, NC	rNc	soybeans	45.34	28.83	14.29
Raleigh, NC	rNc	sorghum	37.39	20.53	-27.41
Raleigh, NC	rNc	hay	-0.44	18.25	-55.97
Raleigh, NC	rNc	GRASS	19.86	0.00	0.00
Raleigh, NC	rNc	tomat	24.40	17.65	5.04
Abilene, TX	ABTX	wheat	34.90	19.30	-14.80
Abilene, TX	ABTX	sorghum	117.62	13.39	-19.88
Abilene, TX	ABTX	hay	21.06	8.53	-28.32
Abilene, TX	ABTX	GRASS	39.02	0.00	0.00
Alamosa, CO	ALCO	hay	16.16	29.24	1.11
Alamosa, CO	ALCO	POTATOES	-5.60	-7.80	8.40
Alamosa, CO	ALCO	GRASS	24.60	0.00	0.00
Bakersfield, CA	BACA	rice	0.00	5.89	2.89
Bakersfield, CA	BACA	hay	79.86	145.48	10.06
Bakersfield, CA	BACA	GRASS	131.54	0.00	0.00
Bakersfield, CA	BACA	oranges	0.00	57.60	-0.60
Boise, ID	BOID	wheat	175.10	18.75	-26.50
Boise, ID	BOID	hay	45.29	72.47	7.68
Boise, ID	BOID	POTATOES	-18.30	-18.60	22.50
Boise, ID	BOID	GRASS	83.20	0.00	0.00
Buffalo, NY	BUNY	hay	11.74	32.32	-60.45
Buffalo, NY	BUNY	POTATOES	21.90	-0.30	-12.50
Buffalo, NY	BUNY	GRASS	28.97	0.00	0.00
Buffalo, NY	BUNY	tomat	46.30	46.20	-26.98
Caribou, ME	CAME	hay	2.94	36.18	-36.44
Caribou, ME	CAME	POTATOES	16.00	3.70	-2.70
Caribou, ME	CAME	GRASS	20.89	0.00	0.00
Corpus Christi, TX	CCTX	hay	-5.19	-16.33	0.17



Corpus Christi, TX	CCTX	GRASS	47.29	0.00	0.00
Corpus Christi, TX	CCTX	oranges	0.00	103.60	13.80
Columbus, OH	COOH	corn	6.20	-3.20	-70.80
Columbus, OH	COOH	wheat	23.60	8.50	-48.00
Columbus, OH	COOH	hay	2.46	21.50	-34.88
Columbus, OH	COOH	GRASS	13.36	0.00	0.00
Columbus, OH	COOH	tomat	23.16	13.99	-52.87
Daytona Beach, FL	DBFL	hay	-18.62	-11.28	14.61
Daytona Beach, FL	DBFL	GRASS	17.70	0.00	0.00
Daytona Beach, FL	DBFL	oranges	0.00	52.00	-1.20
Dodge City, KS	DCKS	wheat	72.50	16.70	-28.00
Dodge City, KS	DCKS	hay	14.37	9.32	-26.19
Dodge City, KS	DCKS	GRASS	27.00	0.00	0.00
Des Moines, IA	DEIA	corn	27.60	0.60	-63.40
Des Moines, IA	DEIA	soybeans	50.67	37.70	-37.09
Des Moines, IA	DEIA	hay	16.84	27.96	-64.82
Des Moines, IA	DEIA	GRASS	40.05	0.00	0.00
Duluth, MN	DUMN	corn	59.00	6.20	-57.90
Duluth, MN	DUMN	soybeans	155.47	119.77	-9.52
Duluth, MN	DUMN	hay	-0.38	43.24	-49.41
Duluth, MN	DUMN	GRASS	20.88	0.00	0.00
El Paso, TX	EPTX	sorghum	167.06	13.52	-7.36
El Paso, TX	EPTX	rice	0.00	6.91	13.88
El Paso, TX	EPTX	hay	14.95	-16.53	-17.99
El Paso, TX	EPTX	GRASS	14.32	0.00	0.00
El Paso, TX	EPTX	tomat	119.65	-16.64	-29.74
El Paso, TX	EPTX	oranges	0.00	215.70	-0.10
Fargo, ND	FAND	corn	52.70	4.20	-56.80
Fargo, ND	FAND	wheat	24.30	10.70	-10.10
Fargo, ND	FAND	hay	13.21	33.84	-25.14
Fargo, ND	FAND	POTATOES	10.90	-0.80	-3.80
Fargo, ND	FAND	GRASS	32.17	0.00	0.00
Fresno, CA	FRCA	wheat	6.10	2.30	-32.90
Fresno, CA	FRCA	rice	0.00	18.56	5.14
Fresno, CA	FRCA	hay	67.29	47.13	-4.20
Fresno, CA	FRCA	GRASS	76.78	0.00	0.00
Fresno, CA	FRCA	tomat	4617.39	15.60	-0.26
Glasgow, MT	GLMT	wheat	27.30	5.50	-10.70
Glasgow, MT	GLMT	hay	17.84	20.15	-14.06
Glasgow, MT	GLMT	GRASS	21.05	0.00	0.00
Goodland, KS	GOKS	wheat	81.40	23.60	-29.90

Goodland, KS	GOKS	sorghum	70.15	17.07	-19.81
Goodland, KS	GOKS	hay	5.88	-0.78	-22.34
Goodland, KS	GOKS	GRASS	17.81	0.00	0.00
Indianapolis, IN	ININ	corn	11.40	-3.20	-67.60
Indianapolis, IN	ININ	soybeans	107.40	36.58	-43.61
Indianapolis, IN	ININ	hay	12.74	28.88	-54.30
Indianapolis, IN	ININ	POTATOES	14.30	-8.60	-12.30
Indianapolis, IN	ININ	GRASS	28.49	0.00	0.00
Indianapolis, IN	ININ	tomat	28.04	18.32	-65.42
Las Vegas, NV	LVNV	hay	75.93	28.55	0.24
Las Vegas, NV	LVNV	GRASS	84.04	0.00	0.00
Las Vegas, NV	LVNV	oranges	0.00	139.50	1.80
Madison, WI	MAWI	corn	10.10	9.70	-70.50
Madison, WI	MAWI	soybeans	91.22	44.69	-32.00
Madison, WI	MAWI	hay	17.86	34.11	-70.05
Madison, WI	MAWI	POTATOES	26.20	1.50	-13.80
Madison, WI	MAWI	GRASS	36.79	0.00	0.00
Medford, OR	MEOR	hay	48.34	83.99	11.32
Medford, OR	MEOR	POTATOES	6.40	-11.60	13.90
Medford, OR	MEOR	GRASS	83.28	0.00	0.00
Memphis, TN	METN	corn	-0.60	-1.90	-57.50
Memphis, TN	METN	soybeans	104.53	22.71	-11.42
Memphis, TN	METN	hay	2.19	17.81	-45.13
Memphis, TN	METN	GRASS	17.39	0.00	0.00
Miami, FL	MIFL	rice	0.00	14.73	6.90
Miami, FL	MIFL	hay	-14.67	-24.27	71.79
Miami, FL	MIFL	GRASS	9.25	0.00	0.00
Miami, FL	MIFL	oranges	0.00	17.90	53.60
Montgomery, AL	MOAL	soybeans	66.31	27.18	7.95
Montgomery, AL	MOAL	sorghum	42.92	20.77	-27.27
Montgomery, AL	MOAL	rice	0.00	22.72	6.42
Montgomery, AL	MOAL	hay	-13.46	0.32	-16.10
Montgomery, AL	MOAL	GRASS	59.75	0.00	0.00
Montgomery, AL	MOAL	tomat	20.49	10.06	5.03
Montgomery, AL	MOAL	oranges	0.00	90.50	40.80
Muskegon, MI	MUMI	soybeans	165.30	54.10	-22.05
Muskegon, MI	MUMI	hay	14.30	33.63	-47.19
Muskegon, MI	MUMI	POTATOES	40.00	-1.50	-12.40
Muskegon, MI	MUMI	GRASS	35.26	0.00	0.00
Muskegon, MI	MUMI	tomat	70.69	57.64	-22.30
North Platte, NE	npne	corn	31.20	-4.40	-47.30

North Platte, NE	npne	soybeans	147.74	46.33	-7.14
North Platte, NE	npne	wheat	44.30	24.50	2.70
North Platte, NE	npne	sorghum	129.06	46.07	-25.73
North Platte, NE	npne	hay	16.17	24.98	-47.51
North Platte, NE	npne	GRASS	36.05	0.00	0.00
Oklahoma City, OK	OKOK	wheat	28.00	13.60	-35.30
Oklahoma City, OK	OKOK	sorghum	107.14	14.93	-34.65
Oklahoma City, OK	OKOK	hay	11.49	17.34	-38.16
Oklahoma City, OK	OKOK	GRASS	33.27	0.00	0.00
Port Arthur, TX	PATX	rice	0.00	17.69	13.36
Port Arthur, TX	PATX	hay	-18.91	-8.24	-4.06
Port Arthur, TX	PATX	GRASS	34.57	0.00	0.00
Port Arthur, TX	PATX	oranges	0.00	162.30	323.90
Peoria, IL	PEIL	corn	37.90	1.10	-59.60
Peoria, IL	PEIL	soybeans	105.60	37.11	-35.25
Peoria, IL	PEIL	sorghum	73.30	25.08	-50.24
Peoria, IL	PEIL	hay	16.34	30.43	-68.76
Peoria, IL	PEIL	GRASS	35.15	0.00	0.00
Pendleton, OR	PEOR	hay	31.81	87.24	14.68
Pendleton, OR	PEOR	POTATOES	8.80	-12.90	11.40
Pendleton, OR	PEOR	GRASS	64.71	0.00	0.00
Pierre, SD	PISD	wheat	47.30	7.10	-28.90
Pierre, SD	PISD	sorghum	243.76	32.32	-21.09
Pierre, SD	PISD	hay	17.32	19.23	-28.13
Pierre, SD	PISD	GRASS	24.59	0.00	0.00
Red Bluff, CA	RBCA	rice	0.00	13.63	8.60
Red Bluff, CA	RBCA	hay	53.22	40.28	-4.49
Red Bluff, CA	RBCA	GRASS	89.14	0.00	0.00
Red Bluff, CA	RBCA	oranges	0.00	79.90	-27.20
Savannah, GA	SAGA	soybeans	32.85	35.22	22.37
Savannah, GA	SAGA	sorghum	27.43	17.90	-13.58
Savannah, GA	SAGA	hay	-24.38	-1.12	-6.21
Savannah, GA	SAGA	GRASS	49.29	0.00	0.00
Savannah, GA	SAGA	oranges	0.00	83.80	-43.00
Scottsbluff, NE	SBNE	hay	57.03	9.52	-19.57
Scottsbluff, NE	SBNE	POTATOES	-37.80	-27.60	8.40
Scottsbluff, NE	SBNE	GRASS	-16.78	0.00	0.00
St. Cloud, MN	SCMN	corn	166.40	151.70	-59.70
St. Cloud, MN	SCMN	soybeans	92.28	50.25	-25.12
St. Cloud, MN	SCMN	wheat	22.30	11.50	-20.00
St. Cloud, MN	SCMN	hay	4.97	36.84	-68.33

St. Cloud, MN	SCMN	GRASS	28.74	0.00	0.00
Sioux Falls, SD	SFSD	corn	34.40	-2.90	-60.90
Sioux Falls, SD	SFSD	sorghum	122.68	58.10	-42.15
Sioux Falls, SD	SFSD	hay	23.81	28.54	-53.50
Sioux Falls, SD	SFSD	GRASS	46.36	0.00	0.00
Shreveport, LA	SHLA	rice	0.00	17.50	7.07
Shreveport, LA	SHLA	hay	-7.52	-3.34	-15.88
Shreveport, LA	SHLA	GRASS	53.35	0.00	0.00
Shreveport, LA	SHLA	oranges	0.00	138.60	29.90
Spokane, WA	SPWA	wheat	131.10	14.05	-22.90
Spokane, WA	SPWA	hay	45.09	94.49	17.37
Spokane, WA	SPWA	GRASS	103.07	0.00	0.00
Tallahassee, FL	T AFL	hay	-29.46	-8.30	-7.77
Tallahassee, FL	T AFL	GRASS	32.94	0.00	0.00
Tallahassee, FL	T AFL	tomat	-7.68	1.38	42.86
Tallahassee, FL	T AFL	oranges	0.00	65.00	35.90
Topeka, KS	TOKS	corn	21.90	-3.90	-53.40
Topeka, KS	TOKS	soybeans	107.77	28.97	-9.32
Topeka, KS	TOKS	wheat	18.40	11.80	-47.10
Topeka, KS	TOKS	sorghum	51.95	14.31	-43.91
Topeka, KS	TOKS	hay	20.47	18.42	-55.59
Topeka, KS	TOKS	GRASS	42.86	0.00	0.00
Tuscon, AZ	TUAZ	wheat	476.80	3.20	-50.20
Tuscon, AZ	TUAZ	hay	26.91	48.53	4.32
Tuscon, AZ	TUAZ	GRASS	26.29	0.00	0.00
Tuscon, AZ	TUAZ	oranges	0.00	111.60	3.90
Yakima, WA	YAWA	hay	36.25	77.05	10.57
Yakima, WA	YAWA	POTATOES	-13.50	-3.40	18.70
Yakima, WA	YAWA	GRASS	60.39	0.00	0.00

Table C2.5 Raw Crop Simulator Generated Data for CSIRO Scenario run for 2060 with Adaptation  
Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		cotton	64.79	0.00	0.00
alabama		corn	4.49	-11.21	-15.98
alabama		soybeans	-20.31	27.35	43.93
alabama		wheat	-20.46	-21.50	-15.96
alabama		sorghum	-23.40	-9.47	19.23
arizona		cotton	4.59	135.64	48.00
arizona		corn	0.00	-22.02	23.01
arkansas		cotton	69.81	99.93	48.00
arkansas		corn	7.36	-13.90	-11.90
arkansas		soybeans	-46.50	19.11	53.67
arkansas		wheat	-15.94	-18.00	-36.84
arkansas		sorghum	-41.55	-12.29	28.73
arkansas		rice	0.00	-10.22	21.26
CALIFORNIN		cotton	47.21	66.17	48.00
CALIFORNIN		corn	0.00	-33.25	0.70
CALIFORNIN		rice	0.00	-16.75	1.73
CALIFORNIS		cotton	47.21	66.17	48.00
CALIFORNIS		corn	0.00	-33.25	0.70
colorado		corn	0.00	687.18	17.29
colorado		wheat	-5.67	-3.00	8.63
colorado		sorghum	266.25	266.15	-6.21
delaware		corn	-11.69	-15.14	-4.88
delaware		soybeans	2.81	42.08	32.28
delaware		wheat	5.96	-5.84	-49.00
florida		cotton	57.05	0.00	0.00
florida		corn	-1.35	-9.41	-7.66
florida		soybeans	2.43	33.04	45.68
florida		sorghum	-14.04	-9.14	11.98
georgia		cotton	70.66	0.00	0.00
georgia		corn	-2.88	-10.70	-12.82
georgia		soybeans	-16.44	30.02	44.55
georgia		wheat	-17.49	-19.87	5.56
georgia		sorghum	-20.21	-5.71	18.36
idaho		corn	0.00	-9.20	0.80
idaho		wheat	76.10	7.80	-22.24
ILLINOISN		corn	-4.33	-16.97	-18.94
ILLINOISN		soybeans	27.51	31.67	20.28

ILLINOISN	wheat	1.72	1.43	-50.85
ILLINOISN	sorghum	41.53	22.90	-15.45
ILLINOISS	corn	8.75	-18.84	-17.11
ILLINOISS	soybeans	3.18	23.74	19.50
ILLINOISS	wheat	-15.50	-15.50	-66.67
ILLINOISS	sorghum	28.87	13.15	-10.56
INDIANAN	corn	-10.51	-18.21	-19.01
INDIANAN	soybeans	19.56	31.56	16.99
INDIANAN	wheat	-2.95	-2.95	-71.87
INDIANAS	corn	-16.35	-17.76	-12.82
INDIANAS	soybeans	2.08	30.02	66.94
INDIANAS	wheat	-13.13	-13.13	-90.91
IOWAW	corn	-1.56	-22.95	-28.66
IOWAW	soybeans	66.06	55.70	5.10
IOWAW	wheat	12.14	15.91	-19.83
IOWAW	sorghum	33.47	2.85	-32.84
IOWACENT	corn	-14.94	-19.68	-32.03
IOWACENT	soybeans	42.76	47.08	7.63
IOWACENT	wheat	11.76	11.08	-30.49
IOWACENT	sorghum	29.93	4.17	-32.87
IOWANE	corn	-13.39	-19.71	-25.60
IOWANE	soybeans	51.78	50.76	9.84
IOWANE	wheat	-1.02	-1.02	-51.56
IOWANE	sorghum	24.35	2.28	-33.33
IOWAS	corn	-4.83	-17.15	-16.67
IOWAS	soybeans	3.79	48.38	42.94
IOWAS	wheat	-1.22	-3.26	0.00
IOWAS	sorghum	42.40	19.55	-11.36
kansas	corn	55.12	-14.33	-2.74
kansas	soybeans	14.20	29.27	28.07
kansas	wheat	52.24	-3.47	-20.13
kansas	sorghum	45.48	25.87	9.73
kentucky	corn	-14.00	-14.01	-2.15
kentucky	soybeans	26.90	40.14	53.92
kentucky	wheat	-15.38	-15.38	-88.24
kentucky	sorghum	-16.37	-20.09	9.30
louisiana	cotton	45.63	0.00	0.00
louisiana	corn	1.05	-9.96	-16.67
louisiana	soybeans	-8.28	20.95	50.26
louisiana	wheat	-23.42	-23.16	79.69
louisiana	sorghum	-21.95	-11.61	22.83

louisiana	rice	0.00	-16.49	11.79
maryland	corn	-11.69	-15.14	-4.88
maryland	soybeans	2.81	42.08	32.28
maryland	wheat	5.96	-5.84	-49.00
michigan	corn	-4.93	-17.98	-31.17
michigan	soybeans	64.05	51.60	-1.46
michigan	wheat	-9.27	-18.95	-60.38
minnesota	corn	-2.29	-15.10	-38.61
minnesota	soybeans	87.11	71.15	-9.60
minnesota	wheat	11.39	15.08	-9.86
minnesota	sorghum	72.26	43.36	-31.29
mississippi	cotton	77.53	0.00	0.00
mississippi	corn	1.61	-12.39	-18.27
mississippi	soybeans	-10.53	27.03	38.83
mississippi	wheat	-20.92	-20.97	7.46
mississippi	sorghum	-22.80	-15.26	10.53
mississippi	rice	0.00	-10.94	9.13
missouri	cotton	63.86	53.10	48.00
missouri	corn	20.75	-16.37	-17.98
missouri	soybeans	7.92	35.22	35.34
missouri	wheat	-11.24	-14.81	-50.00
missouri	sorghum	42.17	21.17	-10.04
missouri	rice	0.00	-5.65	22.01
montana	corn	0.00	-5.83	-35.06
montana	wheat	55.70	7.31	-44.41
nebraska	corn	47.00	-14.04	-20.09
nebraska	soybeans	20.45	37.41	31.34
nebraska	wheat	18.31	-1.46	-50.98
nebraska	sorghum	68.11	39.98	-12.66
newjersey	corn	-22.65	-25.31	-14.71
newjersey	soybeans	48.19	42.58	9.09
newjersey	wheat	6.58	3.13	-38.95
newmexico	cotton	50.80	36.40	48.00
newmexico	corn	0.00	-11.53	13.26
newmexico	wheat	-83.81	0.65	1.13
newmexico	sorghum	-53.92	-4.85	-4.62
newyork	corn	-0.29	-8.65	-44.14
newyork	wheat	-12.19	-15.95	-70.73
northcarol	cotton	57.61	0.00	0.00
northcarol	corn	1.09	-7.23	-1.55
northcarol	soybeans	-19.84	42.51	63.64

northcarol	wheat	-17.17	-19.34	-35.45
northcarol	sorghum	-11.70	17.96	43.40
northdakot	corn	110.52	-4.08	-29.57
northdakot	soybeans	188.71	69.74	-10.38
northdakot	wheat	18.19	13.25	-13.14
OHIONW	corn	-10.15	-17.71	-14.81
OHIONW	soybeans	22.25	33.37	19.87
OHIONW	wheat	-2.31	-2.52	-64.86
OHIOS	corn	-10.63	-14.03	-16.67
OHIOS	soybeans	60.47	65.10	24.56
OHIOS	wheat	-13.01	-13.01	-74.51
OHIOS	sorghum	26.81	10.46	-34.17
OHIONE	corn	-5.83	-10.37	-18.18
OHIONE	soybeans	39.72	56.24	25.88
OHIONE	wheat	-10.54	-10.54	-70.31
oklahoma	cotton	97.20	96.28	48.00
oklahoma	corn	24.90	-17.65	1.79
oklahoma	soybeans	-43.33	6.90	69.35
oklahoma	wheat	-1.00	-8.88	-9.44
oklahoma	sorghum	-24.81	-7.72	29.82
oregon	corn	-3.86	-1.10	-17.26
oregon	wheat	131.12	19.63	-37.65
pennsylvan	corn	2.28	1.56	-50.75
pennsylvan	soybeans	54.16	56.45	0.00
pennsylvan	wheat	-6.03	-6.03	-88.89
southcarol	cotton	72.75	0.00	0.00
southcarol	corn	-3.62	-9.72	-9.39
southcarol	soybeans	-18.50	29.36	48.98
southcarol	wheat	-15.61	-18.32	-19.42
southcarol	sorghum	-22.72	-5.80	24.86
southdakot	corn	18.31	-15.02	-23.15
southdakot	soybeans	78.68	51.86	2.56
southdakot	wheat	23.98	18.69	-18.29
southdakot	sorghum	69.57	45.45	-11.30
tennessee	cotton	51.57	0.00	0.00
tennessee	corn	-1.87	-12.73	-18.44
tennessee	soybeans	-11.83	35.10	47.31
tennessee	wheat	-17.98	-19.14	-64.81
tennessee	sorghum	-2.31	16.24	25.64
TXHIPLAINS	cotton	49.66	43.84	48.00
TXHIPLAINS	corn	4.36	-20.34	-8.63



TXHIPLAINS	soybeans	-1.91	28.02	25.06
TXHIPLAINS	wheat	32.45	-8.88	-9.44
TXHIPLAINS	sorghum	13.32	18.34	-17.82
TXROLINGPL	cotton	53.22	70.14	48.00
TXROLINGPL	corn	0.00	-14.83	-1.81
TXROLINGPL	soybeans	61.21	1.93	29.90
TXROLINGPL	wheat	2.91	-14.36	17.14
TXROLINGPL	sorghum	46.05	9.66	-13.58
TXCNTBLACK	cotton	32.21	58.64	48.00
TXCNTBLACK	corn	36.18	-10.81	-6.22
TXCNTBLACK	soybeans	-81.38	-1.97	60.63
TXCNTBLACK	wheat	-14.77	-21.37	40.20
TXCNTBLACK	sorghum	17.80	7.55	-8.61
TXCNTBLACK	rice	0.00	-16.41	20.72
TXEAST	cotton	43.54	39.84	48.00
TXEAST	corn	7.50	-7.57	-3.97
TXEAST	soybeans	-10.64	8.18	41.09
TXEAST	sorghum	1.23	2.74	-12.81
TXEAST	rice	0.00	-17.82	15.94
TXEDPLAT	cotton	27.78	62.11	48.00
TXEDPLAT	corn	0.00	-18.59	3.87
TXEDPLAT	soybeans	-12.14	4.34	33.67
TXEDPLAT	wheat	-20.78	-18.43	48.01
TXEDPLAT	sorghum	5.43	1.64	-6.65
TXCOASTBE	cotton	7.75	25.91	48.00
TXCOASTBE	corn	-18.01	-14.19	3.75
TXCOASTBE	soybeans	-36.95	6.19	52.51
TXCOASTBE	sorghum	-2.11	-3.26	-1.55
TXCOASTBE	rice	0.00	-8.89	12.02
TXSOUTH	cotton	-1.68	22.77	48.00
TXSOUTH	corn	0.00	-19.47	24.03
TXSOUTH	soybeans	-32.35	-12.50	33.14
TXSOUTH	sorghum	-57.17	-4.30	6.92
TXTRANSPEC	cotton	37.82	91.73	48.00
TXTRANSPEC	corn	0.00	-16.72	9.45
TXTRANSPEC	soybeans	20.00	16.16	22.20
TXTRANSPEC	wheat	-52.63	-17.85	13.88
TXTRANSPEC	sorghum	169.23	6.95	-7.44
utah	corn	0.00	42.38	16.38
utah	wheat	374.94	0.39	-36.79
virginia	cotton	76.64	55.58	48.00

virginia	corn	-16.59	-5.15	16.09
virginia	soybeans	-31.32	52.38	60.57
virginia	wheat	19.76	-10.72	-37.41
washington	corn	0.00	215.21	-6.34
washington	wheat	54.65	17.64	-47.45
westvirgin	corn	-8.68	9.64	21.48
westvirgin	wheat	-7.53	-9.84	-70.83
wisconsin	corn	-8.42	-11.40	-25.00
wisconsin	soybeans	67.77	78.74	16.67
wisconsin	wheat	9.90	8.75	-35.80
wyoming	corn	47.00	3.30	-13.27
wyoming	wheat	116.87	14.13	-51.91

Table C2.6 Raw Crop Simulator Generated Data for REGCM Scenario run for 2060 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		cotton	45.70	0.00	0.00
alabama		corn	9.30	-9.07	-13.24
alabama		soybeans	-66.08	17.95	94.86
alabama		wheat	-20.87	-22.09	-28.72
alabama		sorghum	-54.08	-12.87	70.19
arizona		cotton	43.59	147.42	48.00
arizona		corn	0.00	-1.19	29.94
arkansas		cotton	75.62	104.77	48.00
arkansas		corn	12.24	-6.26	-4.76
arkansas		soybeans	-38.68	11.62	54.83
arkansas		wheat	-11.55	-14.27	-52.63
arkansas		sorghum	-32.49	-16.18	30.22
arkansas		rice	0.00	-12.90	39.08
CALIFORNIN		cotton	27.59	81.15	48.00
CALIFORNIN		corn	0.00	-12.86	8.31
CALIFORNIN		rice	0.00	-14.34	9.09
CALIFORNIS		cotton	27.59	81.15	48.00
CALIFORNIS		corn	0.00	-12.86	8.31
colorado		corn	0.00	656.18	10.85
colorado		wheat	52.23	-3.33	1.89
colorado		sorghum	356.25	403.08	-1.13
delaware		corn	-36.38	-18.96	57.72
delaware		soybeans	-41.87	36.20	96.85
delaware		wheat	2.59	-8.83	-46.00
florida		cotton	51.43	0.00	0.00
florida		corn	10.06	-7.07	-10.64
florida		soybeans	-33.15	26.23	79.63
florida		sorghum	-29.71	-9.32	44.31
georgia		cotton	44.68	0.00	0.00
georgia		corn	-0.98	-9.17	-2.56
georgia		soybeans	-68.06	19.02	109.00
georgia		wheat	-17.72	-20.67	2.08
georgia		sorghum	-53.26	-9.04	78.74
idaho		corn	0.00	-14.45	-12.52
idaho		wheat	79.84	-2.29	-23.67
ILLINOISN		corn	-14.66	-21.67	-6.82
ILLINOISN		soybeans	-9.02	27.47	37.76

ILLINOISN	wheat	-3.66	-3.93	-40.68
ILLINOISN	sorghum	38.03	24.01	0.91
ILLINOISS	corn	-20.56	-22.67	14.97
ILLINOISS	soybeans	-68.27	13.52	75.50
ILLINOISS	wheat	-15.42	-15.42	-51.52
ILLINOISS	sorghum	10.08	13.87	32.30
INDIANAN	corn	-25.08	-24.23	-4.93
INDIANAN	soybeans	-30.57	24.67	58.82
INDIANAN	wheat	-2.06	-2.06	-56.25
INDIANAS	corn	-22.58	-21.97	15.38
INDIANAS	soybeans	-23.61	18.79	81.82
INDIANAS	wheat	-14.65	-14.65	-84.85
IOWAW	corn	2.13	-18.87	-21.34
IOWAW	soybeans	64.95	60.33	14.65
IOWAW	wheat	1.01	-0.47	-35.34
IOWAW	sorghum	43.00	7.39	-30.85
IOWACENT	corn	-14.92	-19.67	-21.09
IOWACENT	soybeans	39.45	48.08	20.34
IOWACENT	wheat	-3.80	-4.39	-40.24
IOWACENT	sorghum	26.93	2.55	-26.57
IOWANE	corn	-11.26	-22.51	-29.60
IOWANE	soybeans	53.94	50.69	11.48
IOWANE	wheat	-9.94	-9.94	-75.00
IOWANE	sorghum	37.45	6.16	-42.67
IOWAS	corn	-9.60	-18.01	-11.31
IOWAS	soybeans	-21.73	45.23	54.71
IOWAS	wheat	0.22	-1.85	0.00
IOWAS	sorghum	34.05	25.09	11.93
kansas	corn	168.69	-17.15	-18.84
kansas	soybeans	180.44	24.29	7.36
kansas	wheat	121.29	0.50	-46.54
kansas	sorghum	125.86	41.27	-9.12
kentucky	corn	-18.04	-16.61	49.46
kentucky	soybeans	5.62	34.27	91.18
kentucky	wheat	-15.36	-15.36	-74.51
kentucky	sorghum	-26.43	-20.86	46.51
louisiana	cotton	47.21	0.00	0.00
louisiana	corn	6.65	-8.70	-22.55
louisiana	soybeans	-30.45	15.66	67.88
louisiana	wheat	-21.30	-21.25	21.87
louisiana	sorghum	-28.52	-11.53	39.67

louisiana	rice	0.00	-13.76	6.11
maryland	corn	-36.38	-18.96	57.72
maryland	soybeans	-41.87	36.20	96.85
maryland	wheat	2.59	-8.83	-46.00
michigan	corn	-30.11	-15.36	17.53
michigan	soybeans	-27.42	57.69	63.50
michigan	wheat	3.14	-3.81	-18.87
minnesota	corn	1.69	-13.16	-44.30
minnesota	soybeans	89.43	73.63	-9.60
minnesota	wheat	8.62	10.51	-19.72
minnesota	sorghum	72.76	33.63	-31.29
mississippi	cotton	77.45	0.00	0.00
mississippi	corn	4.42	-11.36	-16.83
mississippi	soybeans	-56.49	16.24	83.01
mississippi	wheat	-21.72	-22.04	-22.39
mississippi	sorghum	-46.78	-16.39	53.59
mississippi	rice	0.00	-8.77	29.33
missouri	cotton	74.46	67.82	48.00
missouri	corn	2.24	-22.46	-9.21
missouri	soybeans	-18.84	27.20	44.83
missouri	wheat	-15.72	-19.38	-57.14
missouri	sorghum	28.48	24.66	10.92
missouri	rice	0.00	-12.96	45.52
montana	corn	0.00	-2.61	-23.37
montana	wheat	5.44	-2.64	-23.87
nebraska	corn	42.20	-16.51	-31.70
nebraska	soybeans	41.90	33.97	17.51
nebraska	wheat	5.45	-2.50	-26.80
nebraska	sorghum	59.38	21.51	-26.64
newjersey	corn	-38.26	-11.71	62.75
newjersey	soybeans	-40.34	54.55	118.18
newjersey	wheat	4.64	-1.66	-50.53
newmexico	cotton	66.40	46.31	48.00
newmexico	corn	0.00	-21.76	10.93
newmexico	wheat	25.71	-7.96	-7.55
newmexico	sorghum	22.55	-2.43	-0.69
newyork	corn	-2.32	-10.99	-31.53
newyork	wheat	-16.21	-19.81	-90.24
northcarol	cotton	38.44	0.00	0.00
northcarol	corn	-18.30	-4.28	41.75
northcarol	soybeans	-61.72	32.07	130.68

northcarol	wheat	-17.73	-19.74	-28.18
northcarol	sorghum	-42.58	13.01	110.69
northdakot	corn	156.75	-3.83	-43.48
northdakot	soybeans	340.32	74.57	-26.42
northdakot	wheat	35.98	11.09	-31.43
OHIONW	corn	-21.28	-23.02	7.41
OHIONW	soybeans	-17.69	29.48	56.29
OHIONW	wheat	-1.11	-1.33	-64.86
OHIOS	corn	-30.71	-19.72	53.51
OHIOS	soybeans	32.36	61.17	83.33
OHIOS	wheat	-11.62	-11.62	-66.67
OHIOS	sorghum	13.16	8.21	16.67
OHIONE	corn	-17.93	-13.18	26.26
OHIONE	soybeans	11.71	56.17	94.12
OHIONE	wheat	-11.35	-11.35	-67.19
oklahoma	cotton	124.68	95.44	48.00
oklahoma	corn	43.80	-9.41	-4.66
oklahoma	soybeans	44.72	11.55	27.98
oklahoma	wheat	35.04	-1.06	-36.05
oklahoma	sorghum	-15.48	-11.01	5.26
oregon	corn	2.52	-4.43	-15.64
oregon	wheat	115.78	21.44	-34.82
pennsylvan	corn	-7.37	-7.19	-7.46
pennsylvan	soybeans	28.26	83.54	159.65
pennsylvan	wheat	-13.17	-13.17	-25.93
southcarol	cotton	40.00	0.00	0.00
southcarol	corn	-14.23	-6.88	16.43
southcarol	soybeans	-73.49	17.89	134.18
southcarol	wheat	-17.41	-20.55	-21.58
southcarol	sorghum	-56.92	-9.18	108.29
southdakot	corn	18.88	-13.88	-15.28
southdakot	soybeans	60.97	54.69	15.38
southdakot	wheat	20.86	7.58	-31.10
southdakot	sorghum	66.11	45.74	0.00
tennessee	cotton	47.51	0.00	0.00
tennessee	corn	-12.00	-10.26	10.06
tennessee	soybeans	-49.74	28.48	87.43
tennessee	wheat	-15.38	-16.54	-59.26
tennessee	sorghum	-27.71	11.29	65.38
TXHIPLAINS	cotton	53.02	58.12	48.00
TXHIPLAINS	corn	-1.22	-17.23	2.79

TXHIPLAINS	soybeans	217.94	25.90	21.59
TXHIPLAINS	wheat	61.83	-9.06	-12.81
TXHIPLAINS	sorghum	15.27	22.02	-7.18
TXROLINGPL	cotton	118.83	72.42	48.00
TXROLINGPL	corn	0.00	-7.37	-25.34
TXROLINGPL	soybeans	46.67	-8.96	21.33
TXROLINGPL	wheat	77.61	-11.14	-32.38
TXROLINGPL	sorghum	180.23	40.25	-28.46
TXCNTBLACK	cotton	78.50	59.34	48.00
TXCNTBLACK	corn	102.45	-6.19	-17.30
TXCNTBLACK	soybeans	13.79	-3.52	26.57
TXCNTBLACK	wheat	8.39	-15.13	-23.12
TXCNTBLACK	sorghum	95.93	40.17	-11.94
TXCNTBLACK	rice	0.00	-16.90	14.70
TXEAST	cotton	61.24	46.12	48.00
TXEAST	corn	16.17	-5.98	-6.75
TXEAST	soybeans	9.66	6.96	37.45
TXEAST	sorghum	-6.78	-3.52	-16.75
TXEAST	rice	0.00	-14.90	14.78
TXEDPLAT	cotton	39.85	62.28	48.00
TXEDPLAT	corn	0.00	-24.87	-7.51
TXEDPLAT	soybeans	-22.33	-15.30	28.16
TXEDPLAT	wheat	-35.69	-6.97	51.32
TXEDPLAT	sorghum	25.56	-0.50	-16.62
TXCOASTBE	cotton	19.46	18.35	48.00
TXCOASTBE	corn	26.97	-8.62	-11.99
TXCOASTBE	soybeans	-2.77	9.46	32.82
TXCOASTBE	sorghum	30.00	9.90	-16.28
TXCOASTBE	rice	0.00	-5.32	15.45
TXSOUTH	cotton	-0.49	24.28	48.00
TXSOUTH	corn	0.00	-17.15	23.79
TXSOUTH	soybeans	-27.45	-9.49	37.48
TXSOUTH	sorghum	-53.54	-2.67	6.41
TXTRANSPEC	cotton	55.84	94.00	48.00
TXTRANSPEC	corn	0.00	-12.17	10.21
TXTRANSPEC	soybeans	-30.00	-4.11	21.89
TXTRANSPEC	wheat	-2.63	-13.98	13.88
TXTRANSPEC	sorghum	92.31	4.22	-4.13
utah	corn	0.00	43.94	14.97
utah	wheat	211.17	-3.23	-16.69
virginia	cotton	85.25	80.28	48.00

virginia	corn	-41.85	-15.64	45.40
virginia	soybeans	-46.83	42.02	82.29
virginia	wheat	15.82	-17.41	-43.54
washington	corn	0.00	216.37	-14.18
washington	wheat	60.22	22.96	-42.35
westvirgin	corn	-31.14	-4.54	15.56
westvirgin	wheat	-9.10	-11.38	-63.89
wisconsin	corn	-13.09	-17.57	-48.00
wisconsin	soybeans	72.85	76.68	9.09
wisconsin	wheat	-2.89	-3.91	-29.63
wyoming	corn	66.74	-0.41	-15.93
wyoming	wheat	56.13	9.15	-37.54



Table C2.7 Raw Crop Simulator Generated Data for Hadley PNNL Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		corn	23.81	29.69	146.41
alabama		soybeans	5.88	0.00	0.00
alabama		wheat	70.00	0.00	0.00
arizona		corn	0.00	16.39	5.94
arizona		soybeans	-16.67	0.00	0.00
arizona		wheat	66.67	0.00	0.00
arizona		hay	42.11	29.13	11.74
arkansas		corn	0.00	15.00	83.38
arkansas		soybeans	-5.26	0.00	0.00
arkansas		wheat	62.50	0.00	0.00
arkansas		hay	13.27	14.15	24.35
CALIFORNIN		corn	0.00	-7.69	5.55
CALIFORNIN		wheat	32.00	0.00	0.00
CALIFORNIN		hay	40.91	19.23	11.53
CALIFORNIS		corn	0.00	-7.69	5.55
CALIFORNIS		wheat	32.00	0.00	0.00
CALIFORNIS		hay	40.91	19.23	11.53
colorado		corn	-31.25	54.05	71.16
colorado		wheat	27.78	0.00	0.00
colorado		hay	30.30	59.74	67.92
conn		corn	25.58	29.55	198.21
conn		soybeans	30.77	0.00	0.00
conn		wheat	64.29	0.00	0.00
delaware		corn	16.00	16.00	76.38
delaware		soybeans	31.25	0.00	0.00
delaware		wheat	62.50	0.00	0.00
florida		corn	-3.57	1.75	313.64
florida		soybeans	6.67	0.00	0.00
florida		wheat	12.12	0.00	0.00
georgia		corn	1.92	5.77	214.71
georgia		wheat	40.00	0.00	0.00
idaho		corn	-55.56	15.00	3.97
idaho		soybeans	-20.00	0.00	0.00
idaho		wheat	-18.52	0.00	0.00
idaho		hay	24.53	36.00	18.68
ILLINOISN		corn	17.54	16.95	42.39
ILLINOISN		soybeans	10.53	0.00	0.00

ILLINOISN	wheat	68.00	0.00	0.00
ILLINOISN	hay	47.76	50.70	44.94
ILLINOISS	corn	17.54	16.95	42.39
ILLINOISS	soybeans	10.53	0.00	0.00
ILLINOISS	wheat	68.00	0.00	0.00
ILLINOISS	hay	47.76	50.70	44.94
INDIANAN	corn	7.69	7.58	43.76
INDIANAN	soybeans	4.55	0.00	0.00
INDIANAN	wheat	61.54	0.00	0.00
INDIANAN	hay	36.11	37.33	27.20
INDIANAS	corn	7.69	7.58	43.76
INDIANAS	soybeans	4.55	0.00	0.00
INDIANAS	wheat	61.54	0.00	0.00
INDIANAS	hay	36.11	37.33	27.20
IOWAW	corn	16.67	18.33	57.76
IOWAW	soybeans	5.26	0.00	0.00
IOWAW	wheat	51.72	0.00	0.00
IOWAW	hay	25.33	30.77	66.19
IOWACENT	corn	16.67	18.33	57.76
IOWACENT	soybeans	5.26	0.00	0.00
IOWACENT	wheat	51.72	0.00	0.00
IOWACENT	hay	25.33	30.77	66.19
IOWANE	corn	16.67	18.33	57.76
IOWANE	soybeans	5.26	0.00	0.00
IOWANE	wheat	51.72	0.00	0.00
IOWANE	hay	25.33	30.77	66.19
IOWAS	corn	16.67	18.33	57.76
IOWAS	soybeans	5.26	0.00	0.00
IOWAS	wheat	51.72	0.00	0.00
IOWAS	hay	25.33	30.77	66.19
kansas	corn	-17.31	14.52	38.28
kansas	soybeans	-17.65	0.00	0.00
kansas	wheat	17.65	0.00	0.00
kansas	hay	9.68	38.64	51.18
kentucky	corn	4.35	9.72	50.11
kentucky	wheat	62.50	0.00	0.00
kentucky	hay	26.88	28.42	40.90
louisiana	corn	19.05	26.23	171.58
louisiana	soybeans	11.76	0.00	0.00
louisiana	wheat	41.46	0.00	0.00
maine	corn	35.14	34.21	48.08

maine	soybeans	25.00	0.00	0.00
maine	wheat	53.57	0.00	0.00
maryland	corn	15.00	15.00	47.73
maryland	soybeans	23.08	0.00	0.00
maryland	wheat	57.14	0.00	0.00
mass	corn	24.39	32.56	74.22
mass	soybeans	23.08	0.00	0.00
mass	wheat	56.67	0.00	0.00
michigan	corn	36.36	42.22	68.91
michigan	soybeans	38.46	0.00	0.00
michigan	wheat	56.67	0.00	0.00
michigan	hay	41.94	49.23	59.36
minnesota	corn	14.00	23.53	55.71
minnesota	soybeans	20.00	0.00	0.00
minnesota	wheat	40.00	0.00	0.00
minnesota	hay	19.23	42.86	88.44
mississippi	corn	5.00	16.95	116.65
mississippi	wheat	61.76	0.00	0.00
missouri	corn	6.35	12.50	29.69
missouri	soybeans	-5.00	0.00	0.00
missouri	wheat	58.06	0.00	0.00
missouri	hay	28.41	30.93	26.60
montana	corn	-5.26	36.59	17.00
montana	soybeans	14.29	0.00	0.00
montana	wheat	26.92	0.00	0.00
montana	hay	26.67	46.99	31.51
nebraska	corn	-2.08	30.36	40.11
nebraska	soybeans	6.25	0.00	0.00
nebraska	wheat	42.86	0.00	0.00
nebraska	hay	20.00	47.37	49.31
nevada	corn	0.00	13.33	10.44
nevada	wheat	50.00	0.00	0.00
nevada	hay	36.84	8.49	-0.94
newhampshi	corn	30.95	39.53	36.60
newhampshi	soybeans	14.29	0.00	0.00
newhampshi	wheat	58.62	0.00	0.00
newjersey	corn	23.53	25.00	64.13
newjersey	soybeans	37.50	0.00	0.00
newjersey	wheat	72.73	0.00	0.00
newmexico	corn	-15.38	57.78	78.88
newmexico	soybeans	-14.29	0.00	0.00

newmexico	wheat	50.00	0.00	0.00
newmexico	hay	33.33	47.76	64.71
newyork	corn	27.27	29.55	78.61
newyork	soybeans	30.77	0.00	0.00
newyork	wheat	64.29	0.00	0.00
northcarol	corn	10.00	11.76	108.65
northcarol	soybeans	14.29	0.00	0.00
northcarol	wheat	43.75	0.00	0.00
northdakot	corn	-19.51	24.07	48.69
northdakot	soybeans	-7.69	0.00	0.00
northdakot	wheat	6.67	0.00	0.00
northdakot	hay	-9.26	40.26	61.13
OHIONW	corn	15.00	19.67	54.24
OHIONW	soybeans	15.00	0.00	0.00
OHIONW	wheat	62.07	0.00	0.00
OHIONW	hay	37.50	39.76	55.09
OHIOS	corn	15.00	19.67	54.24
OHIOS	soybeans	15.00	0.00	0.00
OHIOS	wheat	62.07	0.00	0.00
OHIOS	hay	37.50	39.76	55.09
OHIONE	corn	15.00	19.67	54.24
OHIONE	soybeans	15.00	0.00	0.00
OHIONE	wheat	62.07	0.00	0.00
OHIONE	hay	37.50	39.76	55.09
oklahoma	corn	1.75	7.35	21.20
oklahoma	soybeans	-11.76	0.00	0.00
oklahoma	wheat	34.21	0.00	0.00
oklahoma	hay	13.79	19.42	31.61
oregon	corn	-8.70	15.52	13.61
oregon	soybeans	42.86	0.00	0.00
oregon	wheat	20.00	0.00	0.00
oregon	hay	20.75	35.71	29.15
pennsylvan	corn	34.69	36.73	58.25
pennsylvan	soybeans	42.86	0.00	0.00
pennsylvan	wheat	48.28	0.00	0.00
pennsylvan	hay	41.25	43.53	58.66
rhodeislan	corn	28.57	26.32	11.55
rhodeislan	soybeans	7.69	0.00	0.00
rhodeislan	wheat	66.67	0.00	0.00
southcarol	corn	5.56	9.26	267.95
southcarol	soybeans	7.14	0.00	0.00

southcarol	wheat	37.93	0.00	0.00
southdakot	corn	-2.56	27.78	34.36
southdakot	wheat	29.03	0.00	0.00
southdakot	hay	14.58	43.94	50.40
tennessee	corn	7.35	15.71	77.69
tennessee	soybeans	5.00	0.00	0.00
tennessee	wheat	70.97	0.00	0.00
TXHIPLAINS	corn	1.85	10.00	21.96
TXHIPLAINS	soybeans	-12.50	0.00	0.00
TXHIPLAINS	wheat	24.32	0.00	0.00
TXHIPLAINS	hay	313.33	28.75	-19.31
TXROLINGPL	corn	1.85	10.00	21.96
TXROLINGPL	soybeans	-12.50	0.00	0.00
TXROLINGPL	wheat	24.32	0.00	0.00
TXROLINGPL	hay	313.33	28.75	-19.31
TXCNTBLACK	corn	1.85	10.00	21.96
TXCNTBLACK	soybeans	-12.50	0.00	0.00
TXCNTBLACK	wheat	24.32	0.00	0.00
TXCNTBLACK	hay	313.33	28.75	-19.31
TXEAST	corn	1.85	10.00	21.96
TXEAST	soybeans	-12.50	0.00	0.00
TXEAST	wheat	24.32	0.00	0.00
TXEAST	hay	313.33	28.75	-19.31
TXEDPLAT	corn	1.85	10.00	21.96
TXEDPLAT	soybeans	-12.50	0.00	0.00
TXEDPLAT	wheat	24.32	0.00	0.00
TXEDPLAT	hay	313.33	28.75	-19.31
TXCOASTBE	corn	1.85	10.00	21.96
TXCOASTBE	soybeans	-12.50	0.00	0.00
TXCOASTBE	wheat	24.32	0.00	0.00
TXCOASTBE	hay	313.33	28.75	-19.31
TXSOUTH	corn	1.85	10.00	21.96
TXSOUTH	soybeans	-12.50	0.00	0.00
TXSOUTH	wheat	24.32	0.00	0.00
TXSOUTH	hay	313.33	28.75	-19.31
TXTRANSPEC	corn	1.85	10.00	21.96
TXTRANSPEC	soybeans	-12.50	0.00	0.00
TXTRANSPEC	wheat	24.32	0.00	0.00
TXTRANSPEC	hay	313.33	28.75	-19.31
utah	corn	-75.00	30.77	23.22
utah	soybeans	-33.33	0.00	0.00

utah	wheat	33.33	0.00	0.00
utah	hay	20.83	38.83	30.10
vermont	corn	36.36	43.18	200.66
vermont	soybeans	88.89	0.00	0.00
vermont	wheat	42.86	0.00	0.00
virginia	corn	16.13	15.63	40.87
virginia	soybeans	15.79	0.00	0.00
virginia	wheat	44.83	0.00	0.00
washington	corn	-11.76	40.48	27.85
washington	soybeans	12.50	0.00	0.00
washington	wheat	17.65	0.00	0.00
washington	hay	24.59	52.94	44.65
westvirgin	corn	12.70	15.63	121.36
westvirgin	soybeans	14.29	0.00	0.00
westvirgin	wheat	45.95	0.00	0.00
westvirgin	hay	26.88	28.42	40.90
wisconsin	corn	28.26	34.78	128.85
wisconsin	soybeans	30.77	0.00	0.00
wisconsin	wheat	60.00	0.00	0.00
wisconsin	hay	46.27	54.41	109.50
wyoming	corn	-35.71	42.22	31.38
wyoming	wheat	10.00	0.00	0.00
wyoming	hay	13.33	45.83	49.76

Table C2.8 Raw Crop Simulator Generated Data for Hadley PNNL Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Abbr	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama		corn	22.22	25.00	56.74
alabama		soybeans	11.76	0.00	0.00
alabama		wheat	70.00	0.00	0.00
arizona		corn	50.00	8.20	-0.84
arizona		soybeans	-16.67	0.00	0.00
arizona		wheat	173.33	0.00	0.00
arizona		hay	115.79	23.62	9.79
arkansas		corn	1.59	-1.67	17.44
arkansas		soybeans	-15.79	0.00	0.00
arkansas		wheat	65.62	0.00	0.00
arkansas		hay	29.59	29.25	19.14
CALIFORNIN		corn	166.67	5.77	11.05
CALIFORNIN		soybeans	66.67	0.00	0.00
CALIFORNIN		wheat	40.00	0.00	0.00
CALIFORNIN		hay	86.36	17.31	9.40
CALIFORNIS		corn	166.67	5.77	11.05
CALIFORNIS		soybeans	66.67	0.00	0.00
CALIFORNIS		wheat	40.00	0.00	0.00
CALIFORNIS		hay	86.36	17.31	9.40
colorado		corn	6.25	72.97	78.25
colorado		soybeans	20.00	0.00	0.00
colorado		wheat	55.56	0.00	0.00
colorado		hay	36.36	59.74	84.26
conn		corn	23.26	31.82	147.02
conn		soybeans	38.46	0.00	0.00
conn		wheat	100.00	0.00	0.00
delaware		corn	12.00	14.00	84.66
delaware		soybeans	12.50	0.00	0.00
delaware		wheat	95.83	0.00	0.00
florida		corn	-21.43	-15.79	346.36
florida		soybeans	-6.67	0.00	0.00
georgia		corn	1.92	3.85	99.02
georgia		soybeans	7.14	0.00	0.00
georgia		wheat	48.57	0.00	0.00
idaho		corn	44.44	40.00	17.78
idaho		soybeans	60.00	0.00	0.00
idaho		wheat	29.63	0.00	0.00

idaho	hay	39.62	56.00	48.82
ILLINOISN	corn	19.30	16.95	20.75
ILLINOISN	soybeans	10.53	0.00	0.00
ILLINOISN	wheat	68.00	0.00	0.00
ILLINOISN	hay	55.22	52.11	31.50
ILLINOISS	corn	19.30	16.95	20.75
ILLINOISS	soybeans	10.53	0.00	0.00
ILLINOISS	wheat	68.00	0.00	0.00
ILLINOISS	hay	55.22	52.11	31.50
INDIANAN	corn	7.69	7.58	15.84
INDIANAN	wheat	61.54	0.00	0.00
INDIANAN	hay	48.61	42.67	20.39
INDIANAS	corn	7.69	7.58	15.84
INDIANAS	wheat	61.54	0.00	0.00
INDIANAS	hay	48.61	42.67	20.39
IOWAW	corn	20.00	20.00	29.67
IOWAW	soybeans	10.53	0.00	0.00
IOWAW	wheat	48.28	0.00	0.00
IOWAW	hay	38.67	37.18	40.07
IOWACENT	corn	20.00	20.00	29.67
IOWACENT	soybeans	10.53	0.00	0.00
IOWACENT	wheat	48.28	0.00	0.00
IOWACENT	hay	38.67	37.18	40.07
IOWANE	corn	20.00	20.00	29.67
IOWANE	soybeans	10.53	0.00	0.00
IOWANE	wheat	48.28	0.00	0.00
IOWANE	hay	38.67	37.18	40.07
IOWAS	corn	20.00	20.00	29.67
IOWAS	soybeans	10.53	0.00	0.00
IOWAS	wheat	48.28	0.00	0.00
IOWAS	hay	38.67	37.18	40.07
kansas	corn	0.00	6.45	19.49
kansas	soybeans	-17.65	0.00	0.00
kansas	wheat	52.94	0.00	0.00
kansas	hay	25.81	52.27	57.95
kentucky	corn	11.59	8.33	6.12
kentucky	soybeans	-4.76	0.00	0.00
kentucky	wheat	75.00	0.00	0.00
kentucky	hay	27.96	27.37	6.17
louisiana	corn	6.35	6.56	94.86
louisiana	soybeans	-11.76	0.00	0.00



louisiana	wheat	29.27	0.00	0.00
maine	corn	32.43	31.58	13.57
maine	soybeans	87.50	0.00	0.00
maine	wheat	60.71	0.00	0.00
maryland	corn	15.00	17.50	111.36
maryland	soybeans	15.38	0.00	0.00
maryland	wheat	82.14	0.00	0.00
mass	corn	24.39	32.56	79.95
mass	soybeans	38.46	0.00	0.00
mass	wheat	76.67	0.00	0.00
michigan	corn	47.73	51.11	72.10
michigan	soybeans	53.85	0.00	0.00
michigan	wheat	70.00	0.00	0.00
michigan	hay	45.16	50.77	70.32
minnesota	corn	32.00	35.29	61.29
minnesota	soybeans	40.00	0.00	0.00
minnesota	wheat	50.00	0.00	0.00
minnesota	hay	33.33	45.24	87.99
mississippi	corn	-5.00	5.08	41.68
mississippi	soybeans	-17.65	0.00	0.00
mississippi	wheat	55.88	0.00	0.00
missouri	corn	7.94	7.81	2.50
missouri	soybeans	-5.00	0.00	0.00
missouri	wheat	70.97	0.00	0.00
missouri	hay	38.64	35.05	17.51
montana	corn	0.00	51.22	22.13
montana	soybeans	28.57	0.00	0.00
montana	wheat	26.92	0.00	0.00
montana	hay	15.56	44.58	49.71
nebraska	corn	6.25	25.00	36.06
nebraska	wheat	46.43	0.00	0.00
nebraska	hay	30.91	50.00	56.52
nevada	corn	100.00	3.33	-0.82
nevada	soybeans	50.00	0.00	0.00
nevada	wheat	160.00	0.00	0.00
nevada	hay	110.53	16.04	7.15
newhampshi	corn	28.57	37.21	54.12
newhampshi	soybeans	42.86	0.00	0.00
newhampshi	wheat	62.07	0.00	0.00
newjersey	corn	23.53	23.08	77.15
newjersey	soybeans	25.00	0.00	0.00

newjersey	wheat	113.64	0.00	0.00
newmexico	corn	-7.69	40.00	76.80
newmexico	wheat	78.57	0.00	0.00
newmexico	hay	72.22	0.00	0.00
newyork	corn	31.82	31.82	80.60
newyork	soybeans	46.15	0.00	0.00
newyork	wheat	89.29	0.00	0.00
northcarol	corn	8.00	7.84	43.27
northcarol	soybeans	7.14	0.00	0.00
northcarol	wheat	59.37	0.00	0.00
northdakot	corn	-14.63	20.37	41.96
northdakot	wheat	13.33	0.00	0.00
northdakot	hay	-1.85	37.66	69.37
OHIONW	corn	16.67	19.67	37.43
OHIONW	soybeans	10.00	0.00	0.00
OHIONW	wheat	79.31	0.00	0.00
OHIONW	hay	40.00	38.55	37.41
OHIOS	corn	16.67	19.67	37.43
OHIOS	soybeans	10.00	0.00	0.00
OHIOS	wheat	79.31	0.00	0.00
OHIOS	hay	40.00	38.55	37.41
OHIONE	corn	16.67	19.67	37.43
OHIONE	soybeans	10.00	0.00	0.00
OHIONE	wheat	79.31	0.00	0.00
OHIONE	hay	40.00	38.55	37.41
oklahoma	corn	5.26	0.00	-3.33
oklahoma	soybeans	-23.53	0.00	0.00
oklahoma	wheat	44.74	0.00	0.00
oklahoma	hay	28.74	35.92	31.28
oregon	corn	17.39	22.41	12.73
oregon	soybeans	57.14	0.00	0.00
oregon	wheat	34.29	0.00	0.00
oregon	hay	35.85	39.29	44.71
pennsylvan	corn	40.82	42.86	49.08
pennsylvan	soybeans	57.14	0.00	0.00
pennsylvan	wheat	72.41	0.00	0.00
pennsylvan	hay	43.75	35.29	55.18
rhodeislan	corn	34.29	28.95	-21.58
rhodeislan	soybeans	7.69	0.00	0.00
rhodeislan	wheat	112.12	0.00	0.00
southcarol	corn	9.26	12.96	94.87

southcarol	soybeans	7.14	0.00	0.00
southcarol	wheat	55.17	0.00	0.00
southdakot	corn	-17.95	25.93	34.14
southdakot	wheat	22.58	0.00	0.00
southdakot	hay	16.67	43.94	68.03
tennessee	corn	13.24	14.29	24.56
tennessee	soybeans	5.00	0.00	0.00
tennessee	wheat	80.65	0.00	0.00
TXHIPLAINS	corn	-5.56	-5.00	12.59
TXHIPLAINS	soybeans	-18.75	0.00	0.00
TXHIPLAINS	wheat	2.70	0.00	0.00
TXHIPLAINS	hay	380.00	35.00	-9.43
TXROLINGPL	corn	-5.56	-5.00	12.59
TXROLINGPL	soybeans	-18.75	0.00	0.00
TXROLINGPL	wheat	2.70	0.00	0.00
TXROLINGPL	hay	380.00	35.00	-9.43
TXCNTBLACK	corn	-5.56	-5.00	12.59
TXCNTBLACK	soybeans	-18.75	0.00	0.00
TXCNTBLACK	wheat	2.70	0.00	0.00
TXCNTBLACK	hay	380.00	35.00	-9.43
TXEAST	corn	-5.56	-5.00	12.59
TXEAST	soybeans	-18.75	0.00	0.00
TXEAST	wheat	2.70	0.00	0.00
TXEAST	hay	380.00	35.00	-9.43
TXEDPLAT	corn	-5.56	-5.00	12.59
TXEDPLAT	soybeans	-18.75	0.00	0.00
TXEDPLAT	wheat	2.70	0.00	0.00
TXEDPLAT	hay	380.00	35.00	-9.43
TXCOASTBE	corn	-5.56	-5.00	12.59
TXCOASTBE	soybeans	-18.75	0.00	0.00
TXCOASTBE	wheat	2.70	0.00	0.00
TXCOASTBE	hay	380.00	35.00	-9.43
TXSOUTH	corn	-5.56	-5.00	12.59
TXSOUTH	soybeans	-18.75	0.00	0.00
TXSOUTH	wheat	2.70	0.00	0.00
TXSOUTH	hay	380.00	35.00	-9.43
TXTRANSPEC	corn	-5.56	-5.00	12.59
TXTRANSPEC	soybeans	-18.75	0.00	0.00
TXTRANSPEC	wheat	2.70	0.00	0.00
TXTRANSPEC	hay	380.00	35.00	-9.43
utah	corn	-50.00	21.15	16.37

utah	soybeans	33.33	0.00	0.00
utah	wheat	150.00	0.00	0.00
utah	hay	83.33	33.98	35.75
vermont	corn	34.09	43.18	216.50
vermont	soybeans	122.22	0.00	0.00
vermont	wheat	50.00	0.00	0.00
virginia	corn	12.90	12.50	2.03
virginia	soybeans	10.53	0.00	0.00
virginia	wheat	68.97	0.00	0.00
washington	corn	29.41	64.29	37.01
washington	soybeans	25.00	0.00	0.00
washington	wheat	35.29	0.00	0.00
washington	hay	32.79	56.86	67.40
westvirgin	corn	17.46	17.19	73.89
westvirgin	soybeans	14.29	0.00	0.00
westvirgin	wheat	54.05	0.00	0.00
westvirgin	hay	27.96	27.37	6.17
wisconsin	corn	47.83	52.17	112.36
wisconsin	soybeans	61.54	0.00	0.00
wisconsin	wheat	60.00	0.00	0.00
wisconsin	hay	50.75	52.94	101.39
wyoming	corn	-28.57	37.78	27.86
wyoming	wheat	20.00	0.00	0.00
wyoming	hay	16.67	41.67	65.57

Appendix D Full Subregional Level data set for Scenarios Run

Table D1.1 Full data set for Canadian Scenario run for 2030 without Adaptation  
Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	17.33	46.47	-10.54
alabama	corn	-8.20	-16.40	-26.70
alabama	soybeans	-46.99	15.83	50.00
alabama	SOFT	-11.30	0.00	0.00
alabama	sorghum	-4.54	0.00	0.00
alabama	oats	-11.30	0.00	0.00
alabama	silage	-8.20	0.00	0.00
alabama	hay	-62.10	-24.47	58.05
alabama	POTATOES	20.30	-13.30	-15.30
alabama	tomatofrsh	-1.90	-11.27	4.40
alabama	PASTURE	-53.48	0.00	0.00
arizona	cotton	0.00	64.26	-10.54
arizona	corn	19.20	-7.30	-35.10
arizona	HRWW	43.80	-5.80	-21.90
arizona	DURW	43.80	-5.80	-21.90
arizona	sorghum	0.00	23.14	6.84
arizona	barley	0.00	-23.20	-87.60
arizona	silage	19.20	-7.30	-35.10
arizona	hay	-10.55	4.71	3.85
arizona	SUGARBEET	-10.55	0.00	0.00
arizona	POTATOES	0.00	-3.90	17.00
arizona	orangefrsh	0.00	66.90	7.60
arizona	orangeproc	0.00	66.90	7.60
arizona	grpfrtfrsh	0.00	66.90	7.60
arizona	grpfrtproc	0.00	66.90	7.60
arizona	PASTURE	-8.37	0.00	0.00
arkansas	cotton	22.80	46.47	-10.54
arkansas	corn	3.60	-14.50	-23.20
arkansas	soybeans	-46.99	15.83	50.00
arkansas	SOFT	-11.30	-10.60	20.10
arkansas	sorghum	-4.54	-3.82	5.19
arkansas	rice	0.00	-3.46	-17.04
arkansas	oats	-11.30	-10.60	20.10
arkansas	silage	3.60	-14.50	-23.20
arkansas	hay	-53.74	-27.19	27.85

arkansas	tomatofrsh	-1.90	-11.27	4.40
arkansas	PASTURE	-47.37	0.00	0.00
CALIFORNIN	cotton	11.73	33.44	-10.54
CALIFORNIN	corn	19.20	-7.30	-35.10
CALIFORNIN	HRWW	11.90	-24.10	-61.30
CALIFORNIN	sorghum	28.82	23.14	6.84
CALIFORNIN	rice	0.00	7.75	1.81
CALIFORNIN	barley	47.60	-96.40	-245.20
CALIFORNIN	oats	47.60	-96.40	-245.20
CALIFORNIN	silage	19.20	-7.30	-35.10
CALIFORNIN	hay	45.27	25.39	0.55
CALIFORNIN	SUGARBEET	0.00	25.39	0.55
CALIFORNIN	POTATOES	0.00	-1.50	2.40
CALIFORNIN	tomatofrsh	0.00	-19.75	1.71
CALIFORNIN	tomatoproc	0.00	-19.75	1.71
CALIFORNIN	orangefrsh	0.00	41.70	-43.50
CALIFORNIN	orangeproc	0.00	41.70	-43.50
CALIFORNIN	grpfrtfrsh	0.00	41.70	-43.50
CALIFORNIN	grpfrtproc	0.00	41.70	-43.50
CALIFORNIN	PASTURE	59.87	0.00	0.00
CALIFORNIS	cotton	0.00	33.44	-10.54
CALIFORNIS	corn	19.20	-7.30	-35.10
CALIFORNIS	DURW	11.90	-24.10	-61.30
CALIFORNIS	sorghum	28.82	0.00	0.00
CALIFORNIS	rice	-6.94	0.00	0.00
CALIFORNIS	barley	11.90	-24.10	-61.30
CALIFORNIS	oats	11.90	-24.10	-61.30
CALIFORNIS	silage	19.20	-7.30	-35.10
CALIFORNIS	hay	48.45	103.83	12.39
CALIFORNIS	SUGARBEET	0.00	103.83	12.39
CALIFORNIS	POTATOES	-7.75	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-19.75	1.71
CALIFORNIS	tomatoproc	0.00	-19.75	1.71
CALIFORNIS	orangefrsh	0.00	26.00	-5.20
CALIFORNIS	orangeproc	0.00	26.00	-5.20
CALIFORNIS	grpfrtfrsh	0.00	26.00	-5.20
CALIFORNIS	grpfrtproc	0.00	26.00	-5.20
CALIFORNIS	PASTURE	90.61	0.00	0.00
colorado	corn	24.70	-11.30	-42.50
colorado	HRSW	-17.10	5.90	11.90
colorado	HRWW	-17.10	5.90	11.90

colorado	sorghum	28.82	23.14	6.84
colorado	barley	-34.20	11.80	23.80
colorado	oats	-34.20	11.80	23.80
colorado	silage	24.70	-11.30	-42.50
colorado	hay	-2.13	8.69	-4.73
colorado	SUGARBEET	0.00	8.69	-4.73
colorado	POTATOES	0.00	-3.90	17.00
colorado	PASTURE	3.25	0.00	0.00
conn	hay	-9.79	0.00	0.00
conn	POTATOES	20.30	0.00	0.00
conn	PASTURE	1.77	0.00	0.00
delaware	corn	0.30	-10.90	-46.10
delaware	soybeans	22.87	7.52	-5.99
delaware	SOFT	3.10	1.20	-12.20
delaware	barley	3.10	1.20	-12.20
delaware	silage	0.30	0.00	0.00
delaware	hay	-9.79	0.00	0.00
delaware	POTATOES	20.30	-13.30	-15.30
delaware	tomatoproc	25.95	25.18	-25.40
delaware	PASTURE	1.77	0.00	0.00
florida	cotton	17.01	46.47	-10.54
florida	corn	-8.20	-16.40	-26.70
florida	soybeans	1.32	14.06	23.03
florida	SOFT	-11.30	-10.60	20.10
florida	oats	-11.30	0.00	0.00
florida	silage	-8.20	-16.40	-26.70
florida	hay	-37.80	-26.81	32.90
florida	SUGARCANE	-5.38	-5.38	-26.90
florida	tomatofrsh	-12.30	-12.67	-10.48
florida	orangefrsh	0.00	8.97	4.07
florida	orangeproc	0.00	8.97	4.07
florida	grpfrtfrsh	0.00	8.97	4.07
florida	grpfrtproc	0.00	8.97	4.07
florida	PASTURE	-17.11	0.00	0.00
georgia	cotton	18.09	46.47	-10.54
georgia	corn	-8.20	-16.40	-26.70
georgia	soybeans	1.32	14.06	23.03
georgia	SOFT	-11.30	-10.60	20.10
georgia	sorghum	0.00	-6.44	-14.20
georgia	oats	-11.30	-10.60	20.10
georgia	silage	-8.20	-16.40	-26.70

georgia	hay	-59.70	-21.82	34.16
georgia	tomatofrsh	-1.90	-11.27	4.40
georgia	PASTURE	-45.06	0.00	0.00
idaho	corn	19.20	-7.30	-35.10
idaho	HRSW	36.60	-16.90	-31.50
idaho	HRWW	36.60	-16.90	-31.50
idaho	barley	146.40	-67.60	-126.00
idaho	oats	146.40	-67.60	-126.00
idaho	silage	0.00	-7.30	-35.10
idaho	hay	30.72	57.70	11.80
idaho	SUGARBEET	0.00	57.70	11.80
idaho	POTATOES	1.80	-6.90	-2.60
idaho	PASTURE	58.66	0.00	0.00
ILLINOISN	corn	18.50	-9.30	-31.80
ILLINOISN	soybeans	42.21	12.57	-12.70
ILLINOISN	SOFT	-11.30	-10.60	20.10
ILLINOISN	sorghum	18.16	0.00	0.00
ILLINOISN	oats	-11.30	-10.60	20.10
ILLINOISN	silage	18.50	-9.30	-31.80
ILLINOISN	hay	-5.30	9.04	-4.02
ILLINOISN	POTATOES	-33.20	0.00	0.00
ILLINOISN	PASTURE	5.40	0.00	0.00
ILLINOISS	corn	18.50	-9.30	-31.80
ILLINOISS	soybeans	42.21	12.57	-12.70
ILLINOISS	SOFT	-11.30	-10.60	20.10
ILLINOISS	sorghum	18.16	-6.35	-22.75
ILLINOISS	oats	-11.30	0.00	0.00
ILLINOISS	silage	18.50	0.00	0.00
ILLINOISS	hay	-5.30	9.04	-4.02
ILLINOISS	PASTURE	5.40	0.00	0.00
INDIANAN	corn	-5.30	-15.20	-26.70
INDIANAN	soybeans	13.03	12.20	8.81
INDIANAN	SOFT	3.10	1.20	-12.20
INDIANAN	sorghum	18.16	0.00	0.00
INDIANAN	oats	3.10	0.00	0.00
INDIANAN	silage	-5.30	-15.20	-26.70
INDIANAN	hay	-14.84	-3.27	29.10
INDIANAN	POTATOES	-33.20	-36.10	4.20
INDIANAN	tomatofrsh	-12.27	-16.48	-31.78
INDIANAN	tomatoproc	-12.27	-16.48	-31.78
INDIANAN	PASTURE	-4.96	0.00	0.00



INDIANAS	corn	-5.30	-15.20	-26.70
INDIANAS	soybeans	13.03	12.20	8.81
INDIANAS	SOFT	3.10	1.20	-12.20
INDIANAS	sorghum	18.16	0.00	0.00
INDIANAS	oats	3.10	0.00	0.00
INDIANAS	silage	-5.30	0.00	0.00
INDIANAS	hay	-14.84	-3.27	29.10
INDIANAS	tomatofrsh	-12.27	-16.48	-31.78
INDIANAS	tomatoproc	-12.27	-16.48	-31.78
INDIANAS	PASTURE	-4.96	0.00	0.00
IOWAW	corn	18.40	-11.70	-44.80
IOWAW	soybeans	25.30	7.50	-49.67
IOWAW	SOFT	26.50	0.00	0.00
IOWAW	sorghum	59.47	0.00	0.00
IOWAW	oats	26.50	0.00	0.00
IOWAW	silage	18.40	0.00	0.00
IOWAW	hay	-31.44	5.01	-97.55
IOWAW	PASTURE	0.62	0.00	0.00
IOWACENT	corn	18.40	-11.70	-44.80
IOWACENT	soybeans	25.30	7.50	-49.67
IOWACENT	SOFT	26.50	0.00	0.00
IOWACENT	sorghum	59.47	0.00	0.00
IOWACENT	oats	26.50	-3.70	-37.30
IOWACENT	silage	18.40	0.00	0.00
IOWACENT	hay	-31.44	5.01	-97.55
IOWACENT	PASTURE	0.62	0.00	0.00
IOWANE	corn	18.40	-11.70	-44.80
IOWANE	soybeans	25.30	7.50	-49.67
IOWANE	SOFT	14.80	0.00	0.00
IOWANE	sorghum	18.16	0.00	0.00
IOWANE	oats	14.80	0.00	0.00
IOWANE	silage	18.40	0.00	0.00
IOWANE	hay	-31.44	5.01	-97.55
IOWANE	POTATOES	23.50	-12.70	-16.00
IOWANE	PASTURE	0.62	0.00	0.00
IOWAS	corn	18.40	-11.70	-44.80
IOWAS	soybeans	25.30	7.50	-49.67
IOWAS	SOFT	14.80	0.00	0.00
IOWAS	sorghum	18.16	0.00	0.00
IOWAS	oats	14.80	0.00	0.00
IOWAS	silage	18.40	0.00	0.00

IOWAS	hay	-31.44	5.01	-97.55
IOWAS	PASTURE	0.62	0.00	0.00
kansas	corn	3.60	-14.50	-23.20
kansas	soybeans	17.12	5.03	11.83
kansas	HRWW	-22.40	0.77	13.60
kansas	sorghum	2.54	-7.81	-5.18
kansas	barley	-89.60	3.07	54.40
kansas	oats	-89.60	3.07	54.40
kansas	silage	3.60	-14.50	-23.20
kansas	hay	-21.80	-16.02	-0.46
kansas	SUGARBEET	-21.80	0.00	0.00
kansas	PASTURE	-11.62	0.00	0.00
kentucky	corn	-5.30	-15.20	-26.70
kentucky	soybeans	-7.35	12.13	24.51
kentucky	SOFT	3.10	0.00	0.00
kentucky	sorghum	-8.16	0.00	0.00
kentucky	barley	3.10	0.00	0.00
kentucky	oats	3.10	0.00	0.00
kentucky	silage	-5.30	0.00	0.00
kentucky	hay	-16.10	-7.33	37.04
kentucky	PASTURE	-8.74	0.00	0.00
louisiana	cotton	14.56	46.47	-10.54
louisiana	corn	-8.20	-16.40	-26.70
louisiana	soybeans	-46.99	15.83	50.00
louisiana	SOFT	-11.30	-10.60	20.10
louisiana	sorghum	-4.54	-3.82	5.19
louisiana	rice	0.00	-3.46	-17.04
louisiana	silage	-8.20	0.00	0.00
louisiana	hay	-53.74	-27.19	27.85
louisiana	SUGARCANE	-3.46	-3.46	-17.04
louisiana	tomatofrsh	-1.90	-11.27	4.40
louisiana	PASTURE	-47.37	0.00	0.00
maine	hay	-5.31	19.43	-53.04
maine	POTATOES	34.00	4.80	-13.30
maine	PASTURE	13.43	0.00	0.00
maryland	corn	0.30	-10.90	-46.10
maryland	soybeans	22.87	7.52	-5.99
maryland	SOFT	3.10	1.20	-12.20
maryland	barley	3.10	1.20	-12.20
maryland	oats	3.10	0.00	0.00
maryland	silage	0.30	-10.90	-46.10

maryland	hay	-22.58	-8.18	-17.59
maryland	POTATOES	20.30	-13.30	-15.30
maryland	tomatofrsh	11.46	0.00	-18.49
maryland	tomatoproc	11.46	0.00	-18.49
maryland	PASTURE	-4.81	0.00	0.00
mass	hay	-5.31	19.43	-53.04
mass	POTATOES	34.00	0.00	0.00
mass	tomatofrsh	25.95	25.18	-25.40
mass	PASTURE	13.43	0.00	0.00
michigan	corn	80.55	70.35	-10.45
michigan	soybeans	76.71	27.39	-6.46
michigan	SOFT	7.00	-11.40	-24.20
michigan	barley	7.00	0.00	0.00
michigan	oats	7.00	-11.40	-24.20
michigan	silage	80.55	70.35	-10.45
michigan	hay	-8.72	8.04	-6.48
michigan	SUGARBEET	-8.72	8.04	-6.48
michigan	POTATOES	25.50	-12.90	-8.30
michigan	tomatofrsh	42.13	37.50	-7.19
michigan	tomatoproc	42.13	37.50	-7.19
michigan	PASTURE	11.35	0.00	0.00
minnesota	corn	80.55	70.35	-10.45
minnesota	soybeans	86.25	49.01	-16.62
minnesota	HRSW	7.00	-11.40	-24.20
minnesota	HRWW	7.00	-11.40	-24.20
minnesota	DURW	7.00	-11.40	-24.20
minnesota	barley	28.00	-45.60	-96.80
minnesota	oats	28.00	-45.60	-96.80
minnesota	silage	80.55	70.35	-10.45
minnesota	hay	-5.09	16.56	-50.97
minnesota	SUGARBEET	-5.09	16.56	-50.97
minnesota	POTATOES	23.50	-12.70	-16.00
minnesota	PASTURE	15.89	0.00	0.00
mississippi	cotton	24.30	46.47	-10.54
mississippi	corn	-8.20	-16.40	-26.70
mississippi	soybeans	-46.99	15.83	50.00
mississippi	SOFT	-11.30	-10.60	20.10
mississippi	sorghum	-4.54	-3.82	5.19
mississippi	rice	0.00	1.90	35.78
mississippi	silage	-8.20	-16.40	-26.70
mississippi	hay	-62.10	-24.47	58.05

mississippi	PASTURE	-53.48	0.00	0.00
missouri	cotton	21.69	27.45	-10.54
missouri	corn	3.60	-14.50	-23.20
missouri	soybeans	17.12	5.03	11.83
missouri	SOFT	-11.30	-10.60	20.10
missouri	sorghum	7.59	-11.56	-17.83
missouri	rice	0.00	-3.46	-17.04
missouri	oats	-45.20	0.00	0.00
missouri	silage	3.60	-14.50	-23.20
missouri	hay	-2.66	-3.12	4.21
missouri	PASTURE	13.46	0.00	0.00
montana	corn	0.00	-7.30	-35.10
montana	HRSW	7.00	-17.50	-29.70
montana	HRWW	7.00	-17.50	-29.70
montana	DURW	7.00	-17.50	-29.70
montana	barley	28.00	-70.00	-118.80
montana	oats	28.00	-70.00	-118.80
montana	silage	19.20	-7.30	-35.10
montana	hay	4.51	20.37	10.28
montana	SUGARBEET	0.00	20.37	10.28
montana	POTATOES	1.80	-6.90	-2.60
montana	PASTURE	11.62	0.00	0.00
nebraska	corn	24.70	-11.30	-42.50
nebraska	soybeans	5.68	28.23	16.07
nebraska	HRWW	-17.10	5.90	11.90
nebraska	sorghum	28.82	23.14	6.84
nebraska	barley	-68.40	23.60	47.60
nebraska	oats	-68.40	23.60	47.60
nebraska	silage	24.70	-11.30	-42.50
nebraska	hay	-16.20	-2.68	12.88
nebraska	SUGARBEET	0.00	-2.68	12.88
nebraska	POTATOES	-9.90	-9.30	3.80
nebraska	PASTURE	-0.92	0.00	0.00
nevada	HRSW	0.00	-16.90	-31.50
nevada	HRWW	0.00	-16.90	-31.50
nevada	barley	0.00	-33.80	-63.00
nevada	hay	0.00	-10.36	-5.00
nevada	POTATOES	0.00	-6.90	-2.60
nevada	PASTURE	36.37	0.00	0.00
newhampshi	hay	-9.79	0.00	0.00
newhampshi	PASTURE	1.77	0.00	0.00

newjersey	corn	0.30	-10.90	-46.10
newjersey	soybeans	22.87	7.52	-5.99
newjersey	SOFT	3.10	1.20	-12.20
newjersey	barley	3.10	0.00	0.00
newjersey	oats	3.10	0.00	0.00
newjersey	silage	0.30	0.00	0.00
newjersey	hay	-9.79	7.74	15.15
newjersey	POTATOES	20.30	-13.30	-15.30
newjersey	tomatofrsh	25.95	25.18	-25.40
newjersey	tomatoproc	25.95	25.18	-25.40
newjersey	PASTURE	1.77	0.00	0.00
newmexico	cotton	18.38	18.78	-10.54
newmexico	corn	24.70	-11.30	-42.50
newmexico	HRWW	43.80	-5.80	-21.90
newmexico	sorghum	28.82	23.14	6.84
newmexico	barley	43.80	-5.80	-21.90
newmexico	silage	24.70	-11.30	-42.50
newmexico	hay	-2.13	8.69	-4.73
newmexico	SUGARBEET	-2.13	0.00	0.00
newmexico	POTATOES	0.00	-3.90	17.00
newmexico	PASTURE	3.25	0.00	0.00
newyork	corn	0.30	-10.90	-46.10
newyork	soybeans	22.87	0.00	0.00
newyork	SOFT	3.10	0.00	0.00
newyork	oats	3.10	1.20	-12.20
newyork	silage	0.30	-10.90	-46.10
newyork	hay	-9.79	7.74	15.15
newyork	POTATOES	20.30	-13.30	-15.30
newyork	tomatofrsh	25.95	25.18	-25.40
newyork	tomatoproc	25.95	25.18	-25.40
newyork	PASTURE	1.77	0.00	0.00
northcarol	cotton	15.06	30.84	-10.54
northcarol	corn	-8.20	-16.40	-26.70
northcarol	soybeans	22.87	7.52	-5.99
northcarol	SOFT	-11.30	-10.60	20.10
northcarol	sorghum	2.68	0.00	0.00
northcarol	barley	-11.30	0.00	0.00
northcarol	oats	-11.30	-10.60	20.10
northcarol	silage	-8.20	-16.40	-26.70
northcarol	hay	-22.58	-8.18	-17.59
northcarol	POTATOES	20.30	-13.30	-15.30

northcarol	tomatofrsh	11.46	0.00	-18.49
northcarol	PASTURE	-4.81	0.00	0.00
northdakot	corn	24.90	8.30	-16.00
northdakot	soybeans	5.68	28.23	16.07
northdakot	HRSW	14.80	-9.60	-26.70
northdakot	HRWW	14.80	-9.60	-26.70
northdakot	DURW	14.80	-9.60	-26.70
northdakot	barley	59.20	-38.40	-106.80
northdakot	oats	59.20	-38.40	-106.80
northdakot	silage	24.90	8.30	-16.00
northdakot	hay	12.84	22.16	-13.30
northdakot	SUGARBEET	12.84	22.16	-13.30
northdakot	POTATOES	11.40	-2.50	-6.00
northdakot	PASTURE	30.28	0.00	0.00
OHIONW	corn	0.30	-10.90	-46.10
OHIONW	soybeans	13.03	12.20	8.81
OHIONW	SOFT	3.10	1.20	-12.20
OHIONW	oats	12.40	0.00	0.00
OHIONW	silage	0.30	0.00	0.00
OHIONW	hay	-6.03	4.83	-7.77
OHIONW	SUGARBEET	-6.03	4.83	-7.77
OHIONW	POTATOES	-33.20	-36.10	4.20
OHIONW	tomatofrsh	1.36	-6.08	-55.17
OHIONW	tomatoproc	1.36	-6.08	-55.17
OHIONW	PASTURE	6.06	0.00	0.00
OHIOS	corn	0.30	-10.90	-46.10
OHIOS	soybeans	13.03	12.20	8.81
OHIOS	SOFT	3.10	1.20	-12.20
OHIOS	oats	12.40	0.00	0.00
OHIOS	silage	0.30	0.00	0.00
OHIOS	hay	-6.03	4.83	-7.77
OHIOS	SUGARBEET	-6.03	0.00	0.00
OHIOS	tomatofrsh	1.36	-6.08	-55.17
OHIOS	tomatoproc	1.36	-6.08	-55.17
OHIOS	PASTURE	6.06	0.00	0.00
OHIONE	corn	0.30	0.00	0.00
OHIONE	soybeans	13.03	12.20	8.81
OHIONE	SOFT	3.10	0.00	0.00
OHIONE	oats	12.40	4.80	-48.80
OHIONE	silage	0.30	0.00	0.00
OHIONE	hay	-6.03	4.83	-7.77

OHIONE	SUGARBEET	-6.03	0.00	0.00
OHIONE	tomatofrsh	1.36	-6.08	-55.17
OHIONE	tomatoproc	1.36	-6.08	-55.17
OHIONE	PASTURE	6.06	0.00	0.00
oklahoma	cotton	34.79	43.52	-10.54
oklahoma	corn	3.60	-14.50	-23.20
oklahoma	soybeans	17.12	5.03	11.83
oklahoma	HRWW	-52.30	-12.30	60.90
oklahoma	sorghum	-9.62	-18.98	4.86
oklahoma	barley	-209.20	0.00	0.00
oklahoma	oats	-209.20	-49.20	243.60
oklahoma	silage	3.60	-14.50	-23.20
oklahoma	hay	-33.68	-22.89	27.77
oklahoma	PASTURE	-25.70	0.00	0.00
oregon	corn	19.20	-7.30	-35.10
oregon	HRSW	16.25	0.25	-5.40
oregon	HRWW	16.25	0.25	-5.40
oregon	barley	32.50	0.50	-10.80
oregon	oats	32.50	0.50	-10.80
oregon	silage	19.20	-7.30	-35.10
oregon	hay	13.13	54.62	17.78
oregon	SUGARBEET	0.00	54.62	17.78
oregon	POTATOES	-7.75	-1.50	2.40
oregon	PASTURE	29.08	0.00	0.00
pennsylvan	corn	0.30	-10.90	-46.10
pennsylvan	soybeans	22.87	0.00	0.00
pennsylvan	SOFT	3.10	1.20	-12.20
pennsylvan	sorghum	2.68	0.00	0.00
pennsylvan	barley	3.10	0.00	0.00
pennsylvan	oats	3.10	0.00	0.00
pennsylvan	silage	0.30	-10.90	-46.10
pennsylvan	hay	-9.79	7.74	15.15
pennsylvan	POTATOES	20.30	-13.30	-15.30
pennsylvan	tomatofrsh	25.95	25.18	-25.40
pennsylvan	tomatoproc	25.95	25.18	-25.40
pennsylvan	PASTURE	1.77	0.00	0.00
rhodeislan	hay	-9.79	7.74	15.15
rhodeislan	POTATOES	20.30	-13.30	-15.30
rhodeislan	PASTURE	1.77	0.00	0.00
southcarol	cotton	17.68	30.84	-10.54
southcarol	corn	-8.20	-16.40	-26.70

southcarol	soybeans	-6.54	10.78	20.97
southcarol	SOFT	-11.30	-10.60	20.10
southcarol	sorghum	-7.01	-7.86	-4.76
southcarol	barley	-11.30	0.00	0.00
southcarol	oats	-11.30	0.00	0.00
southcarol	silage	-8.20	-16.40	-26.70
southcarol	hay	-64.88	-29.45	50.34
southcarol	tomatofrsh	-8.71	-14.75	0.63
southcarol	PASTURE	-55.83	0.00	0.00
southdakot	corn	19.20	-7.30	-35.10
southdakot	soybeans	5.68	28.23	16.07
southdakot	HRSW	26.50	-3.70	-37.30
southdakot	HRWW	26.50	-3.70	-37.30
southdakot	DURW	26.50	-3.70	-37.30
southdakot	sorghum	59.47	18.30	-17.08
southdakot	barley	106.00	-14.80	-149.20
southdakot	oats	106.00	-14.80	-149.20
southdakot	silage	19.20	-7.30	-35.10
southdakot	hay	2.61	11.00	-5.12
southdakot	POTATOES	11.40	-2.50	-6.00
southdakot	PASTURE	16.40	0.00	0.00
tennessee	cotton	15.54	30.84	-10.54
tennessee	corn	-8.20	-16.40	-26.70
tennessee	soybeans	-33.91	9.20	35.64
tennessee	SOFT	3.10	0.00	0.00
tennessee	sorghum	-8.16	0.00	0.00
tennessee	oats	3.10	0.00	0.00
tennessee	silage	-8.20	0.00	0.00
tennessee	hay	-25.37	-16.30	83.30
tennessee	POTATOES	20.30	0.00	0.00
tennessee	tomatofrsh	11.46	0.00	-18.49
tennessee	PASTURE	-19.17	0.00	0.00
TXHIPLAINS	cotton	16.10	23.15	-10.54
TXHIPLAINS	corn	3.60	-14.50	-23.20
TXHIPLAINS	soybeans	17.12	5.03	11.83
TXHIPLAINS	HRWW	-19.00	-5.50	-45.60
TXHIPLAINS	sorghum	26.76	-3.69	-14.20
TXHIPLAINS	barley	-76.00	-22.00	-182.40
TXHIPLAINS	oats	-76.00	-22.00	-182.40
TXHIPLAINS	silage	3.60	-14.50	-23.20
TXHIPLAINS	hay	-5.82	-2.84	-5.23



TXHIPLAINS	SUGARBEET	-5.82	-2.84	-5.23
TXHIPLAINS	POTATOES	-17.00	-3.90	17.00
TXHIPLAINS	PASTURE	9.92	0.00	0.00
TXROLINGPL	cotton	26.98	32.36	-10.54
TXROLINGPL	corn	3.60	-14.50	-23.20
TXROLINGPL	HRWW	-19.00	-5.50	-45.60
TXROLINGPL	sorghum	26.76	-3.69	-14.20
TXROLINGPL	barley	-76.00	0.00	0.00
TXROLINGPL	oats	-76.00	-22.00	-182.40
TXROLINGPL	silage	3.60	-14.50	-23.20
TXROLINGPL	hay	-5.82	-2.84	-5.23
TXROLINGPL	POTATOES	-17.00	0.00	0.00
TXROLINGPL	PASTURE	9.92	0.00	0.00
TXCNTBLACK	cotton	17.36	26.78	-10.54
TXCNTBLACK	corn	3.60	-14.50	-23.20
TXCNTBLACK	soybeans	17.12	0.00	0.00
TXCNTBLACK	HRWW	-19.00	-5.50	-45.60
TXCNTBLACK	sorghum	26.76	-3.69	-14.20
TXCNTBLACK	rice	0.00	-4.15	-18.53
TXCNTBLACK	barley	-19.00	0.00	0.00
TXCNTBLACK	oats	-19.00	-5.50	-45.60
TXCNTBLACK	silage	3.60	-14.50	-23.20
TXCNTBLACK	hay	-36.59	-21.85	-5.72
TXCNTBLACK	PASTURE	-2.51	0.00	0.00
TXEAST	cotton	16.43	19.51	-10.54
TXEAST	corn	-8.20	-16.40	-26.70
TXEAST	soybeans	-46.99	15.83	50.00
TXEAST	HRWW	-19.00	-5.50	-45.60
TXEAST	sorghum	26.76	-3.69	-14.20
TXEAST	rice	0.00	-4.15	-18.53
TXEAST	oats	-19.00	-5.50	-45.60
TXEAST	silage	-8.20	0.00	0.00
TXEAST	hay	-36.59	-21.85	-5.72
TXEAST	tomatofrsh	-1.90	-11.27	4.40
TXEAST	PASTURE	-2.51	0.00	0.00
TXEDPLAT	cotton	10.60	28.24	-10.54
TXEDPLAT	corn	24.70	-11.30	-42.50
TXEDPLAT	soybeans	-46.99	0.00	0.00
TXEDPLAT	HRWW	-19.00	-5.50	-45.60
TXEDPLAT	sorghum	26.76	-3.69	-14.20
TXEDPLAT	barley	-19.00	0.00	0.00

TXEDPLAT	oats	-19.00	-5.50	-45.60
TXEDPLAT	silage	24.70	-11.30	-42.50
TXEDPLAT	hay	-25.27	-20.24	7.06
TXEDPLAT	tomatofrsh	0.00	-11.27	4.40
TXEDPLAT	PASTURE	15.39	0.00	0.00
TXCOASTBE	cotton	4.27	10.05	-10.54
TXCOASTBE	corn	-8.20	-16.40	-26.70
TXCOASTBE	soybeans	-46.99	15.83	50.00
TXCOASTBE	HRWW	-19.00	0.00	0.00
TXCOASTBE	sorghum	26.76	-3.69	-14.20
TXCOASTBE	rice	0.00	-4.15	-18.53
TXCOASTBE	oats	-19.00	-5.50	-45.60
TXCOASTBE	hay	-25.27	-20.24	7.06
TXCOASTBE	tomatofrsh	-1.90	0.00	0.00
TXCOASTBE	PASTURE	15.39	0.00	0.00
TXSOUTH	cotton	-0.34	10.68	-10.54
TXSOUTH	corn	24.70	-11.30	-42.50
TXSOUTH	soybeans	0.00	15.83	50.00
TXSOUTH	HRWW	-19.00	-5.50	-45.60
TXSOUTH	sorghum	26.76	-3.69	-14.20
TXSOUTH	oats	-19.00	-5.50	-45.60
TXSOUTH	silage	24.70	-11.30	-42.50
TXSOUTH	hay	-25.27	-20.24	7.06
TXSOUTH	POTATOES	0.00	-3.90	17.00
TXSOUTH	tomatofrsh	-1.90	-11.27	4.40
TXSOUTH	orangefrsh	0.00	45.50	-14.40
TXSOUTH	orangeproc	0.00	45.50	-14.40
TXSOUTH	grpfrtfrsh	0.00	45.50	-14.40
TXSOUTH	grpfrtproc	0.00	45.50	-14.40
TXSOUTH	PASTURE	15.39	0.00	0.00
TXTRANSPEC	cotton	14.69	42.16	-10.54
TXTRANSPEC	corn	3.60	0.00	0.00
TXTRANSPEC	HRWW	-19.00	-5.50	-45.60
TXTRANSPEC	sorghum	0.00	-5.98	-11.37
TXTRANSPEC	barley	0.00	-5.50	-45.60
TXTRANSPEC	oats	0.00	-5.50	-45.60
TXTRANSPEC	hay	4.99	-3.02	1.93
TXTRANSPEC	PASTURE	6.72	0.00	0.00
utah	corn	0.00	-7.30	-35.10
utah	HRSW	36.60	-16.90	-31.50
utah	HRWW	36.60	-16.90	-31.50

utah	barley	73.20	-33.80	-63.00
utah	oats	73.20	-33.80	-63.00
utah	silage	19.20	-7.30	-35.10
utah	hay	26.24	-10.36	-5.00
utah	SUGARBEET	26.24	0.00	0.00
utah	POTATOES	0.00	-6.90	-2.60
utah	PASTURE	36.37	0.00	0.00
vermont	hay	-9.79	7.74	15.15
vermont	PASTURE	1.77	0.00	0.00
virginia	cotton	25.39	30.84	-10.54
virginia	corn	0.30	-10.90	-46.10
virginia	soybeans	22.87	7.52	-5.99
virginia	SOFT	3.10	1.20	-12.20
virginia	sorghum	2.68	0.00	0.00
virginia	barley	3.10	1.20	-12.20
virginia	oats	3.10	0.00	0.00
virginia	silage	0.30	-10.90	-46.10
virginia	hay	-22.58	-8.18	-17.59
virginia	POTATOES	20.30	-13.30	-15.30
virginia	tomatofrsh	11.46	0.00	-18.49
virginia	tomatoproc	11.46	0.00	-18.49
virginia	PASTURE	-4.81	0.00	0.00
washington	corn	19.20	-7.30	-35.10
washington	HRSW	16.25	0.25	-5.40
washington	HRWW	16.25	0.25	-5.40
washington	barley	65.00	1.00	-21.60
washington	oats	65.00	1.00	-21.60
washington	silage	19.20	-7.30	-35.10
washington	hay	7.78	30.25	13.97
washington	SUGARBEET	0.00	30.25	13.97
washington	POTATOES	-0.30	4.80	-3.50
washington	PASTURE	10.54	0.00	0.00
westvirgin	corn	-8.20	0.00	0.00
westvirgin	SOFT	3.10	0.00	0.00
westvirgin	barley	3.10	0.00	0.00
westvirgin	oats	3.10	0.00	0.00
westvirgin	silage	-8.20	0.00	0.00
westvirgin	hay	-25.37	-16.30	83.30
westvirgin	PASTURE	-19.17	0.00	0.00
wisconsin	corn	-2.00	-5.80	-52.70
wisconsin	soybeans	49.27	16.78	-28.50

wisconsin	silage	-2.00	-5.80	-52.70
wisconsin	hay	1.94	12.00	-27.05
wisconsin	POTATOES	23.50	-12.70	-16.00
wisconsin	PASTURE	19.52	0.00	0.00
wyoming	corn	19.20	-7.30	-35.10
wyoming	HRSW	26.50	-3.70	-37.30
wyoming	HRWW	26.50	-3.70	-37.30
wyoming	barley	53.00	-7.40	-74.60
wyoming	oats	53.00	-7.40	-74.60
wyoming	silage	19.20	-7.30	-35.10
wyoming	hay	5.96	12.87	-12.53
wyoming	SUGARBEET	0.00	12.87	-12.53
wyoming	POTATOES	0.00	-2.50	-6.00
wyoming	PASTURE	26.00	0.00	0.00

Table D1.2 Full data set for Canadian Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	93.16	158.23	106.54
alabama	corn	-14.10	-23.30	-32.80
alabama	soybeans	-86.45	14.76	129.92
alabama	SOFT	-4.40	0.00	0.00
alabama	sorghum	-14.45	0.00	0.00
alabama	oats	-4.40	0.00	0.00
alabama	silage	-14.10	0.00	0.00
alabama	hay	-35.21	-15.84	128.60
alabama	POTATOES	-27.90	-18.20	7.60
alabama	tomatofrsh	-28.02	-42.12	27.67
alabama	PASTURE	20.04	0.00	0.00
arizona	cotton	0.00	218.80	106.54
arizona	corn	8.20	-22.90	-54.50
arizona	HRWW	604.50	-14.90	-59.40
arizona	DURW	604.50	-14.90	-59.40
arizona	sorghum	0.00	3.69	-22.15
arizona	barley	0.00	-59.60	-237.60
arizona	silage	8.20	-22.90	-54.50
arizona	hay	63.89	34.83	0.00
arizona	SUGARBEET	63.89	0.00	0.00
arizona	POTATOES	0.00	-75.50	-54.10
arizona	orangefrsh	0.00	114.60	-0.70
arizona	orangeproc	0.00	114.60	-0.70
arizona	grpfrtfrsh	0.00	114.60	-0.70
arizona	grpfrtproc	0.00	114.60	-0.70
arizona	PASTURE	59.62	0.00	0.00
arkansas	cotton	122.63	158.23	106.54
arkansas	corn	4.80	-22.00	-53.30
arkansas	soybeans	-86.45	14.76	129.92
arkansas	SOFT	-4.40	-9.70	-21.00
arkansas	sorghum	-14.45	-15.20	9.96
arkansas	rice	0.00	-10.89	37.30
arkansas	oats	-4.40	-9.70	-21.00
arkansas	silage	4.80	-22.00	-53.30
arkansas	hay	-38.36	-20.99	33.52
arkansas	tomatofrsh	-28.02	-42.12	27.67
arkansas	PASTURE	-3.59	0.00	0.00

CALIFORNIN	cotton	63.07	113.88	106.54
CALIFORNIN	corn	8.20	-22.90	-54.50
CALIFORNIN	HRWW	-20.80	-46.50	-73.60
CALIFORNIN	sorghum	71.06	3.69	-22.15
CALIFORNIN	rice	0.00	3.89	3.33
CALIFORNIN	barley	-83.20	-186.00	-294.40
CALIFORNIN	oats	-83.20	-186.00	-294.40
CALIFORNIN	silage	8.20	-22.90	-54.50
CALIFORNIN	hay	91.55	39.10	7.13
CALIFORNIN	SUGARBEET	0.00	39.10	7.13
CALIFORNIN	POTATOES	0.00	-12.55	8.90
CALIFORNIN	tomatofrsh	0.00	-7.21	-4.20
CALIFORNIN	tomatoproc	0.00	-7.21	-4.20
CALIFORNIN	orangefrsh	0.00	90.00	-55.30
CALIFORNIN	orangeproc	0.00	90.00	-55.30
CALIFORNIN	grpfrtfrsh	0.00	90.00	-55.30
CALIFORNIN	grpfrtproc	0.00	90.00	-55.30
CALIFORNIN	PASTURE	108.76	0.00	0.00
CALIFORNIS	cotton	0.00	113.88	106.54
CALIFORNIS	corn	8.20	-22.90	-54.50
CALIFORNIS	DURW	-20.80	-46.50	-73.60
CALIFORNIS	sorghum	71.06	0.00	0.00
CALIFORNIS	rice	-25.51	0.00	0.00
CALIFORNIS	barley	-20.80	-46.50	-73.60
CALIFORNIS	oats	-20.80	-46.50	-73.60
CALIFORNIS	silage	8.20	-22.90	-54.50
CALIFORNIS	hay	104.78	147.88	22.27
CALIFORNIS	SUGARBEET	0.00	147.88	22.27
CALIFORNIS	tomatofrsh	0.00	-7.21	-4.20
CALIFORNIS	tomatoproc	0.00	-7.21	-4.20
CALIFORNIS	orangefrsh	0.00	50.70	-11.00
CALIFORNIS	orangeproc	0.00	50.70	-11.00
CALIFORNIS	grpfrtfrsh	0.00	50.70	-11.00
CALIFORNIS	grpfrtproc	0.00	50.70	-11.00
CALIFORNIS	PASTURE	160.44	0.00	0.00
colorado	corn	33.50	-14.00	-65.80
colorado	HRSW	-33.60	-6.40	14.40
colorado	HRWW	-33.60	-6.40	14.40
colorado	sorghum	71.06	3.69	-22.15
colorado	barley	-67.20	-12.80	28.80
colorado	oats	-67.20	-12.80	28.80

colorado	silage	33.50	-14.00	-65.80
colorado	hay	-14.75	16.31	40.96
colorado	SUGARBEET	0.00	16.31	40.96
colorado	POTATOES	0.00	-75.50	-54.10
colorado	PASTURE	-10.13	0.00	0.00
conn	hay	3.57	0.00	0.00
conn	POTATOES	-27.90	0.00	0.00
conn	PASTURE	14.58	0.00	0.00
delaware	corn	-1.30	-10.50	-58.70
delaware	soybeans	24.56	7.50	-17.97
delaware	SOFT	16.20	4.30	-42.60
delaware	barley	16.20	4.30	-42.60
delaware	silage	-1.30	0.00	0.00
delaware	hay	3.57	0.00	0.00
delaware	POTATOES	-27.90	-18.20	7.60
delaware	tomatoproc	30.18	32.77	33.33
delaware	PASTURE	14.58	0.00	0.00
florida	cotton	91.47	158.23	106.54
florida	corn	-14.10	-23.30	-32.80
florida	soybeans	-40.25	7.51	103.29
florida	SOFT	-4.40	-9.70	-21.00
florida	oats	-4.40	0.00	0.00
florida	silage	-14.10	-23.30	-32.80
florida	hay	-34.56	-33.15	159.02
florida	SUGARCANE	0.57	0.57	-24.83
florida	tomatofrsh	-44.39	-43.11	37.14
florida	orangefrsh	0.00	125.93	506.07
florida	orangeproc	0.00	125.93	506.07
florida	grpfrtfrsh	0.00	125.93	506.07
florida	grpfrtproc	0.00	125.93	506.07
florida	PASTURE	-2.92	0.00	0.00
georgia	cotton	97.25	158.23	106.54
georgia	corn	-14.10	-23.30	-32.80
georgia	soybeans	-40.25	7.51	103.29
georgia	SOFT	-4.40	-9.70	-21.00
georgia	sorghum	-10.73	-16.73	-11.73
georgia	oats	-4.40	-9.70	-21.00
georgia	silage	-14.10	-23.30	-32.80
georgia	hay	-45.36	-23.08	138.51
georgia	tomatofrsh	-28.02	-42.12	27.67
georgia	PASTURE	-2.20	0.00	0.00

idaho	corn	8.20	-22.90	-54.50
idaho	HRSW	40.50	-26.10	-43.80
idaho	HRWW	40.50	-26.10	-43.80
idaho	barley	162.00	-104.40	-175.20
idaho	oats	162.00	-104.40	-175.20
idaho	silage	0.00	-22.90	-54.50
idaho	hay	51.67	61.24	29.91
idaho	SUGARBEET	0.00	61.24	29.91
idaho	POTATOES	-35.00	-41.60	12.00
idaho	PASTURE	108.41	0.00	0.00
ILLINOISN	corn	24.80	-10.50	-60.30
ILLINOISN	soybeans	85.82	24.76	-36.48
ILLINOISN	SOFT	-4.40	-9.70	-21.00
ILLINOISN	sorghum	22.25	0.00	0.00
ILLINOISN	oats	-4.40	-9.70	-21.00
ILLINOISN	silage	24.80	-10.50	-60.30
ILLINOISN	hay	12.72	11.17	-38.12
ILLINOISN	POTATOES	-47.40	0.00	0.00
ILLINOISN	PASTURE	24.50	0.00	0.00
ILLINOISS	corn	24.80	-10.50	-60.30
ILLINOISS	soybeans	85.82	24.76	-36.48
ILLINOISS	SOFT	-4.40	-9.70	-21.00
ILLINOISS	sorghum	22.25	-9.58	-53.08
ILLINOISS	oats	-4.40	0.00	0.00
ILLINOISS	silage	24.80	0.00	0.00
ILLINOISS	hay	12.72	11.17	-38.12
ILLINOISS	PASTURE	24.50	0.00	0.00
INDIANAN	corn	-3.90	-17.90	-60.00
INDIANAN	soybeans	62.61	22.29	-28.19
INDIANAN	SOFT	16.20	4.30	-42.60
INDIANAN	sorghum	22.25	0.00	0.00
INDIANAN	oats	16.20	0.00	0.00
INDIANAN	silage	-3.90	-17.90	-60.00
INDIANAN	hay	2.38	2.79	-2.75
INDIANAN	POTATOES	-47.40	-51.20	-5.40
INDIANAN	tomatofrsh	-17.10	-22.53	-53.27
INDIANAN	tomatoproc	-17.10	-22.53	-53.27
INDIANAN	PASTURE	13.71	0.00	0.00
INDIANAS	corn	-3.90	-17.90	-60.00
INDIANAS	soybeans	62.61	22.29	-28.19
INDIANAS	SOFT	16.20	4.30	-42.60



INDIANAS	sorghum	22.25	0.00	0.00
INDIANAS	oats	16.20	0.00	0.00
INDIANAS	silage	-3.90	0.00	0.00
INDIANAS	hay	2.38	2.79	-2.75
INDIANAS	tomatofrsh	-17.10	-22.53	-53.27
INDIANAS	tomatoproc	-17.10	-22.53	-53.27
INDIANAS	PASTURE	13.71	0.00	0.00
IOWAW	corn	16.70	-15.20	-67.50
IOWAW	soybeans	41.05	21.37	-52.98
IOWAW	SOFT	16.20	0.00	0.00
IOWAW	sorghum	56.06	0.00	0.00
IOWAW	oats	16.20	0.00	0.00
IOWAW	silage	16.70	0.00	0.00
IOWAW	hay	12.36	-0.64	-52.81
IOWAW	PASTURE	27.32	0.00	0.00
IOWACENT	corn	16.70	-15.20	-67.50
IOWACENT	soybeans	41.05	21.37	-52.98
IOWACENT	SOFT	16.20	0.00	0.00
IOWACENT	sorghum	56.06	0.00	0.00
IOWACENT	oats	16.20	-9.40	-44.20
IOWACENT	silage	16.70	0.00	0.00
IOWACENT	hay	12.36	-0.64	-52.81
IOWACENT	PASTURE	27.32	0.00	0.00
IOWANE	corn	16.70	-15.20	-67.50
IOWANE	soybeans	41.05	21.37	-52.98
IOWANE	SOFT	-16.20	0.00	0.00
IOWANE	sorghum	22.25	0.00	0.00
IOWANE	oats	-16.20	0.00	0.00
IOWANE	silage	16.70	0.00	0.00
IOWANE	hay	12.36	-0.64	-52.81
IOWANE	POTATOES	-9.20	-19.20	-7.20
IOWANE	PASTURE	27.32	0.00	0.00
IOWAS	corn	16.70	-15.20	-67.50
IOWAS	soybeans	41.05	21.37	-52.98
IOWAS	SOFT	-16.20	0.00	0.00
IOWAS	sorghum	22.25	0.00	0.00
IOWAS	oats	-16.20	0.00	0.00
IOWAS	silage	16.70	0.00	0.00
IOWAS	hay	12.36	-0.64	-52.81
IOWAS	PASTURE	27.32	0.00	0.00
kansas	corn	4.80	-22.00	-53.30

kansas	soybeans	37.20	4.91	-11.47
kansas	HRWW	-24.67	-2.77	-5.53
kansas	sorghum	15.00	-21.96	-33.08
kansas	barley	-98.67	-11.07	-22.13
kansas	oats	-98.67	-11.07	-22.13
kansas	silage	4.80	-22.00	-53.30
kansas	hay	-17.40	-27.14	-2.35
kansas	SUGARBEET	-17.40	0.00	0.00
kansas	PASTURE	-12.94	0.00	0.00
kentucky	corn	-3.90	-17.90	-60.00
kentucky	soybeans	32.80	19.20	0.00
kentucky	SOFT	16.20	0.00	0.00
kentucky	sorghum	15.37	0.00	0.00
kentucky	barley	16.20	0.00	0.00
kentucky	oats	16.20	0.00	0.00
kentucky	silage	-3.90	0.00	0.00
kentucky	hay	-0.88	0.16	23.48
kentucky	PASTURE	4.69	0.00	0.00
louisiana	cotton	78.28	158.23	106.54
louisiana	corn	-14.10	-23.30	-32.80
louisiana	soybeans	-86.45	14.76	129.92
louisiana	SOFT	-4.40	-9.70	-21.00
louisiana	sorghum	-14.45	-15.20	9.96
louisiana	rice	0.00	-10.89	37.30
louisiana	silage	-14.10	0.00	0.00
louisiana	hay	-38.36	-20.99	33.52
louisiana	SUGARCANE	-10.89	-10.89	37.30
louisiana	tomatofrsh	-28.02	-42.12	27.67
louisiana	PASTURE	-3.59	0.00	0.00
maine	hay	-11.50	32.71	159.75
maine	POTATOES	-17.40	3.70	22.10
maine	PASTURE	5.85	0.00	0.00
maryland	corn	-1.30	-10.50	-58.70
maryland	soybeans	24.56	7.50	-17.97
maryland	SOFT	16.20	4.30	-42.60
maryland	barley	16.20	4.30	-42.60
maryland	oats	16.20	0.00	0.00
maryland	silage	-1.30	-10.50	-58.70
maryland	hay	-10.61	-3.96	-32.83
maryland	POTATOES	-27.90	-18.20	7.60
maryland	tomatofrsh	-6.56	-23.33	-30.25

maryland	tomatoproc	-6.56	-23.33	-30.25
maryland	PASTURE	1.53	0.00	0.00
mass	hay	-11.50	32.71	159.75
mass	POTATOES	-17.40	0.00	0.00
mass	tomatofrsh	30.18	32.77	33.33
mass	PASTURE	5.85	0.00	0.00
michigan	corn	104.05	91.45	-11.35
michigan	soybeans	108.77	51.52	-12.93
michigan	SOFT	-0.20	-12.90	-26.20
michigan	barley	-0.20	0.00	0.00
michigan	oats	-0.20	-12.90	-26.20
michigan	silage	104.05	91.45	-11.35
michigan	hay	12.11	23.10	-16.37
michigan	SUGARBEET	12.11	23.10	-16.37
michigan	POTATOES	-17.30	-18.60	1.10
michigan	tomatofrsh	42.03	39.74	1.44
michigan	tomatoproc	42.03	39.74	1.44
michigan	PASTURE	33.99	0.00	0.00
minnesota	corn	104.05	91.45	-11.35
minnesota	soybeans	47.37	111.38	35.02
minnesota	HRSW	-0.20	-12.90	-26.20
minnesota	HRWW	-0.20	-12.90	-26.20
minnesota	DURW	-0.20	-12.90	-26.20
minnesota	barley	-0.80	-51.60	-104.80
minnesota	oats	-0.80	-51.60	-104.80
minnesota	silage	104.05	91.45	-11.35
minnesota	hay	-15.33	21.08	92.76
minnesota	SUGARBEET	-15.33	21.08	92.76
minnesota	POTATOES	-9.20	-19.20	-7.20
minnesota	PASTURE	1.69	0.00	0.00
mississippi	cotton	130.68	158.23	106.54
mississippi	corn	-14.10	-23.30	-32.80
mississippi	soybeans	-86.45	14.76	129.92
mississippi	SOFT	-4.40	-9.70	-21.00
mississippi	sorghum	-14.45	-15.20	9.96
mississippi	rice	0.00	-1.36	86.24
mississippi	silage	-14.10	-23.30	-32.80
mississippi	hay	-35.21	-15.84	128.60
mississippi	PASTURE	20.04	0.00	0.00
missouri	cotton	116.63	93.47	106.54
missouri	corn	4.80	-22.00	-53.30

missouri	soybeans	37.20	4.91	-11.47
missouri	SOFT	-4.40	-9.70	-21.00
missouri	sorghum	6.36	-22.01	-45.65
missouri	rice	0.00	-10.89	37.30
missouri	oats	-17.60	0.00	0.00
missouri	silage	4.80	-22.00	-53.30
missouri	hay	13.41	-3.93	-17.79
missouri	PASTURE	27.28	0.00	0.00
montana	corn	0.00	-22.90	-54.50
montana	HRSW	-24.10	-31.10	-27.40
montana	HRWW	-24.10	-31.10	-27.40
montana	DURW	-24.10	-31.10	-27.40
montana	barley	-96.40	-124.40	-109.60
montana	oats	-96.40	-124.40	-109.60
montana	silage	8.20	-22.90	-54.50
montana	hay	-20.97	-9.13	25.86
montana	SUGARBEET	0.00	-9.13	25.86
montana	POTATOES	-35.00	-41.60	12.00
montana	PASTURE	-22.76	0.00	0.00
nebraska	corn	33.50	-14.00	-65.80
nebraska	soybeans	-7.57	29.64	25.89
nebraska	HRWW	-33.60	-6.40	14.40
nebraska	sorghum	71.06	3.69	-22.15
nebraska	barley	-134.40	-25.60	57.60
nebraska	oats	-134.40	-25.60	57.60
nebraska	silage	33.50	-14.00	-65.80
nebraska	hay	-10.54	-26.33	15.96
nebraska	SUGARBEET	0.00	-26.33	15.96
nebraska	POTATOES	-70.30	-50.10	13.50
nebraska	PASTURE	2.53	0.00	0.00
nevada	HRSW	0.00	-26.10	-43.80
nevada	HRWW	0.00	-26.10	-43.80
nevada	barley	0.00	-52.20	-87.60
nevada	hay	0.00	36.72	2.86
nevada	POTATOES	0.00	-41.60	12.00
nevada	PASTURE	131.35	0.00	0.00
newhampshi	hay	3.57	0.00	0.00
newhampshi	PASTURE	14.58	0.00	0.00
newjersey	corn	-1.30	-10.50	-58.70
newjersey	soybeans	24.56	7.50	-17.97
newjersey	SOFT	16.20	4.30	-42.60

newjersey	barley	16.20	0.00	0.00
newjersey	oats	16.20	0.00	0.00
newjersey	silage	-1.30	0.00	0.00
newjersey	hay	3.57	21.99	40.08
newjersey	POTATOES	-27.90	-18.20	7.60
newjersey	tomatofrsh	30.18	32.77	33.33
newjersey	tomatoproc	30.18	32.77	33.33
newjersey	PASTURE	14.58	0.00	0.00
newmexico	cotton	98.82	63.93	106.54
newmexico	corn	33.50	-14.00	-65.80
newmexico	HRWW	604.50	-14.90	-59.40
newmexico	sorghum	71.06	3.69	-22.15
newmexico	barley	604.50	-14.90	-59.40
newmexico	silage	33.50	-14.00	-65.80
newmexico	hay	-14.75	16.31	40.96
newmexico	SUGARBEET	-14.75	0.00	0.00
newmexico	POTATOES	0.00	-75.50	-54.10
newmexico	PASTURE	-10.13	0.00	0.00
newyork	corn	-1.30	-10.50	-58.70
newyork	soybeans	24.56	0.00	0.00
newyork	SOFT	16.20	0.00	0.00
newyork	oats	16.20	4.30	-42.60
newyork	silage	-1.30	-10.50	-58.70
newyork	hay	3.57	21.99	40.08
newyork	POTATOES	-27.90	-18.20	7.60
newyork	tomatofrsh	30.18	32.77	33.33
newyork	tomatoproc	30.18	32.77	33.33
newyork	PASTURE	14.58	0.00	0.00
northcarol	cotton	80.99	105.02	106.54
northcarol	corn	-14.10	-23.30	-32.80
northcarol	soybeans	24.56	7.50	-17.97
northcarol	SOFT	-4.40	-9.70	-21.00
northcarol	sorghum	-0.93	0.00	0.00
northcarol	barley	-4.40	0.00	0.00
northcarol	oats	-4.40	-9.70	-21.00
northcarol	silage	-14.10	-23.30	-32.80
northcarol	hay	-10.61	-3.96	-32.83
northcarol	POTATOES	-27.90	-18.20	7.60
northcarol	tomatofrsh	-6.56	-23.33	-30.25
northcarol	PASTURE	1.53	0.00	0.00
northdakot	corn	10.60	-9.50	-20.70

northdakot	soybeans	-7.57	29.64	25.89
northdakot	HRSW	-16.20	-19.60	-10.90
northdakot	HRWW	-16.20	-19.60	-10.90
northdakot	DURW	-16.20	-19.60	-10.90
northdakot	barley	-64.80	-78.40	-43.60
northdakot	oats	-64.80	-78.40	-43.60
northdakot	silage	10.60	-9.50	-20.70
northdakot	hay	-23.36	12.26	67.21
northdakot	SUGARBEET	-23.36	12.26	67.21
northdakot	POTATOES	-63.90	-28.00	33.60
northdakot	PASTURE	-9.18	0.00	0.00
OHIONW	corn	-1.30	-10.50	-58.70
OHIONW	soybeans	62.61	22.29	-28.19
OHIONW	SOFT	16.20	4.30	-42.60
OHIONW	oats	64.80	0.00	0.00
OHIONW	silage	-1.30	0.00	0.00
OHIONW	hay	1.39	9.01	20.00
OHIONW	SUGARBEET	1.39	9.01	20.00
OHIONW	POTATOES	-47.40	-51.20	-5.40
OHIONW	tomatofrsh	-8.81	-14.77	-37.93
OHIONW	tomatoproc	-8.81	-14.77	-37.93
OHIONW	PASTURE	10.69	0.00	0.00
OHIOS	corn	-1.30	-10.50	-58.70
OHIOS	soybeans	62.61	22.29	-28.19
OHIOS	SOFT	16.20	4.30	-42.60
OHIOS	oats	64.80	0.00	0.00
OHIOS	silage	-1.30	0.00	0.00
OHIOS	hay	1.39	9.01	20.00
OHIOS	SUGARBEET	1.39	0.00	0.00
OHIOS	tomatofrsh	-8.81	-14.77	-37.93
OHIOS	tomatoproc	-8.81	-14.77	-37.93
OHIOS	PASTURE	10.69	0.00	0.00
OHIONE	corn	-1.30	0.00	0.00
OHIONE	soybeans	62.61	22.29	-28.19
OHIONE	SOFT	16.20	0.00	0.00
OHIONE	oats	64.80	17.20	-170.40
OHIONE	silage	-1.30	0.00	0.00
OHIONE	hay	1.39	9.01	20.00
OHIONE	SUGARBEET	1.39	0.00	0.00
OHIONE	tomatofrsh	-8.81	-14.77	-37.93
OHIONE	tomatoproc	-8.81	-14.77	-37.93

OHIONE	PASTURE	10.69	0.00	0.00
oklahoma	cotton	187.09	148.20	106.54
oklahoma	corn	4.80	-22.00	-53.30
oklahoma	soybeans	37.20	4.91	-11.47
oklahoma	HRWW	-20.70	-6.90	19.80
oklahoma	sorghum	-38.01	-37.31	6.99
oklahoma	barley	-82.80	0.00	0.00
oklahoma	oats	-82.80	-27.60	79.20
oklahoma	silage	4.80	-22.00	-53.30
oklahoma	hay	-16.35	-23.11	27.25
oklahoma	PASTURE	-7.83	0.00	0.00
oregon	corn	8.20	-22.90	-54.50
oregon	HRSW	137.90	4.80	-26.35
oregon	HRWW	137.90	4.80	-26.35
oregon	barley	275.80	9.60	-52.70
oregon	oats	275.80	9.60	-52.70
oregon	silage	8.20	-22.90	-54.50
oregon	hay	38.44	59.17	33.85
oregon	SUGARBEET	0.00	59.17	33.85
oregon	POTATOES	0.00	-12.55	8.90
oregon	PASTURE	69.33	0.00	0.00
pennsylvan	corn	-1.30	-10.50	-58.70
pennsylvan	soybeans	24.56	0.00	0.00
pennsylvan	SOFT	16.20	4.30	-42.60
pennsylvan	sorghum	-0.93	0.00	0.00
pennsylvan	barley	16.20	0.00	0.00
pennsylvan	oats	16.20	0.00	0.00
pennsylvan	silage	-1.30	-10.50	-58.70
pennsylvan	hay	3.57	21.99	40.08
pennsylvan	POTATOES	-27.90	-18.20	7.60
pennsylvan	tomatofrsh	30.18	32.77	33.33
pennsylvan	tomatoproc	30.18	32.77	33.33
pennsylvan	PASTURE	14.58	0.00	0.00
rhodeislan	hay	3.57	21.99	40.08
rhodeislan	POTATOES	-27.90	-18.20	7.60
rhodeislan	PASTURE	14.58	0.00	0.00
southcarol	cotton	95.07	105.02	106.54
southcarol	corn	-14.10	-23.30	-32.80
southcarol	soybeans	-23.78	5.70	30.71
southcarol	SOFT	-4.40	-9.70	-21.00
southcarol	sorghum	-12.57	-22.61	-19.05

southcarol	barley	-4.40	0.00	0.00
southcarol	oats	-4.40	0.00	0.00
southcarol	silage	-14.10	-23.30	-32.80
southcarol	hay	-34.65	-22.61	53.62
southcarol	tomatofrsh	-22.46	-31.65	8.23
southcarol	PASTURE	1.24	0.00	0.00
southdakot	corn	8.20	-22.90	-54.50
southdakot	soybeans	-7.57	29.64	25.89
southdakot	HRSW	16.20	-9.40	-44.20
southdakot	HRWW	16.20	-9.40	-44.20
southdakot	DURW	16.20	-9.40	-44.20
southdakot	sorghum	56.06	8.17	-26.31
southdakot	barley	64.80	-37.60	-176.80
southdakot	oats	64.80	-37.60	-176.80
southdakot	silage	8.20	-22.90	-54.50
southdakot	hay	-1.84	-9.56	7.39
southdakot	POTATOES	-63.90	-28.00	33.60
southdakot	PASTURE	7.56	0.00	0.00
tennessee	cotton	83.54	105.02	106.54
tennessee	corn	-14.10	-23.30	-32.80
tennessee	soybeans	-81.96	5.16	83.39
tennessee	SOFT	16.20	0.00	0.00
tennessee	sorghum	15.37	0.00	0.00
tennessee	oats	16.20	0.00	0.00
tennessee	silage	-14.10	0.00	0.00
tennessee	hay	-20.62	-1.82	136.41
tennessee	POTATOES	-27.90	0.00	0.00
tennessee	tomatofrsh	-6.56	-23.33	-30.25
tennessee	PASTURE	-12.09	0.00	0.00
TXHIPLAINS	cotton	86.58	78.81	106.54
TXHIPLAINS	corn	4.80	-22.00	-53.30
TXHIPLAINS	soybeans	37.20	4.91	-11.47
TXHIPLAINS	HRWW	-31.80	6.00	-29.80
TXHIPLAINS	sorghum	13.68	-19.55	-17.44
TXHIPLAINS	barley	-127.20	24.00	-119.20
TXHIPLAINS	oats	-127.20	24.00	-119.20
TXHIPLAINS	silage	4.80	-22.00	-53.30
TXHIPLAINS	hay	-20.49	-34.58	15.10
TXHIPLAINS	SUGARBEET	-20.49	-34.58	15.10
TXHIPLAINS	POTATOES	6.60	-75.50	-54.10
TXHIPLAINS	PASTURE	-12.55	0.00	0.00



TXROLINGPL	cotton	145.07	110.20	106.54
TXROLINGPL	corn	4.80	-22.00	-53.30
TXROLINGPL	HRWW	-31.80	6.00	-29.80
TXROLINGPL	sorghum	13.68	-19.55	-17.44
TXROLINGPL	barley	-127.20	0.00	0.00
TXROLINGPL	oats	-127.20	24.00	-119.20
TXROLINGPL	silage	4.80	-22.00	-53.30
TXROLINGPL	hay	-20.49	-34.58	15.10
TXROLINGPL	POTATOES	6.60	0.00	0.00
TXROLINGPL	PASTURE	-12.55	0.00	0.00
TXCNTBLACK	cotton	93.35	91.20	106.54
TXCNTBLACK	corn	4.80	-22.00	-53.30
TXCNTBLACK	soybeans	37.20	0.00	0.00
TXCNTBLACK	HRWW	-31.80	6.00	-29.80
TXCNTBLACK	sorghum	13.68	-19.55	-17.44
TXCNTBLACK	rice	0.00	-4.04	30.17
TXCNTBLACK	barley	-31.80	0.00	0.00
TXCNTBLACK	oats	-31.80	6.00	-29.80
TXCNTBLACK	silage	4.80	-22.00	-53.30
TXCNTBLACK	hay	-22.79	-18.64	58.58
TXCNTBLACK	PASTURE	27.53	0.00	0.00
TXEAST	cotton	88.35	66.45	106.54
TXEAST	corn	-14.10	-23.30	-32.80
TXEAST	soybeans	-86.45	14.76	129.92
TXEAST	HRWW	-31.80	6.00	-29.80
TXEAST	sorghum	13.68	-19.55	-17.44
TXEAST	rice	0.00	-4.04	30.17
TXEAST	oats	-31.80	6.00	-29.80
TXEAST	silage	-14.10	0.00	0.00
TXEAST	hay	-22.79	-18.64	58.58
TXEAST	tomatofrsh	-28.02	-42.12	27.67
TXEAST	PASTURE	27.53	0.00	0.00
TXEDPLAT	cotton	57.03	96.15	106.54
TXEDPLAT	corn	33.50	-14.00	-65.80
TXEDPLAT	soybeans	-86.45	0.00	0.00
TXEDPLAT	HRWW	-31.80	6.00	-29.80
TXEDPLAT	sorghum	13.68	-19.55	-17.44
TXEDPLAT	barley	-31.80	0.00	0.00
TXEDPLAT	oats	-31.80	6.00	-29.80
TXEDPLAT	silage	33.50	-14.00	-65.80
TXEDPLAT	hay	-26.27	-22.62	15.48

TXEDPLAT	tomatofrsh	0.00	-42.12	27.67
TXEDPLAT	PASTURE	-11.16	0.00	0.00
TXCOASTBE	cotton	22.94	34.21	106.54
TXCOASTBE	corn	-14.10	-23.30	-32.80
TXCOASTBE	soybeans	-86.45	14.76	129.92
TXCOASTBE	HRWW	-31.80	0.00	0.00
TXCOASTBE	sorghum	13.68	-19.55	-17.44
TXCOASTBE	rice	0.00	-4.04	30.17
TXCOASTBE	oats	-31.80	6.00	-29.80
TXCOASTBE	hay	-26.27	-22.62	15.48
TXCOASTBE	tomatofrsh	-28.02	0.00	0.00
TXCOASTBE	PASTURE	-11.16	0.00	0.00
TXSOUTH	cotton	-1.83	36.37	106.54
TXSOUTH	corn	33.50	-14.00	-65.80
TXSOUTH	soybeans	0.00	14.76	129.92
TXSOUTH	HRWW	-31.80	6.00	-29.80
TXSOUTH	sorghum	13.68	-19.55	-17.44
TXSOUTH	oats	-31.80	6.00	-29.80
TXSOUTH	silage	33.50	-14.00	-65.80
TXSOUTH	hay	-26.27	-22.62	15.48
TXSOUTH	POTATOES	0.00	-75.50	-54.10
TXSOUTH	tomatofrsh	-28.02	-42.12	27.67
TXSOUTH	orangefrsh	0.00	40.70	13.90
TXSOUTH	orangeproc	0.00	40.70	13.90
TXSOUTH	grpfrtfrsh	0.00	40.70	13.90
TXSOUTH	grpfrtproc	0.00	40.70	13.90
TXSOUTH	PASTURE	-11.16	0.00	0.00
TXTRANSPEC	cotton	78.97	143.57	106.54
TXTRANSPEC	corn	4.80	0.00	0.00
TXTRANSPEC	HRWW	-31.80	6.00	-29.80
TXTRANSPEC	sorghum	0.00	-21.86	-15.37
TXTRANSPEC	barley	0.00	6.00	-29.80
TXTRANSPEC	oats	0.00	6.00	-29.80
TXTRANSPEC	hay	-5.64	-18.33	6.00
TXTRANSPEC	PASTURE	-7.13	0.00	0.00
utah	corn	0.00	-22.90	-54.50
utah	HRSW	40.50	-26.10	-43.80
utah	HRWW	40.50	-26.10	-43.80
utah	barley	81.00	-52.20	-87.60
utah	oats	81.00	-52.20	-87.60
utah	silage	8.20	-22.90	-54.50

utah	hay	119.41	36.72	2.86
utah	SUGARBEET	119.41	0.00	0.00
utah	POTATOES	0.00	-41.60	12.00
utah	PASTURE	131.35	0.00	0.00
vermont	hay	3.57	21.99	40.08
vermont	PASTURE	14.58	0.00	0.00
virginia	cotton	136.50	105.02	106.54
virginia	corn	-1.30	-10.50	-58.70
virginia	soybeans	24.56	7.50	-17.97
virginia	SOFT	16.20	4.30	-42.60
virginia	sorghum	-0.93	0.00	0.00
virginia	barley	16.20	4.30	-42.60
virginia	oats	16.20	0.00	0.00
virginia	silage	-1.30	-10.50	-58.70
virginia	hay	-10.61	-3.96	-32.83
virginia	POTATOES	-27.90	-18.20	7.60
virginia	tomatofrsh	-6.56	-23.33	-30.25
virginia	tomatoproc	-6.56	-23.33	-30.25
virginia	PASTURE	1.53	0.00	0.00
washington	corn	8.20	-22.90	-54.50
washington	HRSW	137.90	4.80	-26.35
washington	HRWW	137.90	4.80	-26.35
washington	barley	551.60	19.20	-105.40
washington	oats	551.60	19.20	-105.40
washington	silage	8.20	-22.90	-54.50
washington	hay	33.50	54.06	38.45
washington	SUGARBEET	0.00	54.06	38.45
washington	POTATOES	-6.50	-1.40	12.00
washington	PASTURE	69.96	0.00	0.00
westvirgin	corn	-14.10	0.00	0.00
westvirgin	SOFT	16.20	0.00	0.00
westvirgin	barley	16.20	0.00	0.00
westvirgin	oats	16.20	0.00	0.00
westvirgin	silage	-14.10	0.00	0.00
westvirgin	hay	-20.62	-1.82	136.41
westvirgin	PASTURE	-12.09	0.00	0.00
wisconsin	corn	-3.10	-4.90	-70.60
wisconsin	soybeans	77.25	40.76	-34.50
wisconsin	silage	-3.10	-4.90	-70.60
wisconsin	hay	13.70	19.76	-25.61
wisconsin	POTATOES	-9.20	-19.20	-7.20

wisconsin	PASTURE	31.69	0.00	0.00
wyoming	corn	8.20	-22.90	-54.50
wyoming	HRSW	16.20	-9.40	-44.20
wyoming	HRWW	16.20	-9.40	-44.20
wyoming	barley	32.40	-18.80	-88.40
wyoming	oats	32.40	-18.80	-88.40
wyoming	silage	8.20	-22.90	-54.50
wyoming	hay	8.21	3.40	6.68
wyoming	SUGARBEET	0.00	3.40	6.68
wyoming	POTATOES	0.00	-28.00	33.60
wyoming	PASTURE	24.22	0.00	0.00

Table D1.3 Full data set for Hadley Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	31.15	72.77	36.19
alabama	corn	1.60	-0.90	-28.10
alabama	soybeans	18.56	11.32	-3.41
alabama	SOFT	7.30	0.00	0.00
alabama	sorghum	10.25	0.00	0.00
alabama	oats	7.30	0.00	0.00
alabama	silage	1.60	0.00	0.00
alabama	hay	-22.85	-4.93	7.20
alabama	POTATOES	22.10	-3.90	-13.50
alabama	tomatofrsh	8.54	3.26	-3.77
alabama	PASTURE	32.93	0.00	0.00
arizona	cotton	0.00	100.63	36.19
arizona	corn	17.60	-4.60	-27.00
arizona	HRWW	122.40	-2.90	-22.60
arizona	DURW	122.40	-2.90	-22.60
arizona	sorghum	0.00	16.21	-7.82
arizona	barley	0.00	-11.60	-90.40
arizona	silage	17.60	-4.60	-27.00
arizona	hay	-0.87	45.44	2.17
arizona	SUGARBEET	-0.87	0.00	0.00
arizona	POTATOES	0.00	-1.00	7.70
arizona	orangefrsh	0.00	69.90	3.30
arizona	orangeproc	0.00	69.90	3.30
arizona	grpfrtfrsh	0.00	69.90	3.30
arizona	grpfrtproc	0.00	69.90	3.30
arizona	PASTURE	3.81	0.00	0.00
arkansas	cotton	41.00	72.77	36.19
arkansas	corn	11.60	-3.60	-20.30
arkansas	soybeans	18.56	11.32	-3.41
arkansas	SOFT	7.30	4.10	-8.00
arkansas	sorghum	10.25	-2.44	-14.29
arkansas	rice	0.00	2.32	-3.22
arkansas	oats	7.30	4.10	-8.00
arkansas	silage	11.60	-3.60	-20.30
arkansas	hay	-23.07	-7.56	6.02
arkansas	tomatofrsh	8.54	3.26	-3.77
arkansas	PASTURE	16.97	0.00	0.00

CALIFORNIN	cotton	21.09	52.37	36.19
CALIFORNIN	corn	17.60	-4.60	-27.00
CALIFORNIN	HRWW	20.50	-16.20	-50.20
CALIFORNIN	sorghum	35.01	16.21	-7.82
CALIFORNIN	rice	0.00	6.84	-0.43
CALIFORNIN	barley	82.00	-64.80	-200.80
CALIFORNIN	oats	82.00	-64.80	-200.80
CALIFORNIN	silage	17.60	-4.60	-27.00
CALIFORNIN	hay	29.41	35.18	-7.97
CALIFORNIN	SUGARBEET	0.00	35.18	-7.97
CALIFORNIN	POTATOES	0.00	-2.25	3.10
CALIFORNIN	tomatofrsh	0.00	-9.06	0.13
CALIFORNIN	tomatoproc	0.00	-9.06	0.13
CALIFORNIN	orangefrsh	0.00	45.70	-20.20
CALIFORNIN	orangeproc	0.00	45.70	-20.20
CALIFORNIN	grpfrtfrsh	0.00	45.70	-20.20
CALIFORNIN	grpfrtproc	0.00	45.70	-20.20
CALIFORNIN	PASTURE	52.93	0.00	0.00
CALIFORNIS	cotton	0.00	52.37	36.19
CALIFORNIS	corn	17.60	-4.60	-27.00
CALIFORNIS	DURW	20.50	-16.20	-50.20
CALIFORNIS	sorghum	35.01	0.00	0.00
CALIFORNIS	rice	0.45	0.00	0.00
CALIFORNIS	barley	20.50	-16.20	-50.20
CALIFORNIS	oats	20.50	-16.20	-50.20
CALIFORNIS	silage	17.60	-4.60	-27.00
CALIFORNIS	hay	32.50	107.84	0.00
CALIFORNIS	SUGARBEET	0.00	107.84	0.00
CALIFORNIS	POTATOES	8.95	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-9.06	0.13
CALIFORNIS	tomatoproc	0.00	-9.06	0.13
CALIFORNIS	orangefrsh	0.00	36.20	-1.80
CALIFORNIS	orangeproc	0.00	36.20	-1.80
CALIFORNIS	grpfrtfrsh	0.00	36.20	-1.80
CALIFORNIS	grpfrtproc	0.00	36.20	-1.80
CALIFORNIS	PASTURE	70.88	0.00	0.00
colorado	corn	23.60	-6.50	-39.40
colorado	HRSW	20.50	11.70	-2.10
colorado	HRWW	20.50	11.70	-2.10
colorado	sorghum	35.01	16.21	-7.82
colorado	barley	41.00	23.40	-4.20

colorado	oats	41.00	23.40	-4.20
colorado	silage	23.60	-6.50	-39.40
colorado	hay	6.24	23.48	-14.89
colorado	SUGARBEET	0.00	23.48	-14.89
colorado	POTATOES	0.00	-1.00	7.70
colorado	PASTURE	12.76	0.00	0.00
conn	hay	3.75	0.00	0.00
conn	POTATOES	22.10	0.00	0.00
conn	PASTURE	20.54	0.00	0.00
delaware	corn	5.30	-5.30	-39.50
delaware	soybeans	32.18	10.96	-14.75
delaware	SOFT	8.20	1.90	-16.30
delaware	barley	8.20	1.90	-16.30
delaware	silage	5.30	0.00	0.00
delaware	hay	3.75	0.00	0.00
delaware	POTATOES	22.10	-3.90	-13.50
delaware	tomatoproc	24.02	23.10	-34.92
delaware	PASTURE	20.54	0.00	0.00
florida	cotton	30.58	72.77	36.19
florida	corn	1.60	-0.90	-28.10
florida	soybeans	8.52	7.62	-2.63
florida	SOFT	7.30	4.10	-8.00
florida	oats	7.30	0.00	0.00
florida	silage	1.60	-0.90	-28.10
florida	hay	-23.20	-17.28	17.22
florida	SUGARCANE	-0.99	-0.99	-11.03
florida	tomatofrsh	-2.01	-0.31	2.86
florida	orangefrsh	0.00	25.37	14.67
florida	orangeproc	0.00	25.37	14.67
florida	grpfrtfrsh	0.00	25.37	14.67
florida	grpfrtproc	0.00	25.37	14.67
florida	PASTURE	10.90	0.00	0.00
georgia	cotton	32.52	72.77	36.19
georgia	corn	1.60	-0.90	-28.10
georgia	soybeans	8.52	7.62	-2.63
georgia	SOFT	7.30	4.10	-8.00
georgia	sorghum	3.33	-3.16	-13.58
georgia	oats	7.30	4.10	-8.00
georgia	silage	1.60	-0.90	-28.10
georgia	hay	-28.94	-7.65	16.15
georgia	tomatofrsh	8.54	3.26	-3.77

georgia	PASTURE	27.28	0.00	0.00
idaho	corn	17.60	-4.60	-27.00
idaho	HRSW	19.50	-7.40	-11.20
idaho	HRWW	19.50	-7.40	-11.20
idaho	barley	78.00	-29.60	-44.80
idaho	oats	78.00	-29.60	-44.80
idaho	silage	0.00	-4.60	-27.00
idaho	hay	27.77	82.17	0.49
idaho	SUGARBEET	0.00	82.17	0.49
idaho	POTATOES	-7.00	-8.40	3.70
idaho	PASTURE	58.99	0.00	0.00
ILLINOISN	corn	16.30	-4.20	-21.40
ILLINOISN	soybeans	34.67	16.24	-12.70
ILLINOISN	SOFT	7.30	4.10	-8.00
ILLINOISN	sorghum	13.81	0.00	0.00
ILLINOISN	oats	7.30	4.10	-8.00
ILLINOISN	silage	16.30	-4.20	-21.40
ILLINOISN	hay	4.89	25.67	-53.71
ILLINOISN	POTATOES	7.40	0.00	0.00
ILLINOISN	PASTURE	20.44	0.00	0.00
ILLINOISS	corn	16.30	-4.20	-21.40
ILLINOISS	soybeans	34.67	16.24	-12.70
ILLINOISS	SOFT	7.30	4.10	-8.00
ILLINOISS	sorghum	13.81	0.39	-17.06
ILLINOISS	oats	7.30	0.00	0.00
ILLINOISS	silage	16.30	0.00	0.00
ILLINOISS	hay	4.89	25.67	-53.71
ILLINOISS	PASTURE	20.44	0.00	0.00
INDIANAN	corn	6.50	-4.10	-34.70
INDIANAN	soybeans	45.09	14.61	-22.47
INDIANAN	SOFT	8.20	1.90	-16.30
INDIANAN	sorghum	13.81	0.00	0.00
INDIANAN	oats	8.20	0.00	0.00
INDIANAN	silage	6.50	-4.10	-34.70
INDIANAN	hay	3.35	24.90	-32.77
INDIANAN	POTATOES	7.40	-5.50	-5.80
INDIANAN	tomatofrsh	12.33	6.35	-28.97
INDIANAN	tomatoproc	12.33	6.35	-28.97
INDIANAN	PASTURE	17.13	0.00	0.00
INDIANAS	corn	6.50	-4.10	-34.70
INDIANAS	soybeans	45.09	14.61	-22.47



INDIANAS	SOFT	8.20	1.90	-16.30
INDIANAS	sorghum	13.81	0.00	0.00
INDIANAS	oats	8.20	0.00	0.00
INDIANAS	silage	6.50	0.00	0.00
INDIANAS	hay	3.35	24.90	-32.77
INDIANAS	tomatofrsh	12.33	6.35	-28.97
INDIANAS	tomatoproc	12.33	6.35	-28.97
INDIANAS	PASTURE	17.13	0.00	0.00
IOWAW	corn	11.60	-5.30	-24.70
IOWAW	soybeans	18.21	12.62	-13.91
IOWAW	SOFT	23.40	0.00	0.00
IOWAW	sorghum	45.49	0.00	0.00
IOWAW	oats	23.40	0.00	0.00
IOWAW	silage	11.60	0.00	0.00
IOWAW	hay	3.63	23.54	-49.38
IOWAW	PASTURE	22.48	0.00	0.00
IOWACENT	corn	11.60	-5.30	-24.70
IOWACENT	soybeans	18.21	12.62	-13.91
IOWACENT	SOFT	23.40	0.00	0.00
IOWACENT	sorghum	45.49	0.00	0.00
IOWACENT	oats	23.40	1.30	-22.00
IOWACENT	silage	11.60	0.00	0.00
IOWACENT	hay	3.63	23.54	-49.38
IOWACENT	PASTURE	22.48	0.00	0.00
IOWANE	corn	11.60	-5.30	-24.70
IOWANE	soybeans	18.21	12.62	-13.91
IOWANE	SOFT	19.30	0.00	0.00
IOWANE	sorghum	13.81	0.00	0.00
IOWANE	oats	19.30	0.00	0.00
IOWANE	silage	11.60	0.00	0.00
IOWANE	hay	3.63	23.54	-49.38
IOWANE	POTATOES	19.50	0.20	-8.80
IOWANE	PASTURE	22.48	0.00	0.00
IOWAS	corn	11.60	-5.30	-24.70
IOWAS	soybeans	18.21	12.62	-13.91
IOWAS	SOFT	19.30	0.00	0.00
IOWAS	sorghum	13.81	0.00	0.00
IOWAS	oats	19.30	0.00	0.00
IOWAS	silage	11.60	0.00	0.00
IOWAS	hay	3.63	23.54	-49.38
IOWAS	PASTURE	22.48	0.00	0.00

kansas	corn	11.60	-3.60	-20.30
kansas	soybeans	27.19	13.61	-4.30
kansas	HRWW	15.33	7.87	-7.93
kansas	sorghum	10.22	-1.19	-9.33
kansas	barley	61.33	31.47	-31.73
kansas	oats	61.33	31.47	-31.73
kansas	silage	11.60	-3.60	-20.30
kansas	hay	2.43	17.97	-29.72
kansas	SUGARBEET	2.43	0.00	0.00
kansas	PASTURE	19.77	0.00	0.00
kentucky	corn	6.50	-4.10	-34.70
kentucky	soybeans	50.26	13.61	-15.02
kentucky	SOFT	8.20	0.00	0.00
kentucky	sorghum	24.26	0.00	0.00
kentucky	barley	8.20	0.00	0.00
kentucky	oats	8.20	0.00	0.00
kentucky	silage	6.50	0.00	0.00
kentucky	hay	4.35	19.67	-32.05
kentucky	PASTURE	16.89	0.00	0.00
louisiana	cotton	26.17	72.77	36.19
louisiana	corn	1.60	-0.90	-28.10
louisiana	soybeans	18.56	11.32	-3.41
louisiana	SOFT	7.30	4.10	-8.00
louisiana	sorghum	10.25	-2.44	-14.29
louisiana	rice	0.00	2.32	-3.22
louisiana	silage	1.60	0.00	0.00
louisiana	hay	-23.07	-7.56	6.02
louisiana	SUGARCANE	2.32	2.32	-3.22
louisiana	tomatofrsh	8.54	3.26	-3.77
louisiana	PASTURE	16.97	0.00	0.00
maine	hay	-3.47	26.99	-40.37
maine	POTATOES	6.60	3.30	6.20
maine	PASTURE	14.11	0.00	0.00
maryland	corn	5.30	-5.30	-39.50
maryland	soybeans	32.18	10.96	-14.75
maryland	SOFT	8.20	1.90	-16.30
maryland	barley	8.20	1.90	-16.30
maryland	oats	8.20	0.00	0.00
maryland	silage	5.30	-5.30	-39.50
maryland	hay	-5.21	19.13	-64.61
maryland	POTATOES	22.10	-3.90	-13.50

maryland	tomatofrsh	17.34	8.24	-11.76
maryland	tomatoproc	17.34	8.24	-11.76
maryland	PASTURE	18.52	0.00	0.00
mass	hay	-3.47	26.99	-40.37
mass	POTATOES	6.60	0.00	0.00
mass	tomatofrsh	24.02	23.10	-34.92
mass	PASTURE	14.11	0.00	0.00
michigan	corn	50.00	33.60	-31.40
michigan	soybeans	87.67	22.45	-19.77
michigan	SOFT	15.40	4.90	-17.40
michigan	barley	15.40	0.00	0.00
michigan	oats	15.40	4.90	-17.40
michigan	silage	50.00	33.60	-31.40
michigan	hay	3.78	27.30	-45.01
michigan	SUGARBEET	3.78	27.30	-45.01
michigan	POTATOES	33.10	-0.80	-10.60
michigan	tomatofrsh	41.26	29.50	-17.99
michigan	tomatoproc	41.26	29.50	-17.99
michigan	PASTURE	23.64	0.00	0.00
minnesota	corn	50.00	33.60	-31.40
minnesota	soybeans	59.21	36.38	-16.74
minnesota	HRSW	15.40	4.90	-17.40
minnesota	HRWW	15.40	4.90	-17.40
minnesota	DURW	15.40	4.90	-17.40
minnesota	barley	61.60	19.60	-69.60
minnesota	oats	61.60	19.60	-69.60
minnesota	silage	50.00	33.60	-31.40
minnesota	hay	-5.12	32.03	-52.72
minnesota	SUGARBEET	-5.12	32.03	-52.72
minnesota	POTATOES	19.50	0.20	-8.80
minnesota	PASTURE	16.19	0.00	0.00
mississippi	cotton	43.69	72.77	36.19
mississippi	corn	1.60	-0.90	-28.10
mississippi	soybeans	18.56	11.32	-3.41
mississippi	SOFT	7.30	4.10	-8.00
mississippi	sorghum	10.25	-2.44	-14.29
mississippi	rice	0.00	2.36	-4.59
mississippi	silage	1.60	-0.90	-28.10
mississippi	hay	-22.85	-4.93	7.20
mississippi	PASTURE	32.93	0.00	0.00
missouri	cotton	38.99	42.99	36.19

missouri	corn	11.60	-3.60	-20.30
missouri	soybeans	27.19	13.61	-4.30
missouri	SOFT	7.30	4.10	-8.00
missouri	sorghum	8.69	-4.42	-16.09
missouri	rice	0.00	2.32	-3.22
missouri	oats	29.20	0.00	0.00
missouri	silage	11.60	-3.60	-20.30
missouri	hay	9.43	23.09	-45.99
missouri	PASTURE	31.78	0.00	0.00
montana	corn	0.00	-4.60	-27.00
montana	HRSW	16.10	0.20	-14.00
montana	HRWW	16.10	0.20	-14.00
montana	DURW	16.10	0.20	-14.00
montana	barley	64.40	0.80	-56.00
montana	oats	64.40	0.80	-56.00
montana	silage	17.60	-4.60	-27.00
montana	hay	13.97	22.29	-23.47
montana	SUGARBEET	0.00	22.29	-23.47
montana	POTATOES	-7.00	-8.40	3.70
montana	PASTURE	19.90	0.00	0.00
nebraska	corn	23.60	-6.50	-39.40
nebraska	soybeans	29.34	26.61	-0.89
nebraska	HRWW	20.50	11.70	-2.10
nebraska	sorghum	35.01	16.21	-7.82
nebraska	barley	82.00	46.80	-8.40
nebraska	oats	82.00	46.80	-8.40
nebraska	silage	23.60	-6.50	-39.40
nebraska	hay	2.82	27.25	-21.98
nebraska	SUGARBEET	0.00	27.25	-21.98
nebraska	POTATOES	-6.70	-6.30	2.20
nebraska	PASTURE	19.00	0.00	0.00
nevada	HRSW	0.00	-7.40	-11.20
nevada	HRWW	0.00	-7.40	-11.20
nevada	barley	0.00	-14.80	-22.40
nevada	hay	0.00	9.14	2.24
nevada	POTATOES	0.00	-8.40	3.70
nevada	PASTURE	8.82	0.00	0.00
newhampshi	hay	3.75	0.00	0.00
newhampshi	PASTURE	20.54	0.00	0.00
newjersey	corn	5.30	-5.30	-39.50
newjersey	soybeans	32.18	10.96	-14.75

newjersey	SOFT	8.20	1.90	-16.30
newjersey	barley	8.20	0.00	0.00
newjersey	oats	8.20	0.00	0.00
newjersey	silage	5.30	0.00	0.00
newjersey	hay	3.75	27.00	-55.04
newjersey	POTATOES	22.10	-3.90	-13.50
newjersey	tomatofrsh	24.02	23.10	-34.92
newjersey	tomatoproc	24.02	23.10	-34.92
newjersey	PASTURE	20.54	0.00	0.00
newmexico	cotton	33.04	29.40	36.19
newmexico	corn	23.60	-6.50	-39.40
newmexico	HRWW	122.40	-2.90	-22.60
newmexico	sorghum	35.01	16.21	-7.82
newmexico	barley	122.40	-2.90	-22.60
newmexico	silage	23.60	-6.50	-39.40
newmexico	hay	6.24	23.48	-14.89
newmexico	SUGARBEET	6.24	0.00	0.00
newmexico	POTATOES	0.00	-1.00	7.70
newmexico	PASTURE	12.76	0.00	0.00
newyork	corn	5.30	-5.30	-39.50
newyork	soybeans	32.18	0.00	0.00
newyork	SOFT	8.20	0.00	0.00
newyork	oats	8.20	1.90	-16.30
newyork	silage	5.30	-5.30	-39.50
newyork	hay	3.75	27.00	-55.04
newyork	POTATOES	22.10	-3.90	-13.50
newyork	tomatofrsh	24.02	23.10	-34.92
newyork	tomatoproc	24.02	23.10	-34.92
newyork	PASTURE	20.54	0.00	0.00
northcarol	cotton	27.08	48.30	36.19
northcarol	corn	1.60	-0.90	-28.10
northcarol	soybeans	32.18	10.96	-14.75
northcarol	SOFT	7.30	4.10	-8.00
northcarol	sorghum	8.58	0.00	0.00
northcarol	barley	7.30	0.00	0.00
northcarol	oats	7.30	4.10	-8.00
northcarol	silage	1.60	-0.90	-28.10
northcarol	hay	-5.21	19.13	-64.61
northcarol	POTATOES	22.10	-3.90	-13.50
northcarol	tomatofrsh	17.34	8.24	-11.76
northcarol	PASTURE	18.52	0.00	0.00

northdakot	corn	24.00	-0.10	-28.60
northdakot	soybeans	29.34	26.61	-0.89
northdakot	HRSW	19.30	5.70	-17.40
northdakot	HRWW	19.30	5.70	-17.40
northdakot	DURW	19.30	5.70	-17.40
northdakot	barley	77.20	22.80	-69.60
northdakot	oats	77.20	22.80	-69.60
northdakot	silage	24.00	-0.10	-28.60
northdakot	hay	2.39	31.08	-30.61
northdakot	SUGARBEET	2.39	31.08	-30.61
northdakot	POTATOES	20.70	2.10	-6.90
northdakot	PASTURE	21.99	0.00	0.00
OHIONW	corn	5.30	-5.30	-39.50
OHIONW	soybeans	45.09	14.61	-22.47
OHIONW	SOFT	8.20	1.90	-16.30
OHIONW	oats	32.80	0.00	0.00
OHIONW	silage	5.30	0.00	0.00
OHIONW	hay	2.46	21.50	-34.88
OHIONW	SUGARBEET	2.46	21.50	-34.88
OHIONW	POTATOES	7.40	-5.50	-5.80
OHIONW	tomatofrsh	13.64	7.50	-39.08
OHIONW	tomatoproc	13.64	7.50	-39.08
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	5.30	-5.30	-39.50
OHIOS	soybeans	45.09	14.61	-22.47
OHIOS	SOFT	8.20	1.90	-16.30
OHIOS	oats	32.80	0.00	0.00
OHIOS	silage	5.30	0.00	0.00
OHIOS	hay	2.46	21.50	-34.88
OHIOS	SUGARBEET	2.46	0.00	0.00
OHIOS	tomatofrsh	13.64	7.50	-39.08
OHIOS	tomatoproc	13.64	7.50	-39.08
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	5.30	0.00	0.00
OHIONE	soybeans	45.09	14.61	-22.47
OHIONE	SOFT	8.20	0.00	0.00
OHIONE	oats	32.80	7.60	-65.20
OHIONE	silage	5.30	0.00	0.00
OHIONE	hay	2.46	21.50	-34.88
OHIONE	SUGARBEET	2.46	0.00	0.00
OHIONE	tomatofrsh	13.64	7.50	-39.08

OHIONE	tomatoproc	13.64	7.50	-39.08
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	62.55	68.16	36.19
oklahoma	corn	11.60	-3.60	-20.30
oklahoma	soybeans	27.19	13.61	-4.30
oklahoma	HRWW	6.20	4.20	0.70
oklahoma	sorghum	7.98	-5.73	-5.47
oklahoma	barley	24.80	0.00	0.00
oklahoma	oats	24.80	16.80	2.80
oklahoma	silage	11.60	-3.60	-20.30
oklahoma	hay	-3.55	18.97	-16.70
oklahoma	PASTURE	19.00	0.00	0.00
oregon	corn	17.60	-4.60	-27.00
oregon	HRSW	65.75	4.60	-11.60
oregon	HRWW	65.75	4.60	-11.60
oregon	barley	131.50	9.20	-23.20
oregon	oats	131.50	9.20	-23.20
oregon	silage	17.60	-4.60	-27.00
oregon	hay	24.66	88.00	0.47
oregon	SUGARBEET	0.00	88.00	0.47
oregon	POTATOES	8.95	-2.25	3.10
oregon	PASTURE	56.29	0.00	0.00
pennsylvan	corn	5.30	-5.30	-39.50
pennsylvan	soybeans	32.18	0.00	0.00
pennsylvan	SOFT	8.20	1.90	-16.30
pennsylvan	sorghum	8.58	0.00	0.00
pennsylvan	barley	8.20	0.00	0.00
pennsylvan	oats	8.20	0.00	0.00
pennsylvan	silage	5.30	-5.30	-39.50
pennsylvan	hay	3.75	27.00	-55.04
pennsylvan	POTATOES	22.10	-3.90	-13.50
pennsylvan	tomatofrsh	24.02	23.10	-34.92
pennsylvan	tomatoproc	24.02	23.10	-34.92
pennsylvan	PASTURE	20.54	0.00	0.00
rhodeislan	hay	3.75	27.00	-55.04
rhodeislan	POTATOES	22.10	-3.90	-13.50
rhodeislan	PASTURE	20.54	0.00	0.00
southcarol	cotton	31.79	48.30	36.19
southcarol	corn	1.60	-0.90	-28.10
southcarol	soybeans	18.47	9.00	-6.74
southcarol	SOFT	7.30	4.10	-8.00

southcarol	sorghum	8.05	-3.18	-13.33
southcarol	barley	7.30	0.00	0.00
southcarol	oats	7.30	0.00	0.00
southcarol	silage	1.60	-0.90	-28.10
southcarol	hay	-25.92	-15.05	-2.58
southcarol	tomatofrsh	11.27	3.87	-11.39
southcarol	PASTURE	28.10	0.00	0.00
southdakot	corn	17.60	-4.60	-27.00
southdakot	soybeans	29.34	26.61	-0.89
southdakot	HRSW	23.40	1.30	-22.00
southdakot	HRWW	23.40	1.30	-22.00
southdakot	DURW	23.40	1.30	-22.00
southdakot	sorghum	45.49	15.18	-12.86
southdakot	barley	93.60	5.20	-88.00
southdakot	oats	93.60	5.20	-88.00
southdakot	silage	17.60	-4.60	-27.00
southdakot	hay	6.71	26.41	-28.60
southdakot	POTATOES	20.70	2.10	-6.90
southdakot	PASTURE	22.97	0.00	0.00
tennessee	cotton	27.93	48.30	36.19
tennessee	corn	1.60	-0.90	-28.10
tennessee	soybeans	34.41	12.17	-10.03
tennessee	SOFT	8.20	0.00	0.00
tennessee	sorghum	24.26	0.00	0.00
tennessee	oats	8.20	0.00	0.00
tennessee	silage	1.60	0.00	0.00
tennessee	hay	-1.76	18.20	-26.39
tennessee	POTATOES	22.10	0.00	0.00
tennessee	tomatofrsh	17.34	8.24	-11.76
tennessee	PASTURE	13.45	0.00	0.00
TXHIPLAINS	cotton	28.95	36.25	36.19
TXHIPLAINS	corn	11.60	-3.60	-20.30
TXHIPLAINS	soybeans	27.19	13.61	-4.30
TXHIPLAINS	HRWW	18.40	4.70	-11.90
TXHIPLAINS	sorghum	10.39	-3.12	-5.27
TXHIPLAINS	barley	73.60	18.80	-47.60
TXHIPLAINS	oats	73.60	18.80	-47.60
TXHIPLAINS	silage	11.60	-3.60	-20.30
TXHIPLAINS	hay	0.99	17.55	-14.01
TXHIPLAINS	SUGARBEET	0.99	17.55	-14.01
TXHIPLAINS	POTATOES	-8.50	-1.00	7.70



TXHIPLAINS	PASTURE	19.40	0.00	0.00
TXROLINGPL	cotton	48.50	50.68	36.19
TXROLINGPL	corn	11.60	-3.60	-20.30
TXROLINGPL	HRWW	18.40	4.70	-11.90
TXROLINGPL	sorghum	10.39	-3.12	-5.27
TXROLINGPL	barley	73.60	0.00	0.00
TXROLINGPL	oats	73.60	18.80	-47.60
TXROLINGPL	silage	11.60	-3.60	-20.30
TXROLINGPL	hay	0.99	17.55	-14.01
TXROLINGPL	POTATOES	-8.50	0.00	0.00
TXROLINGPL	PASTURE	19.40	0.00	0.00
TXCNTBLACK	cotton	31.21	41.94	36.19
TXCNTBLACK	corn	11.60	-3.60	-20.30
TXCNTBLACK	soybeans	27.19	0.00	0.00
TXCNTBLACK	HRWW	18.40	4.70	-11.90
TXCNTBLACK	sorghum	10.39	-3.12	-5.27
TXCNTBLACK	rice	0.00	0.84	2.16
TXCNTBLACK	barley	18.40	0.00	0.00
TXCNTBLACK	oats	18.40	4.70	-11.90
TXCNTBLACK	silage	11.60	-3.60	-20.30
TXCNTBLACK	hay	-27.77	-9.63	20.30
TXCNTBLACK	PASTURE	11.50	0.00	0.00
TXEAST	cotton	29.54	30.56	36.19
TXEAST	corn	1.60	-0.90	-28.10
TXEAST	soybeans	18.56	11.32	-3.41
TXEAST	HRWW	18.40	4.70	-11.90
TXEAST	sorghum	10.39	-3.12	-5.27
TXEAST	rice	0.00	0.84	2.16
TXEAST	oats	18.40	4.70	-11.90
TXEAST	silage	1.60	0.00	0.00
TXEAST	hay	-27.77	-9.63	20.30
TXEAST	tomatofrsh	8.54	3.26	-3.77
TXEAST	PASTURE	11.50	0.00	0.00
TXEDPLAT	cotton	19.07	44.22	36.19
TXEDPLAT	corn	23.60	-6.50	-39.40
TXEDPLAT	soybeans	18.56	0.00	0.00
TXEDPLAT	HRWW	18.40	4.70	-11.90
TXEDPLAT	sorghum	10.39	-3.12	-5.27
TXEDPLAT	barley	18.40	0.00	0.00
TXEDPLAT	oats	18.40	4.70	-11.90
TXEDPLAT	silage	23.60	-6.50	-39.40

TXEDPLAT	hay	-21.33	-15.75	-16.50
TXEDPLAT	tomatofrsh	0.00	3.26	-3.77
TXEDPLAT	PASTURE	16.60	0.00	0.00
TXCOASTBE	cotton	7.67	15.73	36.19
TXCOASTBE	corn	1.60	-0.90	-28.10
TXCOASTBE	soybeans	18.56	11.32	-3.41
TXCOASTBE	HRWW	18.40	0.00	0.00
TXCOASTBE	sorghum	10.39	-3.12	-5.27
TXCOASTBE	rice	0.00	0.84	2.16
TXCOASTBE	oats	18.40	4.70	-11.90
TXCOASTBE	hay	-21.33	-15.75	-16.50
TXCOASTBE	tomatofrsh	8.54	0.00	0.00
TXCOASTBE	PASTURE	16.60	0.00	0.00
TXSOUTH	cotton	-0.61	16.73	36.19
TXSOUTH	corn	23.60	-6.50	-39.40
TXSOUTH	soybeans	0.00	11.32	-3.41
TXSOUTH	HRWW	18.40	4.70	-11.90
TXSOUTH	sorghum	10.39	-3.12	-5.27
TXSOUTH	oats	18.40	4.70	-11.90
TXSOUTH	silage	23.60	-6.50	-39.40
TXSOUTH	hay	-21.33	-15.75	-16.50
TXSOUTH	POTATOES	0.00	-1.00	7.70
TXSOUTH	tomatofrsh	8.54	3.26	-3.77
TXSOUTH	orangefrsh	0.00	46.90	-7.30
TXSOUTH	orangeproc	0.00	46.90	-7.30
TXSOUTH	grpfrtfrsh	0.00	46.90	-7.30
TXSOUTH	grpfrtproc	0.00	46.90	-7.30
TXSOUTH	PASTURE	16.60	0.00	0.00
TXTRANSPEC	cotton	26.40	66.03	36.19
TXTRANSPEC	corn	11.60	0.00	0.00
TXTRANSPEC	HRWW	18.40	4.70	-11.90
TXTRANSPEC	sorghum	0.00	-5.31	-4.78
TXTRANSPEC	barley	0.00	4.70	-11.90
TXTRANSPEC	oats	0.00	4.70	-11.90
TXTRANSPEC	hay	2.87	12.18	-18.99
TXTRANSPEC	PASTURE	7.56	0.00	0.00
utah	corn	0.00	-4.60	-27.00
utah	HRSW	19.50	-7.40	-11.20
utah	HRWW	19.50	-7.40	-11.20
utah	barley	39.00	-14.80	-22.40
utah	oats	39.00	-14.80	-22.40

utah	silage	17.60	-4.60	-27.00
utah	hay	2.80	9.14	2.24
utah	SUGARBEET	2.80	0.00	0.00
utah	POTATOES	0.00	-8.40	3.70
utah	PASTURE	8.82	0.00	0.00
vermont	hay	3.75	27.00	-55.04
vermont	PASTURE	20.54	0.00	0.00
virginia	cotton	45.64	48.30	36.19
virginia	corn	5.30	-5.30	-39.50
virginia	soybeans	32.18	10.96	-14.75
virginia	SOFT	8.20	1.90	-16.30
virginia	sorghum	8.58	0.00	0.00
virginia	barley	8.20	1.90	-16.30
virginia	oats	8.20	0.00	0.00
virginia	silage	5.30	-5.30	-39.50
virginia	hay	-5.21	19.13	-64.61
virginia	POTATOES	22.10	-3.90	-13.50
virginia	tomatofrsh	17.34	8.24	-11.76
virginia	tomatoproc	17.34	8.24	-11.76
virginia	PASTURE	18.52	0.00	0.00
washington	corn	17.60	-4.60	-27.00
washington	HRSW	65.75	4.60	-11.60
washington	HRWW	65.75	4.60	-11.60
washington	barley	263.00	18.40	-46.40
washington	oats	263.00	18.40	-46.40
washington	silage	17.60	-4.60	-27.00
washington	hay	30.41	65.77	2.70
washington	SUGARBEET	0.00	65.77	2.70
washington	POTATOES	2.70	2.10	3.30
washington	PASTURE	55.20	0.00	0.00
westvirgin	corn	1.60	0.00	0.00
westvirgin	SOFT	8.20	0.00	0.00
westvirgin	barley	8.20	0.00	0.00
westvirgin	oats	8.20	0.00	0.00
westvirgin	silage	1.60	0.00	0.00
westvirgin	hay	-1.76	18.20	-26.39
westvirgin	PASTURE	13.45	0.00	0.00
wisconsin	corn	-1.30	-3.70	-42.20
wisconsin	soybeans	43.79	17.94	-19.50
wisconsin	silage	-1.30	-3.70	-42.20
wisconsin	hay	7.38	26.11	-64.47

wisconsin	POTATOES	19.50	0.20	-8.80
wisconsin	PASTURE	24.40	0.00	0.00
wyoming	corn	17.60	-4.60	-27.00
wyoming	HRSW	23.40	1.30	-22.00
wyoming	HRWW	23.40	1.30	-22.00
wyoming	barley	46.80	2.60	-44.00
wyoming	oats	46.80	2.60	-44.00
wyoming	silage	17.60	-4.60	-27.00
wyoming	hay	6.70	25.97	-39.88
wyoming	SUGARBEET	0.00	25.97	-39.88
wyoming	POTATOES	0.00	2.10	-6.90
wyoming	PASTURE	30.13	0.00	0.00

Table D1.4 Full data set for Hadley Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	79.34	131.93	59.81
alabama	corn	-0.60	-1.90	-57.50
alabama	soybeans	47.06	19.73	-7.20
alabama	SOFT	17.30	0.00	0.00
alabama	sorghum	16.27	0.00	0.00
alabama	oats	17.30	0.00	0.00
alabama	silage	-0.60	0.00	0.00
alabama	hay	-13.46	0.32	-16.10
alabama	POTATOES	21.90	-7.80	-16.70
alabama	tomatofrsh	3.36	-2.08	7.55
alabama	PASTURE	59.75	0.00	0.00
arizona	cotton	0.00	182.43	59.81
arizona	corn	34.40	-3.20	-59.80
arizona	HRWW	476.80	3.20	-50.20
arizona	DURW	476.80	3.20	-50.20
arizona	sorghum	0.00	20.88	-33.88
arizona	barley	0.00	12.80	-200.80
arizona	silage	34.40	-3.20	-59.80
arizona	hay	26.91	48.53	4.32
arizona	SUGARBEET	26.91	0.00	0.00
arizona	POTATOES	0.00	-7.80	8.40
arizona	orangefrsh	0.00	111.60	3.90
arizona	orangeproc	0.00	111.60	3.90
arizona	grpfrtfrsh	0.00	111.60	3.90
arizona	grpfrtproc	0.00	111.60	3.90
arizona	PASTURE	26.29	0.00	0.00
arkansas	cotton	104.43	131.93	59.81
arkansas	corn	21.90	-3.90	-53.40
arkansas	soybeans	47.06	19.73	-7.20
arkansas	SOFT	17.30	8.90	-44.90
arkansas	sorghum	16.27	-5.22	-32.47
arkansas	rice	0.00	9.85	-5.47
arkansas	oats	17.30	8.90	-44.90
arkansas	silage	21.90	-3.90	-53.40
arkansas	hay	-7.52	-3.34	-15.88
arkansas	tomatofrsh	3.36	-2.08	7.55
arkansas	PASTURE	53.35	0.00	0.00

CALIFORNIN	cotton	53.71	94.95	59.81
CALIFORNIN	corn	34.40	-3.20	-59.80
CALIFORNIN	HRWW	6.10	-28.30	-73.60
CALIFORNIN	sorghum	106.99	20.88	-33.88
CALIFORNIN	rice	0.00	7.18	1.95
CALIFORNIN	barley	24.40	-113.20	-294.40
CALIFORNIN	oats	24.40	-113.20	-294.40
CALIFORNIN	silage	34.40	-3.20	-59.80
CALIFORNIN	hay	60.25	43.70	-4.34
CALIFORNIN	SUGARBEET	0.00	43.70	-4.34
CALIFORNIN	POTATOES	0.00	-12.25	12.65
CALIFORNIN	tomatofrsh	0.00	-19.65	1.84
CALIFORNIN	tomatoproc	0.00	-19.65	1.84
CALIFORNIN	orangefrsh	0.00	79.90	-27.20
CALIFORNIN	orangeproc	0.00	79.90	-27.20
CALIFORNIN	grpfrtfrsh	0.00	79.90	-27.20
CALIFORNIN	grpfrtproc	0.00	79.90	-27.20
CALIFORNIN	PASTURE	82.96	0.00	0.00
CALIFORNIS	cotton	0.00	94.95	59.81
CALIFORNIS	corn	34.40	-3.20	-59.80
CALIFORNIS	DURW	6.10	-28.30	-73.60
CALIFORNIS	sorghum	106.99	0.00	0.00
CALIFORNIS	rice	-12.89	0.00	0.00
CALIFORNIS	barley	6.10	-28.30	-73.60
CALIFORNIS	oats	6.10	-28.30	-73.60
CALIFORNIS	silage	34.40	-3.20	-59.80
CALIFORNIS	hay	79.86	145.48	10.06
CALIFORNIS	SUGARBEET	0.00	145.48	10.06
CALIFORNIS	POTATOES	7.60	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-19.65	1.84
CALIFORNIS	tomatoproc	0.00	-19.65	1.84
CALIFORNIS	orangefrsh	0.00	57.60	-0.60
CALIFORNIS	orangeproc	0.00	57.60	-0.60
CALIFORNIS	grpfrtfrsh	0.00	57.60	-0.60
CALIFORNIS	grpfrtproc	0.00	57.60	-0.60
CALIFORNIS	PASTURE	131.54	0.00	0.00
colorado	corn	31.20	-4.40	-47.30
colorado	HRSW	44.30	22.50	-18.50
colorado	HRWW	44.30	22.50	-18.50
colorado	sorghum	106.99	20.88	-33.88
colorado	barley	88.60	45.00	-37.00

colorado	oats	88.60	45.00	-37.00
colorado	silage	31.20	-4.40	-47.30
colorado	hay	16.16	29.24	1.11
colorado	SUGARBEET	0.00	29.24	1.11
colorado	POTATOES	0.00	-7.80	8.40
colorado	PASTURE	24.60	0.00	0.00
conn	hay	11.74	0.00	0.00
conn	POTATOES	21.90	0.00	0.00
conn	PASTURE	28.97	0.00	0.00
delaware	corn	6.20	-5.80	-71.30
delaware	soybeans	41.97	20.49	-12.90
delaware	SOFT	23.60	8.50	-48.00
delaware	barley	23.60	8.50	-48.00
delaware	silage	6.20	0.00	0.00
delaware	hay	11.74	0.00	0.00
delaware	POTATOES	21.90	-7.80	-16.70
delaware	tomatoproc	42.16	40.93	-49.21
delaware	PASTURE	28.97	0.00	0.00
florida	cotton	77.90	131.93	59.81
florida	corn	-0.60	-1.90	-57.50
florida	soybeans	24.33	12.57	-18.42
florida	SOFT	17.30	8.90	-44.90
florida	oats	17.30	0.00	0.00
florida	silage	-0.60	-1.90	-57.50
florida	hay	-20.91	-14.61	26.21
florida	SUGARCANE	6.51	6.51	2.07
florida	tomatofrsh	-22.06	-14.41	26.67
florida	orangefrsh	0.00	44.97	29.43
florida	orangeproc	0.00	44.97	29.43
florida	grpfrtfrsh	0.00	44.97	29.43
florida	grpfrtproc	0.00	44.97	29.43
florida	PASTURE	19.96	0.00	0.00
georgia	cotton	82.82	131.93	59.81
georgia	corn	-0.60	-1.90	-57.50
georgia	soybeans	24.33	12.57	-18.42
georgia	SOFT	17.30	8.90	-44.90
georgia	sorghum	5.59	-6.29	-32.10
georgia	oats	17.30	8.90	-44.90
georgia	silage	-0.60	-1.90	-57.50
georgia	hay	-24.38	-1.12	-6.21
georgia	tomatofrsh	3.36	-2.08	7.55

georgia	PASTURE	49.29	0.00	0.00
idaho	corn	34.40	-3.20	-59.80
idaho	HRSW	38.00	-7.30	-17.20
idaho	HRWW	38.00	-7.30	-17.20
idaho	barley	152.00	-29.20	-68.80
idaho	oats	152.00	-29.20	-68.80
idaho	silage	0.00	-3.20	-59.80
idaho	hay	45.29	72.47	7.68
idaho	SUGARBEET	0.00	72.47	7.68
idaho	POTATOES	-32.90	-34.30	13.70
idaho	PASTURE	83.20	0.00	0.00
ILLINOISN	corn	37.90	1.10	-59.60
ILLINOISN	soybeans	90.25	32.24	-36.07
ILLINOISN	SOFT	17.30	8.90	-44.90
ILLINOISN	sorghum	36.79	0.00	0.00
ILLINOISN	oats	17.30	8.90	-44.90
ILLINOISN	silage	37.90	1.10	-59.60
ILLINOISN	hay	16.34	30.43	-68.76
ILLINOISN	POTATOES	14.30	0.00	0.00
ILLINOISN	PASTURE	35.15	0.00	0.00
ILLINOISS	corn	37.90	1.10	-59.60
ILLINOISS	soybeans	90.25	32.24	-36.07
ILLINOISS	SOFT	17.30	8.90	-44.90
ILLINOISS	sorghum	36.79	0.46	-54.03
ILLINOISS	oats	17.30	0.00	0.00
ILLINOISS	silage	37.90	0.00	0.00
ILLINOISS	hay	16.34	30.43	-68.76
ILLINOISS	PASTURE	35.15	0.00	0.00
INDIANAN	corn	11.40	-5.70	-67.20
INDIANAN	soybeans	92.72	31.84	-41.41
INDIANAN	SOFT	23.60	8.50	-48.00
INDIANAN	sorghum	36.79	0.00	0.00
INDIANAN	oats	23.60	0.00	0.00
INDIANAN	silage	11.40	-5.70	-67.20
INDIANAN	hay	12.74	28.88	-54.30
INDIANAN	POTATOES	14.30	-8.60	-12.30
INDIANAN	tomatofrsh	22.02	14.12	-57.94
INDIANAN	tomatoproc	22.02	14.12	-57.94
INDIANAN	PASTURE	28.49	0.00	0.00
INDIANAS	corn	11.40	-5.70	-67.20
INDIANAS	soybeans	92.72	31.84	-41.41



INDIANAS	SOFT	23.60	8.50	-48.00
INDIANAS	sorghum	36.79	0.00	0.00
INDIANAS	oats	23.60	0.00	0.00
INDIANAS	silage	11.40	0.00	0.00
INDIANAS	hay	12.74	28.88	-54.30
INDIANAS	tomatofrsh	22.02	14.12	-57.94
INDIANAS	tomatoproc	22.02	14.12	-57.94
INDIANAS	PASTURE	28.49	0.00	0.00
IOWAW	corn	27.60	-3.30	-61.00
IOWAW	soybeans	47.91	29.85	-43.05
IOWAW	SOFT	47.30	0.00	0.00
IOWAW	sorghum	121.74	0.00	0.00
IOWAW	oats	47.30	0.00	0.00
IOWAW	silage	27.60	0.00	0.00
IOWAW	hay	16.84	27.96	-64.82
IOWAW	PASTURE	40.05	0.00	0.00
IOWACENT	corn	27.60	-3.30	-61.00
IOWACENT	soybeans	47.91	29.85	-43.05
IOWACENT	SOFT	47.30	0.00	0.00
IOWACENT	sorghum	121.74	0.00	0.00
IOWACENT	oats	47.30	7.10	-28.90
IOWACENT	silage	27.60	0.00	0.00
IOWACENT	hay	16.84	27.96	-64.82
IOWACENT	PASTURE	40.05	0.00	0.00
IOWANE	corn	27.60	-3.30	-61.00
IOWANE	soybeans	47.91	29.85	-43.05
IOWANE	SOFT	21.80	0.00	0.00
IOWANE	sorghum	36.79	0.00	0.00
IOWANE	oats	21.80	0.00	0.00
IOWANE	silage	27.60	0.00	0.00
IOWANE	hay	16.84	27.96	-64.82
IOWANE	POTATOES	26.20	1.50	-13.80
IOWANE	PASTURE	40.05	0.00	0.00
IOWAS	corn	27.60	-3.30	-61.00
IOWAS	soybeans	47.91	29.85	-43.05
IOWAS	SOFT	21.80	0.00	0.00
IOWAS	sorghum	36.79	0.00	0.00
IOWAS	oats	21.80	0.00	0.00
IOWAS	silage	27.60	0.00	0.00
IOWAS	hay	16.84	27.96	-64.82
IOWAS	PASTURE	40.05	0.00	0.00

kansas	corn	21.90	-3.90	-53.40
kansas	soybeans	67.40	25.40	-19.71
kansas	HRWW	57.07	16.40	-34.27
kansas	sorghum	42.20	-6.44	-36.01
kansas	barley	228.27	65.60	-137.07
kansas	oats	228.27	65.60	-137.07
kansas	silage	21.90	-3.90	-53.40
kansas	hay	13.58	8.99	-34.71
kansas	SUGARBEET	13.58	0.00	0.00
kansas	PASTURE	29.22	0.00	0.00
kentucky	corn	11.40	-5.70	-67.20
kentucky	soybeans	110.74	27.92	-31.62
kentucky	SOFT	23.60	0.00	0.00
kentucky	sorghum	45.93	0.00	0.00
kentucky	barley	23.60	0.00	0.00
kentucky	oats	23.60	0.00	0.00
kentucky	silage	11.40	0.00	0.00
kentucky	hay	10.96	21.23	-55.10
kentucky	PASTURE	27.07	0.00	0.00
louisiana	cotton	66.67	131.93	59.81
louisiana	corn	-0.60	-1.90	-57.50
louisiana	soybeans	47.06	19.73	-7.20
louisiana	SOFT	17.30	8.90	-44.90
louisiana	sorghum	16.27	-5.22	-32.47
louisiana	rice	0.00	9.85	-5.47
louisiana	silage	-0.60	0.00	0.00
louisiana	hay	-7.52	-3.34	-15.88
louisiana	SUGARCANE	9.85	9.85	-5.47
louisiana	tomatofrsh	3.36	-2.08	7.55
louisiana	PASTURE	53.35	0.00	0.00
maine	hay	2.94	36.18	-36.44
maine	POTATOES	16.00	3.70	-2.70
maine	PASTURE	20.89	0.00	0.00
maryland	corn	6.20	-5.80	-71.30
maryland	soybeans	41.97	20.49	-12.90
maryland	SOFT	23.60	8.50	-48.00
maryland	barley	23.60	8.50	-48.00
maryland	oats	23.60	0.00	0.00
maryland	silage	6.20	-5.80	-71.30
maryland	hay	-0.44	18.25	-55.97
maryland	POTATOES	21.90	-7.80	-16.70

maryland	tomatofrsh	24.40	17.65	5.04
maryland	tomatoproc	24.40	17.65	5.04
maryland	PASTURE	19.86	0.00	0.00
mass	hay	2.94	36.18	-36.44
mass	POTATOES	16.00	0.00	0.00
mass	tomatofrsh	42.16	40.93	-49.21
mass	PASTURE	20.89	0.00	0.00
michigan	corn	112.70	78.95	-58.80
michigan	soybeans	154.34	44.97	-27.00
michigan	SOFT	22.30	11.50	-20.00
michigan	barley	22.30	0.00	0.00
michigan	oats	22.30	11.50	-20.00
michigan	silage	112.70	78.95	-58.80
michigan	hay	14.30	33.63	-47.19
michigan	SUGARBEET	14.30	33.63	-47.19
michigan	POTATOES	40.00	-1.50	-12.40
michigan	tomatofrsh	70.69	57.64	-22.30
michigan	tomatoproc	70.69	57.64	-22.30
michigan	PASTURE	35.26	0.00	0.00
minnesota	corn	112.70	78.95	-58.80
minnesota	soybeans	112.09	78.93	-19.40
minnesota	HRSW	22.30	11.50	-20.00
minnesota	HRWW	22.30	11.50	-20.00
minnesota	DURW	22.30	11.50	-20.00
minnesota	barley	89.20	46.00	-80.00
minnesota	oats	89.20	46.00	-80.00
minnesota	silage	112.70	78.95	-58.80
minnesota	hay	2.30	40.04	-58.87
minnesota	SUGARBEET	2.30	40.04	-58.87
minnesota	POTATOES	26.20	1.50	-13.80
minnesota	PASTURE	24.81	0.00	0.00
mississippi	cotton	111.29	131.93	59.81
mississippi	corn	-0.60	-1.90	-57.50
mississippi	soybeans	47.06	19.73	-7.20
mississippi	SOFT	17.30	8.90	-44.90
mississippi	sorghum	16.27	-5.22	-32.47
mississippi	rice	0.00	15.00	-10.55
mississippi	silage	-0.60	-1.90	-57.50
mississippi	hay	-13.46	0.32	-16.10
mississippi	PASTURE	59.75	0.00	0.00
missouri	cotton	99.33	77.93	59.81

missouri	corn	21.90	-3.90	-53.40
missouri	soybeans	67.40	25.40	-19.71
missouri	SOFT	17.30	8.90	-44.90
missouri	sorghum	22.49	-6.82	-45.22
missouri	rice	0.00	9.85	-5.47
missouri	oats	69.20	0.00	0.00
missouri	silage	21.90	-3.90	-53.40
missouri	hay	20.47	18.42	-55.59
missouri	PASTURE	42.86	0.00	0.00
montana	corn	0.00	-3.20	-59.80
montana	HRSW	24.20	-0.30	-26.10
montana	HRWW	24.20	-0.30	-26.10
montana	DURW	24.20	-0.30	-26.10
montana	barley	96.80	-1.20	-104.40
montana	oats	96.80	-1.20	-104.40
montana	silage	34.40	-3.20	-59.80
montana	hay	17.84	20.15	-14.06
montana	SUGARBEET	0.00	20.15	-14.06
montana	POTATOES	-32.90	-34.30	13.70
montana	PASTURE	21.05	0.00	0.00
nebraska	corn	31.20	-4.40	-47.30
nebraska	soybeans	79.92	46.33	-7.14
nebraska	HRWW	44.30	22.50	-18.50
nebraska	sorghum	106.99	20.88	-33.88
nebraska	barley	177.20	90.00	-74.00
nebraska	oats	177.20	90.00	-74.00
nebraska	silage	31.20	-4.40	-47.30
nebraska	hay	36.60	17.25	-33.54
nebraska	SUGARBEET	0.00	17.25	-33.54
nebraska	POTATOES	-37.80	-27.60	8.40
nebraska	PASTURE	9.63	0.00	0.00
nevada	HRSW	0.00	-7.30	-17.20
nevada	HRWW	0.00	-7.30	-17.20
nevada	barley	0.00	-14.60	-34.40
nevada	hay	0.00	28.55	0.24
nevada	POTATOES	0.00	-34.30	13.70
nevada	PASTURE	84.04	0.00	0.00
newhampshi	hay	11.74	0.00	0.00
newhampshi	PASTURE	28.97	0.00	0.00
newjersey	corn	6.20	-5.80	-71.30
newjersey	soybeans	41.97	20.49	-12.90

newjersey	SOFT	23.60	8.50	-48.00
newjersey	barley	23.60	0.00	0.00
newjersey	oats	23.60	0.00	0.00
newjersey	silage	6.20	0.00	0.00
newjersey	hay	11.74	32.32	-60.45
newjersey	POTATOES	21.90	-7.80	-16.70
newjersey	tomatofrsh	42.16	40.93	-49.21
newjersey	tomatoproc	42.16	40.93	-49.21
newjersey	PASTURE	28.97	0.00	0.00
newmexico	cotton	84.16	53.31	59.81
newmexico	corn	31.20	-4.40	-47.30
newmexico	HRWW	476.80	3.20	-50.20
newmexico	sorghum	106.99	20.88	-33.88
newmexico	barley	476.80	3.20	-50.20
newmexico	silage	31.20	-4.40	-47.30
newmexico	hay	16.16	29.24	1.11
newmexico	SUGARBEET	16.16	0.00	0.00
newmexico	POTATOES	0.00	-7.80	8.40
newmexico	PASTURE	24.60	0.00	0.00
newyork	corn	6.20	-5.80	-71.30
newyork	soybeans	41.97	0.00	0.00
newyork	SOFT	23.60	0.00	0.00
newyork	oats	23.60	8.50	-48.00
newyork	silage	6.20	-5.80	-71.30
newyork	hay	11.74	32.32	-60.45
newyork	POTATOES	21.90	-7.80	-16.70
newyork	tomatofrsh	42.16	40.93	-49.21
newyork	tomatoproc	42.16	40.93	-49.21
newyork	PASTURE	28.97	0.00	0.00
northcarol	cotton	68.97	87.56	59.81
northcarol	corn	-0.60	-1.90	-57.50
northcarol	soybeans	41.97	20.49	-12.90
northcarol	SOFT	17.30	8.90	-44.90
northcarol	sorghum	8.73	0.00	0.00
northcarol	barley	17.30	0.00	0.00
northcarol	oats	17.30	8.90	-44.90
northcarol	silage	-0.60	-1.90	-57.50
northcarol	hay	-0.44	18.25	-55.97
northcarol	POTATOES	21.90	-7.80	-16.70
northcarol	tomatofrsh	24.40	17.65	5.04
northcarol	PASTURE	19.86	0.00	0.00

northdakot	corn	52.70	4.20	-56.80
northdakot	soybeans	79.92	46.33	-7.14
northdakot	HRSW	21.80	6.90	-19.00
northdakot	HRWW	21.80	6.90	-19.00
northdakot	DURW	21.80	6.90	-19.00
northdakot	barley	87.20	27.60	-76.00
northdakot	oats	87.20	27.60	-76.00
northdakot	silage	52.70	4.20	-56.80
northdakot	hay	13.21	33.84	-25.14
northdakot	SUGARBEET	13.21	33.84	-25.14
northdakot	POTATOES	10.90	-0.80	-3.80
northdakot	PASTURE	32.17	0.00	0.00
OHIONW	corn	6.20	-5.80	-71.30
OHIONW	soybeans	92.72	31.84	-41.41
OHIONW	SOFT	23.60	8.50	-48.00
OHIONW	oats	94.40	0.00	0.00
OHIONW	silage	6.20	0.00	0.00
OHIONW	hay	2.46	21.50	-34.88
OHIONW	SUGARBEET	2.46	21.50	-34.88
OHIONW	POTATOES	14.30	-8.60	-12.30
OHIONW	tomatofrsh	21.14	12.11	-58.62
OHIONW	tomatoproc	21.14	12.11	-58.62
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	6.20	-5.80	-71.30
OHIOS	soybeans	92.72	31.84	-41.41
OHIOS	SOFT	23.60	8.50	-48.00
OHIOS	oats	94.40	0.00	0.00
OHIOS	silage	6.20	0.00	0.00
OHIOS	hay	2.46	21.50	-34.88
OHIOS	SUGARBEET	2.46	0.00	0.00
OHIOS	tomatofrsh	21.14	12.11	-58.62
OHIOS	tomatoproc	21.14	12.11	-58.62
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	6.20	0.00	0.00
OHIONE	soybeans	92.72	31.84	-41.41
OHIONE	SOFT	23.60	0.00	0.00
OHIONE	oats	94.40	34.00	-192.00
OHIONE	silage	6.20	0.00	0.00
OHIONE	hay	2.46	21.50	-34.88
OHIONE	SUGARBEET	2.46	0.00	0.00
OHIONE	tomatofrsh	21.14	12.11	-58.62

OHIONE	tomatoproc	21.14	12.11	-58.62
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	159.33	123.56	59.81
oklahoma	corn	21.90	-3.90	-53.40
oklahoma	soybeans	67.40	25.40	-19.71
oklahoma	HRWW	28.00	13.60	-35.30
oklahoma	sorghum	48.03	-13.35	-31.31
oklahoma	barley	112.00	0.00	0.00
oklahoma	oats	112.00	54.40	-141.20
oklahoma	silage	21.90	-3.90	-53.40
oklahoma	hay	11.49	17.34	-38.16
oklahoma	PASTURE	33.27	0.00	0.00
oregon	corn	34.40	-3.20	-59.80
oregon	HRSW	131.10	11.75	-21.50
oregon	HRWW	131.10	11.75	-21.50
oregon	barley	262.20	23.50	-43.00
oregon	oats	262.20	23.50	-43.00
oregon	silage	34.40	-3.20	-59.80
oregon	hay	40.08	85.61	13.00
oregon	SUGARBEET	0.00	85.61	13.00
oregon	POTATOES	7.60	-12.25	12.65
oregon	PASTURE	74.00	0.00	0.00
pennsylvan	corn	6.20	-5.80	-71.30
pennsylvan	soybeans	41.97	0.00	0.00
pennsylvan	SOFT	23.60	8.50	-48.00
pennsylvan	sorghum	8.73	0.00	0.00
pennsylvan	barley	23.60	0.00	0.00
pennsylvan	oats	23.60	0.00	0.00
pennsylvan	silage	6.20	-5.80	-71.30
pennsylvan	hay	11.74	32.32	-60.45
pennsylvan	POTATOES	21.90	-7.80	-16.70
pennsylvan	tomatofrsh	42.16	40.93	-49.21
pennsylvan	tomatoproc	42.16	40.93	-49.21
pennsylvan	PASTURE	28.97	0.00	0.00
rhodeislan	hay	11.74	32.32	-60.45
rhodeislan	POTATOES	21.90	-7.80	-16.70
rhodeislan	PASTURE	28.97	0.00	0.00
southcarol	cotton	80.96	87.56	59.81
southcarol	corn	-0.60	-1.90	-57.50
southcarol	soybeans	38.32	14.67	-13.11
southcarol	SOFT	17.30	8.90	-44.90

southcarol	sorghum	13.03	-8.53	-34.76
southcarol	barley	17.30	0.00	0.00
southcarol	oats	17.30	0.00	0.00
southcarol	silage	-0.60	-1.90	-57.50
southcarol	hay	-12.63	-9.04	-23.92
southcarol	tomatofrsh	19.37	12.72	6.96
southcarol	PASTURE	58.75	0.00	0.00
southdakot	corn	34.40	-3.20	-59.80
southdakot	soybeans	79.92	46.33	-7.14
southdakot	HRSW	47.30	7.10	-28.90
southdakot	HRWW	47.30	7.10	-28.90
southdakot	DURW	47.30	7.10	-28.90
southdakot	sorghum	121.74	19.91	-40.45
southdakot	barley	189.20	28.40	-115.60
southdakot	oats	189.20	28.40	-115.60
southdakot	silage	34.40	-3.20	-59.80
southdakot	hay	20.57	23.88	-40.82
southdakot	POTATOES	10.90	-0.80	-3.80
southdakot	PASTURE	35.48	0.00	0.00
tennessee	cotton	71.15	87.56	59.81
tennessee	corn	-0.60	-1.90	-57.50
tennessee	soybeans	82.12	21.07	-24.22
tennessee	SOFT	23.60	0.00	0.00
tennessee	sorghum	45.93	0.00	0.00
tennessee	oats	23.60	0.00	0.00
tennessee	silage	-0.60	0.00	0.00
tennessee	hay	2.19	17.81	-45.13
tennessee	POTATOES	21.90	0.00	0.00
tennessee	tomatofrsh	24.40	17.65	5.04
tennessee	PASTURE	17.39	0.00	0.00
TXHIPLAINS	cotton	73.73	65.71	59.81
TXHIPLAINS	corn	21.90	-3.90	-53.40
TXHIPLAINS	soybeans	67.40	25.40	-19.71
TXHIPLAINS	HRWW	34.90	18.60	-17.50
TXHIPLAINS	sorghum	89.94	-8.51	-32.05
TXHIPLAINS	barley	139.60	74.40	-70.00
TXHIPLAINS	oats	139.60	74.40	-70.00
TXHIPLAINS	silage	21.90	-3.90	-53.40
TXHIPLAINS	hay	21.06	8.53	-28.32
TXHIPLAINS	SUGARBEET	21.06	8.53	-28.32
TXHIPLAINS	POTATOES	-5.60	-7.80	8.40



TXHIPLAINS	PASTURE	39.02	0.00	0.00
TXROLINGPL	cotton	123.55	91.88	59.81
TXROLINGPL	corn	21.90	-3.90	-53.40
TXROLINGPL	HRWW	34.90	18.60	-17.50
TXROLINGPL	sorghum	89.94	-8.51	-32.05
TXROLINGPL	barley	139.60	0.00	0.00
TXROLINGPL	oats	139.60	74.40	-70.00
TXROLINGPL	silage	21.90	-3.90	-53.40
TXROLINGPL	hay	21.06	8.53	-28.32
TXROLINGPL	POTATOES	-5.60	0.00	0.00
TXROLINGPL	PASTURE	39.02	0.00	0.00
TXCNTBLACK	cotton	79.50	76.04	59.81
TXCNTBLACK	corn	21.90	-3.90	-53.40
TXCNTBLACK	soybeans	67.40	0.00	0.00
TXCNTBLACK	HRWW	34.90	18.60	-17.50
TXCNTBLACK	sorghum	89.94	-8.51	-32.05
TXCNTBLACK	rice	0.00	8.79	-0.43
TXCNTBLACK	barley	34.90	0.00	0.00
TXCNTBLACK	oats	34.90	18.60	-17.50
TXCNTBLACK	silage	21.90	-3.90	-53.40
TXCNTBLACK	hay	-18.91	-8.24	-4.06
TXCNTBLACK	PASTURE	34.57	0.00	0.00
TXEAST	cotton	75.24	55.40	59.81
TXEAST	corn	-0.60	-1.90	-57.50
TXEAST	soybeans	47.06	19.73	-7.20
TXEAST	HRWW	34.90	18.60	-17.50
TXEAST	sorghum	89.94	-8.51	-32.05
TXEAST	rice	0.00	8.79	-0.43
TXEAST	oats	34.90	18.60	-17.50
TXEAST	silage	-0.60	0.00	0.00
TXEAST	hay	-18.91	-8.24	-4.06
TXEAST	tomatofrsh	3.36	-2.08	7.55
TXEAST	PASTURE	34.57	0.00	0.00
TXEDPLAT	cotton	48.56	80.17	59.81
TXEDPLAT	corn	31.20	-4.40	-47.30
TXEDPLAT	soybeans	47.06	0.00	0.00
TXEDPLAT	HRWW	34.90	18.60	-17.50
TXEDPLAT	sorghum	89.94	-8.51	-32.05
TXEDPLAT	barley	34.90	0.00	0.00
TXEDPLAT	oats	34.90	18.60	-17.50
TXEDPLAT	silage	31.20	-4.40	-47.30

TXEDPLAT	hay	-5.19	-16.33	0.17
TXEDPLAT	tomatofrsh	0.00	-2.08	7.55
TXEDPLAT	PASTURE	47.29	0.00	0.00
TXCOASTBE	cotton	19.54	28.53	59.81
TXCOASTBE	corn	-0.60	-1.90	-57.50
TXCOASTBE	soybeans	47.06	19.73	-7.20
TXCOASTBE	HRWW	34.90	0.00	0.00
TXCOASTBE	sorghum	89.94	-8.51	-32.05
TXCOASTBE	rice	0.00	8.79	-0.43
TXCOASTBE	oats	34.90	18.60	-17.50
TXCOASTBE	hay	-5.19	-16.33	0.17
TXCOASTBE	tomatofrsh	3.36	0.00	0.00
TXCOASTBE	PASTURE	47.29	0.00	0.00
TXSOUTH	cotton	-1.56	30.32	59.81
TXSOUTH	corn	31.20	-4.40	-47.30
TXSOUTH	soybeans	0.00	19.73	-7.20
TXSOUTH	HRWW	34.90	18.60	-17.50
TXSOUTH	sorghum	89.94	-8.51	-32.05
TXSOUTH	oats	34.90	18.60	-17.50
TXSOUTH	silage	31.20	-4.40	-47.30
TXSOUTH	hay	-5.19	-16.33	0.17
TXSOUTH	POTATOES	0.00	-7.80	8.40
TXSOUTH	tomatofrsh	3.36	-2.08	7.55
TXSOUTH	orangefrsh	0.00	103.60	13.80
TXSOUTH	orangeproc	0.00	103.60	13.80
TXSOUTH	grpfrtfrsh	0.00	103.60	13.80
TXSOUTH	grpfrtproc	0.00	103.60	13.80
TXSOUTH	PASTURE	47.29	0.00	0.00
TXTRANSPEC	cotton	67.26	119.70	59.81
TXTRANSPEC	corn	21.90	0.00	0.00
TXTRANSPEC	HRWW	34.90	18.60	-17.50
TXTRANSPEC	sorghum	0.00	-12.84	-18.48
TXTRANSPEC	barley	0.00	18.60	-17.50
TXTRANSPEC	oats	0.00	18.60	-17.50
TXTRANSPEC	hay	14.95	-16.53	-17.99
TXTRANSPEC	PASTURE	14.32	0.00	0.00
utah	corn	0.00	-3.20	-59.80
utah	HRSW	38.00	-7.30	-17.20
utah	HRWW	38.00	-7.30	-17.20
utah	barley	76.00	-14.60	-34.40
utah	oats	76.00	-14.60	-34.40

utah	silage	34.40	-3.20	-59.80
utah	hay	75.93	28.55	0.24
utah	SUGARBEET	75.93	0.00	0.00
utah	POTATOES	0.00	-34.30	13.70
utah	PASTURE	84.04	0.00	0.00
vermont	hay	11.74	32.32	-60.45
vermont	PASTURE	28.97	0.00	0.00
virginia	cotton	116.25	87.56	59.81
virginia	corn	6.20	-5.80	-71.30
virginia	soybeans	41.97	20.49	-12.90
virginia	SOFT	23.60	8.50	-48.00
virginia	sorghum	8.73	0.00	0.00
virginia	barley	23.60	8.50	-48.00
virginia	oats	23.60	0.00	0.00
virginia	silage	6.20	-5.80	-71.30
virginia	hay	-0.44	18.25	-55.97
virginia	POTATOES	21.90	-7.80	-16.70
virginia	tomatofrsh	24.40	17.65	5.04
virginia	tomatoproc	24.40	17.65	5.04
virginia	PASTURE	19.86	0.00	0.00
washington	corn	34.40	-3.20	-59.80
washington	HRSW	131.10	11.75	-21.50
washington	HRWW	131.10	11.75	-21.50
washington	barley	524.40	47.00	-86.00
washington	oats	524.40	47.00	-86.00
washington	silage	34.40	-3.20	-59.80
washington	hay	40.67	85.77	13.97
washington	SUGARBEET	0.00	85.77	13.97
washington	POTATOES	-13.50	-3.40	18.70
washington	PASTURE	81.73	0.00	0.00
westvirgin	corn	-0.60	0.00	0.00
westvirgin	SOFT	23.60	0.00	0.00
westvirgin	barley	23.60	0.00	0.00
westvirgin	oats	23.60	0.00	0.00
westvirgin	silage	-0.60	0.00	0.00
westvirgin	hay	2.19	17.81	-45.13
westvirgin	PASTURE	17.39	0.00	0.00
wisconsin	corn	7.40	5.50	-74.10
wisconsin	soybeans	84.47	39.78	-36.00
wisconsin	silage	7.40	5.50	-74.10
wisconsin	hay	17.86	34.11	-70.05

wisconsin	POTATOES	26.20	1.50	-13.80
wisconsin	PASTURE	36.79	0.00	0.00
wyoming	corn	34.40	-3.20	-59.80
wyoming	HRSW	47.30	7.10	-28.90
wyoming	HRWW	47.30	7.10	-28.90
wyoming	barley	94.60	14.20	-57.80
wyoming	oats	94.60	14.20	-57.80
wyoming	silage	34.40	-3.20	-59.80
wyoming	hay	23.81	28.54	-53.50
wyoming	SUGARBEET	0.00	28.54	-53.50
wyoming	POTATOES	0.00	-0.80	-3.80
wyoming	PASTURE	46.36	0.00	0.00

Table D1.5 Full data set for CSIRO Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	64.79	99.93	48.00
alabama	corn	4.49	-11.21	-15.98
alabama	soybeans	-20.31	27.35	43.93
alabama	SOFT	-20.46	0.00	0.00
alabama	sorghum	-23.40	0.00	0.00
alabama	oats	-81.84	0.00	0.00
alabama	silage	4.49	0.00	0.00
alabama	hay	-33.40	-11.23	44.44
alabama	POTATOES	9.10	-10.80	-9.48
alabama	tomatofrsh	-4.51	-13.05	8.96
alabama	PASTURE	14.81	0.00	0.00
arizona	cotton	0.00	135.64	48.00
arizona	corn	47.00	-22.02	23.01
arizona	HRWW	-83.81	0.65	1.13
arizona	DURW	-83.81	0.65	1.13
arizona	sorghum	0.00	-4.85	-4.62
arizona	barley	0.00	1.30	2.26
arizona	silage	47.00	-22.02	23.01
arizona	hay	59.32	46.57	7.98
arizona	SUGARBEET	59.32	0.00	0.00
arizona	POTATOES	0.00	-22.05	-5.25
arizona	orangefrsh	0.00	90.75	3.52
arizona	orangeproc	0.00	90.75	3.52
arizona	grpfrtfrsh	0.00	90.75	3.52
arizona	grpfrtproc	0.00	90.75	3.52
arizona	PASTURE	20.34	0.00	0.00
arkansas	cotton	69.81	99.93	48.00
arkansas	corn	7.36	-13.90	-11.90
arkansas	soybeans	-46.50	19.11	53.67
arkansas	SOFT	-15.94	-18.00	-36.84
arkansas	sorghum	-41.55	-12.29	28.73
arkansas	rice	0.00	-10.22	21.26
arkansas	oats	-63.76	-72.00	-147.36
arkansas	silage	7.36	-13.90	-11.90
arkansas	hay	-19.96	-3.92	23.75
arkansas	tomatofrsh	-4.51	-13.05	8.96
arkansas	PASTURE	4.84	0.00	0.00

CALIFORNIN	cotton	47.21	66.17	48.00
CALIFORNIN	corn	-3.86	-33.25	0.70
CALIFORNIN	HRWW	131.12	19.63	-37.65
CALIFORNIN	sorghum	-53.92	-4.85	-4.62
CALIFORNIN	rice	0.00	-16.75	1.73
CALIFORNIN	barley	131.12	19.63	-37.65
CALIFORNIN	oats	131.12	19.63	-37.65
CALIFORNIN	silage	-3.86	-33.25	0.70
CALIFORNIN	hay	88.44	44.98	4.07
CALIFORNIN	SUGARBEET	0.00	44.98	4.07
CALIFORNIN	POTATOES	0.00	-7.14	6.76
CALIFORNIN	tomatofrsh	0.00	-13.92	-0.13
CALIFORNIN	tomatoproc	0.00	-13.92	-0.13
CALIFORNIN	orangefrsh	0.00	64.33	-36.55
CALIFORNIN	orangeproc	0.00	64.33	-36.55
CALIFORNIN	grpfrtfrsh	0.00	64.33	-36.55
CALIFORNIN	grpfrtproc	0.00	64.33	-36.55
CALIFORNIN	PASTURE	76.13	0.00	0.00
CALIFORNIS	cotton	0.00	66.17	48.00
CALIFORNIS	corn	-3.86	-33.25	0.70
CALIFORNIS	DURW	374.94	0.39	-36.79
CALIFORNIS	sorghum	-53.92	0.00	0.00
CALIFORNIS	rice	-16.75	0.00	0.00
CALIFORNIS	barley	374.94	0.39	-36.79
CALIFORNIS	oats	374.94	0.39	-36.79
CALIFORNIS	silage	-3.86	-33.25	0.70
CALIFORNIS	hay	98.22	135.39	16.39
CALIFORNIS	SUGARBEET	0.00	135.39	16.39
CALIFORNIS	POTATOES	2.19	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-13.92	-0.13
CALIFORNIS	tomatoproc	0.00	-13.92	-0.13
CALIFORNIS	orangefrsh	0.00	42.63	-4.65
CALIFORNIS	orangeproc	0.00	42.63	-4.65
CALIFORNIS	grpfrtfrsh	0.00	42.63	-4.65
CALIFORNIS	grpfrtproc	0.00	42.63	-4.65
CALIFORNIS	PASTURE	113.37	0.00	0.00
colorado	corn	47.00	687.18	17.29
colorado	HRSW	-5.67	-3.00	8.63
colorado	HRWW	-5.67	-3.00	8.63
colorado	sorghum	266.25	266.15	-6.21
colorado	barley	-22.68	-12.00	34.52

colorado	oats	-22.68	-12.00	34.52
colorado	silage	47.00	687.18	17.29
colorado	hay	18.04	49.30	43.66
colorado	SUGARBEET	0.00	49.30	43.66
colorado	POTATOES	0.00	-22.05	-5.25
colorado	PASTURE	7.62	0.00	0.00
conn	hay	2.32	0.00	0.00
conn	POTATOES	9.10	0.00	0.00
conn	PASTURE	16.47	0.00	0.00
delaware	corn	-11.69	-15.14	-4.88
delaware	soybeans	2.81	42.08	32.28
delaware	SOFT	5.96	-5.84	-49.00
delaware	barley	23.84	-23.36	-196.00
delaware	silage	-11.69	0.00	0.00
delaware	hay	2.32	0.00	0.00
delaware	POTATOES	9.10	-10.80	-9.48
delaware	tomatoproc	30.58	30.50	-19.05
delaware	PASTURE	16.47	0.00	0.00
florida	cotton	57.05	99.93	48.00
florida	corn	-1.35	-9.41	-7.66
florida	soybeans	2.43	33.04	45.68
florida	SOFT	-17.49	-19.87	5.56
florida	oats	-17.49	0.00	0.00
florida	silage	-1.35	-9.41	-7.66
florida	hay	-29.12	-22.96	58.84
florida	tomatofrsh	-20.19	-17.62	14.05
florida	orangefrsh	0.00	51.31	138.56
florida	orangeproc	0.00	51.31	138.56
florida	grpfrtfrsh	0.00	51.31	138.56
florida	grpfrtproc	0.00	51.31	138.56
florida	PASTURE	2.71	0.00	0.00
georgia	cotton	70.66	99.93	48.00
georgia	corn	-2.88	-10.70	-12.82
georgia	soybeans	-16.44	30.02	44.55
georgia	SOFT	-17.49	-19.87	5.56
georgia	sorghum	-20.21	-5.71	18.36
georgia	oats	-69.96	-79.48	22.24
georgia	silage	-2.88	-10.70	-12.82
georgia	hay	-39.60	-13.42	45.65
georgia	tomatofrsh	-4.51	-13.05	8.96
georgia	PASTURE	7.32	0.00	0.00

idaho	corn	-3.86	-9.20	0.80
idaho	HRSW	76.10	7.80	-22.24
idaho	HRWW	76.10	7.80	-22.24
idaho	barley	304.40	31.20	-88.96
idaho	oats	304.40	31.20	-88.96
idaho	silage	0.00	-9.20	0.80
idaho	hay	54.90	91.40	29.35
idaho	SUGARBEET	0.00	91.40	29.35
idaho	POTATOES	-18.27	-22.80	6.70
idaho	PASTURE	77.32	0.00	0.00
ILLINOISN	corn	-4.33	-16.97	-18.94
ILLINOISN	soybeans	27.51	31.67	20.28
ILLINOISN	SOFT	1.72	1.43	-50.85
ILLINOISN	sorghum	41.53	0.00	0.00
ILLINOISN	oats	6.88	5.72	-203.40
ILLINOISN	silage	-4.33	-16.97	-18.94
ILLINOISN	hay	32.91	44.78	-22.04
ILLINOISN	POTATOES	-14.72	0.00	0.00
ILLINOISN	PASTURE	21.37	0.00	0.00
ILLINOISS	corn	8.75	-18.84	-17.11
ILLINOISS	soybeans	3.18	23.74	19.50
ILLINOISS	SOFT	-15.50	-15.50	-66.67
ILLINOISS	sorghum	28.87	13.15	-10.56
ILLINOISS	oats	-62.00	0.00	0.00
ILLINOISS	silage	8.75	0.00	0.00
ILLINOISS	hay	32.91	44.78	-22.04
ILLINOISS	PASTURE	21.37	0.00	0.00
INDIANAN	corn	-10.51	-18.21	-19.01
INDIANAN	soybeans	19.56	31.56	16.99
INDIANAN	SOFT	-2.95	-2.95	-71.87
INDIANAN	sorghum	41.53	0.00	0.00
INDIANAN	oats	-11.80	0.00	0.00
INDIANAN	silage	-10.51	-18.21	-19.01
INDIANAN	hay	22.09	33.32	-3.28
INDIANAN	POTATOES	-14.72	-25.35	-4.83
INDIANAN	tomatofrsh	1.25	-4.64	-42.99
INDIANAN	tomatoproc	1.25	-4.64	-42.99
INDIANAN	PASTURE	13.59	0.00	0.00
INDIANAS	corn	-16.35	-17.76	-12.82
INDIANAS	soybeans	2.08	30.02	66.94
INDIANAS	SOFT	-13.13	-13.13	-90.91



INDIANAS	sorghum	28.87	0.00	0.00
INDIANAS	oats	-52.52	0.00	0.00
INDIANAS	silage	-16.35	0.00	0.00
INDIANAS	hay	22.09	33.32	-3.28
INDIANAS	tomatofrsh	1.25	-4.64	-42.99
INDIANAS	tomatoproc	1.25	-4.64	-42.99
INDIANAS	PASTURE	13.59	0.00	0.00
IOWAW	corn	-1.56	-22.95	-28.66
IOWAW	soybeans	66.06	55.70	5.10
IOWAW	SOFT	12.14	0.00	0.00
IOWAW	sorghum	33.47	0.00	0.00
IOWAW	oats	48.56	0.00	0.00
IOWAW	silage	-1.56	0.00	0.00
IOWAW	hay	16.35	30.95	-39.58
IOWAW	PASTURE	22.61	0.00	0.00
IOWACENT	corn	-14.94	-19.68	-32.03
IOWACENT	soybeans	42.76	47.08	7.63
IOWACENT	SOFT	11.76	0.00	0.00
IOWACENT	sorghum	29.93	0.00	0.00
IOWACENT	oats	47.04	44.32	-121.96
IOWACENT	silage	-14.94	0.00	0.00
IOWACENT	hay	16.35	30.95	-39.58
IOWACENT	PASTURE	22.61	0.00	0.00
IOWANE	corn	-13.39	-19.71	-25.60
IOWANE	soybeans	51.78	50.76	9.84
IOWANE	SOFT	-1.02	0.00	0.00
IOWANE	sorghum	24.35	0.00	0.00
IOWANE	oats	-4.08	0.00	0.00
IOWANE	silage	-13.39	0.00	0.00
IOWANE	hay	16.35	30.95	-39.58
IOWANE	POTATOES	15.00	-7.55	-11.45
IOWANE	PASTURE	22.61	0.00	0.00
IOWAS	corn	-4.83	-17.15	-16.67
IOWAS	soybeans	3.79	48.38	42.94
IOWAS	SOFT	-1.22	0.00	0.00
IOWAS	sorghum	42.40	0.00	0.00
IOWAS	oats	-4.88	0.00	0.00
IOWAS	silage	-4.83	0.00	0.00
IOWAS	hay	16.35	30.95	-39.58
IOWAS	PASTURE	22.61	0.00	0.00
kansas	corn	55.12	-14.33	-2.74

kansas	soybeans	14.20	29.27	28.07
kansas	HRWW	52.24	-3.47	-20.13
kansas	sorghum	45.48	25.87	9.73
kansas	barley	208.96	-13.88	-80.52
kansas	oats	208.96	-13.88	-80.52
kansas	silage	55.12	-14.33	-2.74
kansas	hay	3.07	18.68	10.47
kansas	SUGARBEET	3.07	0.00	0.00
kansas	PASTURE	6.11	0.00	0.00
kentucky	corn	-14.00	-14.01	-2.15
kentucky	soybeans	26.90	40.14	53.92
kentucky	SOFT	-15.38	0.00	0.00
kentucky	sorghum	-16.37	0.00	0.00
kentucky	barley	-61.52	0.00	0.00
kentucky	oats	-61.52	0.00	0.00
kentucky	silage	-14.00	0.00	0.00
kentucky	hay	13.29	22.38	5.11
kentucky	PASTURE	9.98	0.00	0.00
louisiana	cotton	45.63	99.93	48.00
louisiana	corn	1.05	-9.96	-16.67
louisiana	soybeans	-8.28	20.95	50.26
louisiana	SOFT	-23.42	-23.16	79.69
louisiana	sorghum	-21.95	-11.61	22.83
louisiana	rice	0.00	-16.49	11.79
louisiana	silage	1.05	0.00	0.00
louisiana	hay	-30.67	-14.77	12.88
louisiana	SUGARCANE	-16.49	-16.49	11.79
louisiana	tomatofrsh	-4.51	-13.05	8.96
louisiana	PASTURE	4.84	0.00	0.00
maine	hay	-4.34	28.83	7.47
maine	POTATOES	9.80	3.88	3.08
maine	PASTURE	13.57	0.00	0.00
maryland	corn	-11.69	-15.14	-4.88
maryland	soybeans	2.81	42.08	32.28
maryland	SOFT	5.96	-5.84	-49.00
maryland	barley	23.84	-23.36	-196.00
maryland	oats	23.84	0.00	0.00
maryland	silage	-11.69	-15.14	-4.88
maryland	hay	-9.71	6.31	-42.75
maryland	POTATOES	9.10	-10.80	-9.48
maryland	tomatofrsh	11.66	0.63	-13.87

maryland	tomatoproc	11.66	0.63	-13.87
maryland	PASTURE	8.77	0.00	0.00
mass	hay	-4.34	28.83	7.47
mass	POTATOES	9.80	0.00	0.00
mass	tomatofrsh	30.58	30.50	-19.05
mass	PASTURE	13.57	0.00	0.00
michigan	corn	-4.93	-17.98	-31.17
michigan	soybeans	64.05	51.60	-1.46
michigan	SOFT	-9.27	-18.95	-60.38
michigan	barley	-37.08	0.00	0.00
michigan	oats	-37.08	-75.80	-241.52
michigan	silage	-4.93	-17.98	-31.17
michigan	hay	27.14	48.02	3.66
michigan	SUGARBEET	27.14	48.02	3.66
michigan	POTATOES	20.33	-8.45	-7.55
michigan	tomatofrsh	49.03	41.09	-11.51
michigan	tomatoproc	49.03	41.09	-11.51
michigan	PASTURE	26.06	0.00	0.00
minnesota	corn	-2.29	-15.10	-38.61
minnesota	soybeans	87.11	71.15	-9.60
minnesota	HRSW	11.39	15.08	-9.86
minnesota	HRWW	11.39	15.08	-9.86
minnesota	DURW	11.39	15.08	-9.86
minnesota	barley	45.56	60.32	-39.44
minnesota	oats	45.56	60.32	-39.44
minnesota	silage	-2.29	-15.10	-38.61
minnesota	hay	7.33	49.45	26.66
minnesota	SUGARBEET	7.33	49.45	26.66
minnesota	POTATOES	15.00	-7.55	-11.45
minnesota	PASTURE	14.65	0.00	0.00
mississippi	cotton	77.53	99.93	48.00
mississippi	corn	1.61	-12.39	-18.27
mississippi	soybeans	-10.53	27.03	38.83
mississippi	SOFT	-20.92	-20.97	7.46
mississippi	sorghum	-22.80	-15.26	10.53
mississippi	rice	0.00	-10.94	9.13
mississippi	silage	1.61	-12.39	-18.27
mississippi	hay	-33.40	-11.23	44.44
mississippi	PASTURE	14.81	0.00	0.00
missouri	cotton	63.86	53.10	48.00
missouri	corn	20.75	-16.37	-17.98

missouri	soybeans	7.92	35.22	35.34
missouri	SOFT	-11.24	-14.81	-50.00
missouri	sorghum	42.17	21.17	-10.04
missouri	rice	0.00	-5.65	22.01
missouri	oats	-44.96	0.00	0.00
missouri	silage	20.75	-16.37	-17.98
missouri	hay	26.92	25.11	-17.76
missouri	PASTURE	28.84	0.00	0.00
montana	corn	0.00	-5.83	-35.06
montana	HRSW	55.70	7.31	-44.41
montana	HRWW	55.70	7.31	-44.41
montana	DURW	55.70	7.31	-44.41
montana	barley	222.80	29.24	-177.64
montana	oats	222.80	29.24	-177.64
montana	silage	47.00	-5.83	-35.06
montana	hay	14.39	36.31	19.96
montana	SUGARBEET	0.00	36.31	19.96
montana	POTATOES	-18.27	-22.80	6.70
montana	PASTURE	7.45	0.00	0.00
nebraska	corn	47.00	-14.04	-20.09
nebraska	soybeans	20.45	37.41	31.34
nebraska	HRWW	18.31	-1.46	-50.98
nebraska	sorghum	68.11	39.98	-12.66
nebraska	barley	73.24	-5.84	-203.92
nebraska	oats	73.24	-5.84	-203.92
nebraska	silage	47.00	-14.04	-20.09
nebraska	hay	15.90	28.21	19.79
nebraska	SUGARBEET	0.00	28.21	19.79
nebraska	POTATOES	-31.18	-23.33	6.98
nebraska	PASTURE	7.56	0.00	0.00
nevada	HRSW	0.00	14.13	-51.91
nevada	HRWW	0.00	14.13	-51.91
nevada	barley	0.00	28.26	-103.82
nevada	hay	0.00	22.14	1.64
nevada	POTATOES	0.00	-22.80	6.70
nevada	PASTURE	65.15	0.00	0.00
newhampshi	hay	2.32	0.00	0.00
newhampshi	PASTURE	16.47	0.00	0.00
newjersey	corn	-22.65	-25.31	-14.71
newjersey	soybeans	48.19	42.58	9.09
newjersey	SOFT	6.58	3.13	-38.95

newjersey	barley	26.32	0.00	0.00
newjersey	oats	26.32	0.00	0.00
newjersey	silage	-22.65	0.00	0.00
newjersey	hay	2.32	22.26	-15.07
newjersey	POTATOES	9.10	-10.80	-9.48
newjersey	tomatofrsh	30.58	30.50	-19.05
newjersey	tomatoproc	30.58	30.50	-19.05
newjersey	PASTURE	16.47	0.00	0.00
newmexico	cotton	50.80	36.40	48.00
newmexico	corn	47.00	-11.53	13.26
newmexico	HRWW	-83.81	0.65	1.13
newmexico	sorghum	-53.92	-4.85	-4.62
newmexico	barley	-335.24	2.60	4.52
newmexico	silage	47.00	-11.53	13.26
newmexico	hay	27.77	31.37	21.79
newmexico	SUGARBEET	27.77	0.00	0.00
newmexico	POTATOES	0.00	-22.05	-5.25
newmexico	PASTURE	7.62	0.00	0.00
newyork	corn	-0.29	-8.65	-44.14
newyork	soybeans	54.16	0.00	0.00
newyork	SOFT	-12.19	0.00	0.00
newyork	oats	-48.76	-63.80	-282.92
newyork	silage	-0.29	-8.65	-44.14
newyork	hay	2.32	22.26	-15.07
newyork	POTATOES	9.10	-10.80	-9.48
newyork	tomatofrsh	30.58	30.50	-19.05
newyork	tomatoproc	30.58	30.50	-19.05
newyork	PASTURE	16.47	0.00	0.00
northcarol	cotton	57.61	55.58	48.00
northcarol	corn	1.09	-7.23	-1.55
northcarol	soybeans	-19.84	42.51	63.64
northcarol	SOFT	-17.17	-19.34	-35.45
northcarol	sorghum	-11.70	0.00	0.00
northcarol	barley	-68.68	0.00	0.00
northcarol	oats	-68.68	-77.36	-141.80
northcarol	silage	1.09	-7.23	-1.55
northcarol	hay	-9.71	6.31	-42.75
northcarol	POTATOES	9.10	-10.80	-9.48
northcarol	tomatofrsh	11.66	0.63	-13.87
northcarol	PASTURE	8.77	0.00	0.00
northdakot	corn	110.52	-4.08	-29.57

northdakot	soybeans	188.71	69.74	-10.38
northdakot	HRSW	18.19	13.25	-13.14
northdakot	HRWW	18.19	13.25	-13.14
northdakot	DURW	18.19	13.25	-13.14
northdakot	barley	72.76	53.00	-52.56
northdakot	oats	72.76	53.00	-52.56
northdakot	silage	110.52	-4.08	-29.57
northdakot	hay	-1.51	44.32	32.16
northdakot	SUGARBEET	-1.51	44.32	32.16
northdakot	POTATOES	-5.23	-7.30	4.23
northdakot	PASTURE	18.82	0.00	0.00
OHIONW	corn	-10.15	-17.71	-14.81
OHIONW	soybeans	22.25	33.37	19.87
OHIONW	SOFT	-2.31	-2.52	-64.86
OHIONW	oats	-9.24	0.00	0.00
OHIONW	silage	-10.15	0.00	0.00
OHIONW	hay	19.44	33.79	8.74
OHIONW	SUGARBEET	19.44	33.79	8.74
OHIONW	POTATOES	-14.72	-25.35	-4.83
OHIONW	tomatofrsh	6.83	-0.31	-47.70
OHIONW	tomatoproc	6.83	-0.31	-47.70
OHIONW	PASTURE	10.87	0.00	0.00
OHIOS	corn	-10.63	-14.03	-16.67
OHIOS	soybeans	60.47	65.10	24.56
OHIOS	SOFT	-13.01	-13.01	-74.51
OHIOS	oats	-52.04	0.00	0.00
OHIOS	silage	-10.63	0.00	0.00
OHIOS	hay	19.44	33.79	8.74
OHIOS	SUGARBEET	19.44	0.00	0.00
OHIOS	tomatofrsh	6.83	-0.31	-47.70
OHIOS	tomatoproc	6.83	-0.31	-47.70
OHIOS	PASTURE	10.87	0.00	0.00
OHIONE	corn	-5.83	0.00	0.00
OHIONE	soybeans	39.72	56.24	25.88
OHIONE	SOFT	-10.54	0.00	0.00
OHIONE	oats	-42.16	-42.16	-281.24
OHIONE	silage	-5.83	0.00	0.00
OHIONE	hay	19.44	33.79	8.74
OHIONE	SUGARBEET	19.44	0.00	0.00
OHIONE	tomatofrsh	6.83	-0.31	-47.70
OHIONE	tomatoproc	6.83	-0.31	-47.70

OHIONE	PASTURE	10.87	0.00	0.00
oklahoma	cotton	97.20	96.28	48.00
oklahoma	corn	24.90	-17.65	1.79
oklahoma	soybeans	-43.33	6.90	69.35
oklahoma	HRWW	-1.00	-8.88	-9.44
oklahoma	sorghum	-24.81	-7.72	29.82
oklahoma	barley	-4.00	0.00	0.00
oklahoma	oats	-4.00	-35.52	-37.76
oklahoma	silage	24.90	-17.65	1.79
oklahoma	hay	0.11	11.41	15.76
oklahoma	PASTURE	4.69	0.00	0.00
oregon	corn	-3.86	-1.10	-17.26
oregon	HRSW	131.12	19.63	-37.65
oregon	HRWW	131.12	19.63	-37.65
oregon	barley	524.48	78.52	-150.60
oregon	oats	524.48	78.52	-150.60
oregon	silage	-3.86	-1.10	-17.26
oregon	hay	43.23	90.60	34.74
oregon	SUGARBEET	0.00	90.60	34.74
oregon	POTATOES	2.19	-7.14	6.76
oregon	PASTURE	57.17	0.00	0.00
pennsylvan	corn	2.28	1.56	-50.75
pennsylvan	soybeans	54.16	0.00	0.00
pennsylvan	SOFT	-6.03	-6.03	-88.89
pennsylvan	barley	-24.12	0.00	0.00
pennsylvan	oats	-24.12	0.00	0.00
pennsylvan	silage	2.28	1.56	-50.75
pennsylvan	hay	23.57	41.97	13.39
pennsylvan	POTATOES	9.10	-10.80	-9.48
pennsylvan	tomatofrsh	30.58	30.50	-19.05
pennsylvan	tomatoproc	30.58	30.50	-19.05
pennsylvan	PASTURE	16.47	0.00	0.00
rhodeislan	hay	2.32	22.26	-15.07
rhodeislan	POTATOES	9.10	-10.80	-9.48
rhodeislan	PASTURE	16.47	0.00	0.00
southcarol	cotton	72.75	55.58	48.00
southcarol	corn	-3.62	-9.72	-9.39
southcarol	soybeans	-18.50	29.36	48.98
southcarol	SOFT	-15.61	-18.32	-19.42
southcarol	sorghum	-22.72	-5.80	24.86
southcarol	barley	-62.44	0.00	0.00

southcarol	oats	-62.44	0.00	0.00
southcarol	silage	-3.62	-9.72	-9.39
southcarol	hay	-34.52	-19.04	19.36
southcarol	tomatofrsh	-0.14	-7.45	1.11
southcarol	PASTURE	8.06	0.00	0.00
southdakot	corn	18.31	-15.02	-23.15
southdakot	soybeans	78.68	51.86	2.56
southdakot	HRSW	23.98	18.69	-18.29
southdakot	HRWW	23.98	18.69	-18.29
southdakot	DURW	23.98	18.69	-18.29
southdakot	sorghum	69.57	45.45	-11.30
southdakot	barley	95.92	74.76	-73.16
southdakot	oats	95.92	74.76	-73.16
southdakot	silage	18.31	-15.02	-23.15
southdakot	hay	14.82	34.90	12.82
southdakot	POTATOES	-5.23	-7.30	4.23
southdakot	PASTURE	20.60	0.00	0.00
tennessee	cotton	51.57	55.58	48.00
tennessee	corn	-1.87	-12.73	-18.44
tennessee	soybeans	-11.83	35.10	47.31
tennessee	SOFT	-17.98	0.00	0.00
tennessee	sorghum	-2.31	0.00	0.00
tennessee	oats	-71.92	0.00	0.00
tennessee	silage	-1.87	0.00	0.00
tennessee	hay	-11.39	4.47	37.05
tennessee	POTATOES	9.10	0.00	0.00
tennessee	tomatofrsh	11.66	0.63	-13.87
tennessee	PASTURE	-0.10	0.00	0.00
TXHIPLAINS	cotton	49.66	43.84	48.00
TXHIPLAINS	corn	4.36	-20.34	-8.63
TXHIPLAINS	soybeans	-1.91	28.02	25.06
TXHIPLAINS	HRWW	32.45	-8.88	-9.44
TXHIPLAINS	sorghum	13.32	18.34	-17.82
TXHIPLAINS	barley	129.80	-35.52	-37.76
TXHIPLAINS	oats	129.80	-35.52	-37.76
TXHIPLAINS	silage	4.36	-20.34	-8.63
TXHIPLAINS	hay	172.27	13.10	-15.30
TXHIPLAINS	SUGARBEET	172.27	13.10	-15.30
TXHIPLAINS	POTATOES	-6.13	-22.05	-5.25
TXHIPLAINS	PASTURE	13.95	0.00	0.00
TXROLINGPL	cotton	53.22	70.14	48.00



TXROLINGPL	corn	4.36	-14.83	-1.81
TXROLINGPL	HRWW	2.91	-14.36	17.14
TXROLINGPL	sorghum	46.05	9.66	-13.58
TXROLINGPL	barley	11.64	0.00	0.00
TXROLINGPL	oats	11.64	-57.44	68.56
TXROLINGPL	silage	4.36	-14.83	-1.81
TXROLINGPL	hay	172.27	13.10	-15.30
TXROLINGPL	POTATOES	-6.13	0.00	0.00
TXROLINGPL	PASTURE	13.95	0.00	0.00
TXCNTBLACK	cotton	32.21	58.64	48.00
TXCNTBLACK	corn	36.18	-10.81	-6.22
TXCNTBLACK	soybeans	-81.38	0.00	0.00
TXCNTBLACK	HRWW	-14.77	-21.37	40.20
TXCNTBLACK	sorghum	17.80	7.55	-8.61
TXCNTBLACK	rice	0.00	-16.41	20.72
TXCNTBLACK	barley	-59.08	0.00	0.00
TXCNTBLACK	oats	-59.08	-85.48	160.80
TXCNTBLACK	silage	36.18	-10.81	-6.22
TXCNTBLACK	hay	146.82	1.35	10.09
TXCNTBLACK	PASTURE	17.77	0.00	0.00
TXEAST	cotton	43.54	39.84	48.00
TXEAST	corn	7.50	-7.57	-3.97
TXEAST	soybeans	-10.64	8.18	41.09
TXEAST	HRWW	-14.77	-21.37	40.20
TXEAST	sorghum	1.23	2.74	-12.81
TXEAST	rice	0.00	-17.82	15.94
TXEAST	oats	-14.77	-21.37	40.20
TXEAST	silage	7.50	0.00	0.00
TXEAST	hay	146.82	1.35	10.09
TXEAST	tomatofrsh	-4.51	-13.05	8.96
TXEAST	PASTURE	17.77	0.00	0.00
TXEDPLAT	cotton	27.78	62.11	48.00
TXEDPLAT	corn	-18.01	-18.59	3.87
TXEDPLAT	soybeans	-12.14	0.00	0.00
TXEDPLAT	HRWW	-20.78	-18.43	48.01
TXEDPLAT	sorghum	5.43	1.64	-6.65
TXEDPLAT	barley	-83.12	0.00	0.00
TXEDPLAT	oats	-83.12	-73.72	192.04
TXEDPLAT	silage	-18.01	-18.59	3.87
TXEDPLAT	hay	153.82	-2.80	-5.63
TXEDPLAT	tomatofrsh	0.00	-13.05	8.96

TXEDPLAT	PASTURE	17.03	0.00	0.00
TXCOASTBE	cotton	7.75	25.91	48.00
TXCOASTBE	corn	-18.01	-14.19	3.75
TXCOASTBE	soybeans	-36.95	6.19	52.51
TXCOASTBE	HRWW	-14.77	0.00	0.00
TXCOASTBE	sorghum	-2.11	-3.26	-1.55
TXCOASTBE	rice	0.00	-8.89	12.02
TXCOASTBE	oats	-14.77	-21.37	40.20
TXCOASTBE	hay	153.82	-2.80	-5.63
TXCOASTBE	tomatofrsh	-4.51	0.00	0.00
TXCOASTBE	PASTURE	17.03	0.00	0.00
TXSOUTH	cotton	-1.68	22.77	48.00
TXSOUTH	corn	-18.01	-19.47	24.03
TXSOUTH	soybeans	0.00	-12.50	33.14
TXSOUTH	HRWW	-14.77	-21.37	40.20
TXSOUTH	sorghum	-57.17	-4.30	6.92
TXSOUTH	oats	-14.77	-21.37	40.20
TXSOUTH	silage	-18.01	-19.47	24.03
TXSOUTH	hay	153.82	-2.80	-5.63
TXSOUTH	POTATOES	0.00	-22.05	-5.25
TXSOUTH	tomatofrsh	-4.51	-13.05	8.96
TXSOUTH	orangefrsh	0.00	59.18	1.50
TXSOUTH	orangeproc	0.00	59.18	1.50
TXSOUTH	grpfrtfrsh	0.00	59.18	1.50
TXSOUTH	grpfrtproc	0.00	59.18	1.50
TXSOUTH	PASTURE	17.03	0.00	0.00
TXTRANSPEC	cotton	37.82	91.73	48.00
TXTRANSPEC	corn	4.36	0.00	0.00
TXTRANSPEC	HRWW	-52.63	-17.85	13.88
TXTRANSPEC	sorghum	0.00	6.95	-7.44
TXTRANSPEC	barley	0.00	-71.40	55.52
TXTRANSPEC	oats	0.00	-71.40	55.52
TXTRANSPEC	hay	177.62	9.51	-14.45
TXTRANSPEC	PASTURE	5.37	0.00	0.00
utah	corn	0.00	42.38	16.38
utah	HRSW	374.94	0.39	-36.79
utah	HRWW	374.94	0.39	-36.79
utah	barley	1499.76	1.56	-147.16
utah	oats	1499.76	1.56	-147.16
utah	silage	47.00	42.38	16.38
utah	hay	82.14	34.22	16.55

utah	SUGARBEET	82.14	0.00	0.00
utah	POTATOES	0.00	-22.80	6.70
utah	PASTURE	65.15	0.00	0.00
vermont	hay	2.32	22.26	-15.07
vermont	PASTURE	16.47	0.00	0.00
virginia	cotton	76.64	55.58	48.00
virginia	corn	-16.59	-5.15	16.09
virginia	soybeans	-31.32	52.38	60.57
virginia	SOFT	19.76	-10.72	-37.41
virginia	sorghum	-11.70	0.00	0.00
virginia	barley	79.04	-42.88	-149.64
virginia	oats	79.04	0.00	0.00
virginia	silage	-16.59	-5.15	16.09
virginia	hay	-9.71	6.31	-42.75
virginia	POTATOES	9.10	-10.80	-9.48
virginia	tomatofrsh	11.66	0.63	-13.87
virginia	tomatoproc	11.66	0.63	-13.87
virginia	PASTURE	8.77	0.00	0.00
washington	corn	-3.86	215.21	-6.34
washington	HRSW	54.65	17.64	-47.45
washington	HRWW	54.65	17.64	-47.45
washington	barley	218.60	70.56	-189.80
washington	oats	218.60	70.56	-189.80
washington	silage	-3.86	215.21	-6.34
washington	hay	42.43	86.42	45.28
washington	SUGARBEET	0.00	86.42	45.28
washington	POTATOES	-4.40	0.53	7.63
washington	PASTURE	54.36	0.00	0.00
westvirgin	corn	-8.68	0.00	0.00
westvirgin	SOFT	-7.53	0.00	0.00
westvirgin	barley	-30.12	0.00	0.00
westvirgin	oats	-30.12	0.00	0.00
westvirgin	silage	-8.68	0.00	0.00
westvirgin	hay	2.32	18.42	48.82
westvirgin	PASTURE	-0.10	0.00	0.00
wisconsin	corn	-8.42	-11.40	-25.00
wisconsin	soybeans	67.77	78.74	16.67
wisconsin	HRSW	9.90	8.75	-35.80
wisconsin	HRWW	9.90	8.75	-35.80
wisconsin	barley	39.60	0.00	0.00
wisconsin	oats	39.60	35.00	-143.20

wisconsin	silage	-8.42	-11.40	-25.00
wisconsin	hay	34.47	49.83	5.93
wisconsin	POTATOES	15.00	-7.55	-11.45
wisconsin	PASTURE	28.10	0.00	0.00
wyoming	corn	47.00	3.30	-13.27
wyoming	HRSW	116.87	14.13	-51.91
wyoming	HRWW	116.87	14.13	-51.91
wyoming	barley	467.48	56.52	-207.64
wyoming	oats	467.48	56.52	-207.64
wyoming	silage	47.00	3.30	-13.27
wyoming	hay	18.67	39.57	4.02
wyoming	SUGARBEET	0.00	39.57	4.02
wyoming	POTATOES	0.00	-7.30	4.23
wyoming	PASTURE	31.68	0.00	0.00

Table D1.6 Full data set for REGCM Scenario run for 2060 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	45.70	104.77	48.00
alabama	corn	9.30	-9.07	-13.24
alabama	soybeans	-66.08	17.95	94.86
alabama	SOFT	-20.87	0.00	0.00
alabama	sorghum	-54.08	0.00	0.00
alabama	oats	-83.48	0.00	0.00
alabama	silage	9.30	0.00	0.00
alabama	hay	-33.40	-11.23	44.44
alabama	POTATOES	9.10	-10.80	-9.48
alabama	tomatofrsh	-4.51	-13.05	8.96
alabama	PASTURE	14.81	0.00	0.00
arizona	cotton	0.00	147.42	48.00
arizona	corn	66.74	-1.19	29.94
arizona	HRWW	25.71	-7.96	-7.55
arizona	DURW	25.71	-7.96	-7.55
arizona	sorghum	0.00	-2.43	-0.69
arizona	barley	0.00	-15.92	-15.10
arizona	silage	66.74	-1.19	29.94
arizona	hay	59.32	46.57	7.98
arizona	SUGARBEET	59.32	0.00	0.00
arizona	POTATOES	0.00	-22.05	-5.25
arizona	orangefrsh	0.00	90.75	3.52
arizona	orangeproc	0.00	90.75	3.52
arizona	grpfrtfrsh	0.00	90.75	3.52
arizona	grpfrtproc	0.00	90.75	3.52
arizona	PASTURE	20.34	0.00	0.00
arkansas	cotton	75.62	104.77	48.00
arkansas	corn	12.24	-6.26	-4.76
arkansas	soybeans	-38.68	11.62	54.83
arkansas	SOFT	-11.55	-14.27	-52.63
arkansas	sorghum	-32.49	-16.18	30.22
arkansas	rice	0.00	-12.90	39.08
arkansas	oats	-46.20	-57.08	-210.52
arkansas	silage	12.24	-6.26	-4.76
arkansas	hay	-19.96	-3.92	23.75
arkansas	tomatofrsh	-4.51	-13.05	8.96
arkansas	PASTURE	4.84	0.00	0.00

CALIFORNIN	cotton	27.59	81.15	48.00
CALIFORNIN	corn	2.52	-12.86	8.31
CALIFORNIN	HRWW	115.78	21.44	-34.82
CALIFORNIN	sorghum	22.55	-2.43	-0.69
CALIFORNIN	rice	0.00	-14.34	9.09
CALIFORNIN	barley	115.78	21.44	-34.82
CALIFORNIN	oats	115.78	21.44	-34.82
CALIFORNIN	silage	2.52	-12.86	8.31
CALIFORNIN	hay	88.44	44.98	4.07
CALIFORNIN	SUGARBEET	0.00	44.98	4.07
CALIFORNIN	POTATOES	0.00	-7.14	6.76
CALIFORNIN	tomatofrsh	0.00	-13.92	-0.13
CALIFORNIN	tomatoproc	0.00	-13.92	-0.13
CALIFORNIN	orangefrsh	0.00	64.33	-36.55
CALIFORNIN	orangeproc	0.00	64.33	-36.55
CALIFORNIN	grpfrtfrsh	0.00	64.33	-36.55
CALIFORNIN	grpfrtproc	0.00	64.33	-36.55
CALIFORNIN	PASTURE	76.13	0.00	0.00
CALIFORNIS	cotton	0.00	81.15	48.00
CALIFORNIS	corn	2.52	-12.86	8.31
CALIFORNIS	DURW	211.17	-3.23	-16.69
CALIFORNIS	sorghum	22.55	0.00	0.00
CALIFORNIS	rice	-14.34	0.00	0.00
CALIFORNIS	barley	211.17	-3.23	-16.69
CALIFORNIS	oats	211.17	-3.23	-16.69
CALIFORNIS	silage	2.52	-12.86	8.31
CALIFORNIS	hay	98.22	135.39	16.39
CALIFORNIS	SUGARBEET	0.00	135.39	16.39
CALIFORNIS	POTATOES	2.19	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-13.92	-0.13
CALIFORNIS	tomatoproc	0.00	-13.92	-0.13
CALIFORNIS	orangefrsh	0.00	42.63	-4.65
CALIFORNIS	orangeproc	0.00	42.63	-4.65
CALIFORNIS	grpfrtfrsh	0.00	42.63	-4.65
CALIFORNIS	grpfrtproc	0.00	42.63	-4.65
CALIFORNIS	PASTURE	113.37	0.00	0.00
colorado	corn	42.20	656.18	10.85
colorado	HRSW	52.23	-3.33	1.89
colorado	HRWW	52.23	-3.33	1.89
colorado	sorghum	356.25	403.08	-1.13
colorado	barley	208.92	-13.32	7.56

colorado	oats	208.92	-13.32	7.56
colorado	silage	42.20	656.18	10.85
colorado	hay	18.04	49.30	43.66
colorado	SUGARBEET	0.00	49.30	43.66
colorado	POTATOES	0.00	-22.05	-5.25
colorado	PASTURE	7.62	0.00	0.00
conn	hay	2.32	0.00	0.00
conn	POTATOES	9.10	0.00	0.00
conn	PASTURE	16.47	0.00	0.00
delaware	corn	-36.38	-18.96	57.72
delaware	soybeans	-41.87	36.20	96.85
delaware	SOFT	2.59	-8.83	-46.00
delaware	barley	10.36	-35.32	-184.00
delaware	silage	-36.38	0.00	0.00
delaware	hay	2.32	0.00	0.00
delaware	POTATOES	9.10	-10.80	-9.48
delaware	tomatoproc	30.58	30.50	-19.05
delaware	PASTURE	16.47	0.00	0.00
florida	cotton	51.43	104.77	48.00
florida	corn	10.06	-7.07	-10.64
florida	soybeans	-33.15	26.23	79.63
florida	SOFT	-17.72	-20.67	2.08
florida	oats	-17.72	0.00	0.00
florida	silage	10.06	-7.07	-10.64
florida	hay	-29.12	-22.96	58.84
florida	tomatofrsh	-20.19	-17.62	14.05
florida	orangefrsh	0.00	51.31	138.56
florida	orangeproc	0.00	51.31	138.56
florida	grpfrtfrsh	0.00	51.31	138.56
florida	grpfrtproc	0.00	51.31	138.56
florida	PASTURE	2.71	0.00	0.00
georgia	cotton	44.68	104.77	48.00
georgia	corn	-0.98	-9.17	-2.56
georgia	soybeans	-68.06	19.02	109.00
georgia	SOFT	-17.72	-20.67	2.08
georgia	sorghum	-53.26	-9.04	78.74
georgia	oats	-70.88	-82.68	8.32
georgia	silage	-0.98	-9.17	-2.56
georgia	hay	-39.60	-13.42	45.65
georgia	tomatofrsh	-4.51	-13.05	8.96
georgia	PASTURE	7.32	0.00	0.00

idaho	corn	2.52	-14.45	-12.52
idaho	HRSW	79.84	-2.29	-23.67
idaho	HRWW	79.84	-2.29	-23.67
idaho	barley	319.36	-9.16	-94.68
idaho	oats	319.36	-9.16	-94.68
idaho	silage	0.00	-14.45	-12.52
idaho	hay	54.90	91.40	29.35
idaho	SUGARBEET	0.00	91.40	29.35
idaho	POTATOES	-18.27	-22.80	6.70
idaho	PASTURE	77.32	0.00	0.00
ILLINOISN	corn	-14.66	-21.67	-6.82
ILLINOISN	soybeans	-9.02	27.47	37.76
ILLINOISN	SOFT	-3.66	-3.93	-40.68
ILLINOISN	sorghum	38.03	0.00	0.00
ILLINOISN	oats	-14.64	-15.72	-162.72
ILLINOISN	silage	-14.66	-21.67	-6.82
ILLINOISN	hay	32.91	44.78	-22.04
ILLINOISN	POTATOES	-14.72	0.00	0.00
ILLINOISN	PASTURE	21.37	0.00	0.00
ILLINOISS	corn	-20.56	-22.67	14.97
ILLINOISS	soybeans	-68.27	13.52	75.50
ILLINOISS	SOFT	-15.42	-15.42	-51.52
ILLINOISS	sorghum	10.08	13.87	32.30
ILLINOISS	oats	-61.68	0.00	0.00
ILLINOISS	silage	-20.56	0.00	0.00
ILLINOISS	hay	32.91	44.78	-22.04
ILLINOISS	PASTURE	21.37	0.00	0.00
INDIANAN	corn	-25.08	-24.23	-4.93
INDIANAN	soybeans	-30.57	24.67	58.82
INDIANAN	SOFT	-2.06	-2.06	-56.25
INDIANAN	sorghum	38.03	0.00	0.00
INDIANAN	oats	-8.24	0.00	0.00
INDIANAN	silage	-25.08	-24.23	-4.93
INDIANAN	hay	22.09	33.32	-3.28
INDIANAN	POTATOES	-14.72	-25.35	-4.83
INDIANAN	tomatofrsh	1.25	-4.64	-42.99
INDIANAN	tomatoproc	1.25	-4.64	-42.99
INDIANAN	PASTURE	13.59	0.00	0.00
INDIANAS	corn	-22.58	-21.97	15.38
INDIANAS	soybeans	-23.61	18.79	81.82
INDIANAS	SOFT	-14.65	-14.65	-84.85



INDIANAS	sorghum	10.08	0.00	0.00
INDIANAS	oats	-58.60	0.00	0.00
INDIANAS	silage	-22.58	0.00	0.00
INDIANAS	hay	22.09	33.32	-3.28
INDIANAS	tomatofrsh	1.25	-4.64	-42.99
INDIANAS	tomatoproc	1.25	-4.64	-42.99
INDIANAS	PASTURE	13.59	0.00	0.00
IOWAW	corn	2.13	-18.87	-21.34
IOWAW	soybeans	64.95	60.33	14.65
IOWAW	SOFT	1.01	0.00	0.00
IOWAW	sorghum	43.00	0.00	0.00
IOWAW	oats	4.04	0.00	0.00
IOWAW	silage	2.13	0.00	0.00
IOWAW	hay	16.35	30.95	-39.58
IOWAW	PASTURE	22.61	0.00	0.00
IOWACENT	corn	-14.92	-19.67	-21.09
IOWACENT	soybeans	39.45	48.08	20.34
IOWACENT	SOFT	-3.80	0.00	0.00
IOWACENT	sorghum	26.93	0.00	0.00
IOWACENT	oats	-15.20	-17.56	-160.96
IOWACENT	silage	-14.92	0.00	0.00
IOWACENT	hay	16.35	30.95	-39.58
IOWACENT	PASTURE	22.61	0.00	0.00
IOWANE	corn	-11.26	-22.51	-29.60
IOWANE	soybeans	53.94	50.69	11.48
IOWANE	SOFT	-9.94	0.00	0.00
IOWANE	sorghum	37.45	0.00	0.00
IOWANE	oats	-39.76	0.00	0.00
IOWANE	silage	-11.26	0.00	0.00
IOWANE	hay	16.35	30.95	-39.58
IOWANE	POTATOES	15.00	-7.55	-11.45
IOWANE	PASTURE	22.61	0.00	0.00
IOWAS	corn	-9.60	-18.01	-11.31
IOWAS	soybeans	-21.73	45.23	54.71
IOWAS	SOFT	0.22	0.00	0.00
IOWAS	sorghum	34.05	0.00	0.00
IOWAS	oats	0.88	0.00	0.00
IOWAS	silage	-9.60	0.00	0.00
IOWAS	hay	16.35	30.95	-39.58
IOWAS	PASTURE	22.61	0.00	0.00
kansas	corn	168.69	-17.15	-18.84

kansas	soybeans	180.44	24.29	7.36
kansas	HRWW	121.29	0.50	-46.54
kansas	sorghum	125.86	41.27	-9.12
kansas	barley	485.16	2.00	-186.16
kansas	oats	485.16	2.00	-186.16
kansas	silage	168.69	-17.15	-18.84
kansas	hay	3.07	18.68	10.47
kansas	SUGARBEET	3.07	0.00	0.00
kansas	PASTURE	6.11	0.00	0.00
kentucky	corn	-18.04	-16.61	49.46
kentucky	soybeans	5.62	34.27	91.18
kentucky	SOFT	-15.36	0.00	0.00
kentucky	sorghum	-26.43	0.00	0.00
kentucky	barley	-61.44	0.00	0.00
kentucky	oats	-61.44	0.00	0.00
kentucky	silage	-18.04	0.00	0.00
kentucky	hay	13.29	22.38	5.11
kentucky	PASTURE	9.98	0.00	0.00
louisiana	cotton	47.21	104.77	48.00
louisiana	corn	6.65	-8.70	-22.55
louisiana	soybeans	-30.45	15.66	67.88
louisiana	SOFT	-21.30	-21.25	21.87
louisiana	sorghum	-28.52	-11.53	39.67
louisiana	rice	0.00	-13.76	6.11
louisiana	silage	6.65	0.00	0.00
louisiana	hay	-30.67	-14.77	12.88
louisiana	SUGARCANE	-13.76	-13.76	6.11
louisiana	tomatofrsh	-4.51	-13.05	8.96
louisiana	PASTURE	4.84	0.00	0.00
maine	hay	-4.34	28.83	7.47
maine	POTATOES	9.80	3.88	3.08
maine	PASTURE	13.57	0.00	0.00
maryland	corn	-36.38	-18.96	57.72
maryland	soybeans	-41.87	36.20	96.85
maryland	SOFT	2.59	-8.83	-46.00
maryland	barley	10.36	-35.32	-184.00
maryland	oats	10.36	0.00	0.00
maryland	silage	-36.38	-18.96	57.72
maryland	hay	-9.71	6.31	-42.75
maryland	POTATOES	9.10	-10.80	-9.48
maryland	tomatofrsh	11.66	0.63	-13.87

maryland	tomatoproc	11.66	0.63	-13.87
maryland	PASTURE	8.77	0.00	0.00
mass	hay	-4.34	28.83	7.47
mass	POTATOES	9.80	0.00	0.00
mass	tomatofrsh	30.58	30.50	-19.05
mass	PASTURE	13.57	0.00	0.00
michigan	corn	-30.11	-15.36	17.53
michigan	soybeans	-27.42	57.69	63.50
michigan	SOFT	3.14	-3.81	-18.87
michigan	barley	12.56	0.00	0.00
michigan	oats	12.56	-15.24	-75.48
michigan	silage	-30.11	-15.36	17.53
michigan	hay	27.14	48.02	3.66
michigan	SUGARBEET	27.14	48.02	3.66
michigan	POTATOES	20.33	-8.45	-7.55
michigan	tomatofrsh	49.03	41.09	-11.51
michigan	tomatoproc	49.03	41.09	-11.51
michigan	PASTURE	26.06	0.00	0.00
minnesota	corn	1.69	-13.16	-44.30
minnesota	soybeans	89.43	73.63	-9.60
minnesota	HRSW	8.62	10.51	-19.72
minnesota	HRWW	8.62	10.51	-19.72
minnesota	DURW	8.62	10.51	-19.72
minnesota	barley	34.48	42.04	-78.88
minnesota	oats	34.48	42.04	-78.88
minnesota	silage	1.69	-13.16	-44.30
minnesota	hay	7.33	49.45	26.66
minnesota	SUGARBEET	7.33	49.45	26.66
minnesota	POTATOES	15.00	-7.55	-11.45
minnesota	PASTURE	14.65	0.00	0.00
mississippi	cotton	77.45	104.77	48.00
mississippi	corn	4.42	-11.36	-16.83
mississippi	soybeans	-56.49	16.24	83.01
mississippi	SOFT	-21.72	-22.04	-22.39
mississippi	sorghum	-46.78	-16.39	53.59
mississippi	rice	0.00	-8.77	29.33
mississippi	silage	4.42	-11.36	-16.83
mississippi	hay	-33.40	-11.23	44.44
mississippi	PASTURE	14.81	0.00	0.00
missouri	cotton	74.46	67.82	48.00
missouri	corn	2.24	-22.46	-9.21

missouri	soybeans	-18.84	27.20	44.83
missouri	SOFT	-15.72	-19.38	-57.14
missouri	sorghum	28.48	24.66	10.92
missouri	rice	0.00	-12.96	45.52
missouri	oats	-62.88	0.00	0.00
missouri	silage	2.24	-22.46	-9.21
missouri	hay	26.92	25.11	-17.76
missouri	PASTURE	28.84	0.00	0.00
montana	corn	0.00	-2.61	-23.37
montana	HRSW	5.44	-2.64	-23.87
montana	HRWW	5.44	-2.64	-23.87
montana	DURW	5.44	-2.64	-23.87
montana	barley	21.76	-10.56	-95.48
montana	oats	21.76	-10.56	-95.48
montana	silage	66.74	-2.61	-23.37
montana	hay	14.39	36.31	19.96
montana	SUGARBEET	0.00	36.31	19.96
montana	POTATOES	-18.27	-22.80	6.70
montana	PASTURE	7.45	0.00	0.00
nebraska	corn	42.20	-16.51	-31.70
nebraska	soybeans	41.90	33.97	17.51
nebraska	HRWW	5.45	-2.50	-26.80
nebraska	sorghum	59.38	21.51	-26.64
nebraska	barley	21.80	-10.00	-107.20
nebraska	oats	21.80	-10.00	-107.20
nebraska	silage	42.20	-16.51	-31.70
nebraska	hay	15.90	28.21	19.79
nebraska	SUGARBEET	0.00	28.21	19.79
nebraska	POTATOES	-31.18	-23.33	6.98
nebraska	PASTURE	7.56	0.00	0.00
nevada	HRSW	0.00	9.15	-37.54
nevada	HRWW	0.00	9.15	-37.54
nevada	barley	0.00	18.30	-75.08
nevada	hay	0.00	22.14	1.64
nevada	POTATOES	0.00	-22.80	6.70
nevada	PASTURE	65.15	0.00	0.00
newhampshi	hay	2.32	0.00	0.00
newhampshi	PASTURE	16.47	0.00	0.00
newjersey	corn	-38.26	-11.71	62.75
newjersey	soybeans	-40.34	54.55	118.18
newjersey	SOFT	4.64	-1.66	-50.53

newjersey	barley	18.56	0.00	0.00
newjersey	oats	18.56	0.00	0.00
newjersey	silage	-38.26	0.00	0.00
newjersey	hay	2.32	22.26	-15.07
newjersey	POTATOES	9.10	-10.80	-9.48
newjersey	tomatofrsh	30.58	30.50	-19.05
newjersey	tomatoproc	30.58	30.50	-19.05
newjersey	PASTURE	16.47	0.00	0.00
newmexico	cotton	66.40	46.31	48.00
newmexico	corn	42.20	-21.76	10.93
newmexico	HRWW	25.71	-7.96	-7.55
newmexico	sorghum	22.55	-2.43	-0.69
newmexico	barley	102.84	-31.84	-30.20
newmexico	silage	42.20	-21.76	10.93
newmexico	hay	27.77	31.37	21.79
newmexico	SUGARBEET	27.77	0.00	0.00
newmexico	POTATOES	0.00	-22.05	-5.25
newmexico	PASTURE	7.62	0.00	0.00
newyork	corn	-2.32	-10.99	-31.53
newyork	soybeans	28.26	0.00	0.00
newyork	SOFT	-16.21	0.00	0.00
newyork	oats	-64.84	-79.24	-360.96
newyork	silage	-2.32	-10.99	-31.53
newyork	hay	2.32	22.26	-15.07
newyork	POTATOES	9.10	-10.80	-9.48
newyork	tomatofrsh	30.58	30.50	-19.05
newyork	tomatoproc	30.58	30.50	-19.05
newyork	PASTURE	16.47	0.00	0.00
northcarol	cotton	38.44	80.28	48.00
northcarol	corn	-18.30	-4.28	41.75
northcarol	soybeans	-61.72	32.07	130.68
northcarol	SOFT	-17.73	-19.74	-28.18
northcarol	sorghum	-42.58	0.00	0.00
northcarol	barley	-70.92	0.00	0.00
northcarol	oats	-70.92	-78.96	-112.72
northcarol	silage	-18.30	-4.28	41.75
northcarol	hay	-9.71	6.31	-42.75
northcarol	POTATOES	9.10	-10.80	-9.48
northcarol	tomatofrsh	11.66	0.63	-13.87
northcarol	PASTURE	8.77	0.00	0.00
northdakot	corn	156.75	-3.83	-43.48

northdakot	soybeans	340.32	74.57	-26.42
northdakot	HRSW	35.98	11.09	-31.43
northdakot	HRWW	35.98	11.09	-31.43
northdakot	DURW	35.98	11.09	-31.43
northdakot	barley	143.92	44.36	-125.72
northdakot	oats	143.92	44.36	-125.72
northdakot	silage	156.75	-3.83	-43.48
northdakot	hay	-1.51	44.32	32.16
northdakot	SUGARBEET	-1.51	44.32	32.16
northdakot	POTATOES	-5.23	-7.30	4.23
northdakot	PASTURE	18.82	0.00	0.00
OHIONW	corn	-21.28	-23.02	7.41
OHIONW	soybeans	-17.69	29.48	56.29
OHIONW	SOFT	-1.11	-1.33	-64.86
OHIONW	oats	-4.44	0.00	0.00
OHIONW	silage	-21.28	0.00	0.00
OHIONW	hay	19.44	33.79	8.74
OHIONW	SUGARBEET	19.44	33.79	8.74
OHIONW	POTATOES	-14.72	-25.35	-4.83
OHIONW	tomatofrsh	6.83	-0.31	-47.70
OHIONW	tomatoproc	6.83	-0.31	-47.70
OHIONW	PASTURE	10.87	0.00	0.00
OHIOS	corn	-30.71	-19.72	53.51
OHIOS	soybeans	32.36	61.17	83.33
OHIOS	SOFT	-11.62	-11.62	-66.67
OHIOS	oats	-46.48	0.00	0.00
OHIOS	silage	-30.71	0.00	0.00
OHIOS	hay	19.44	33.79	8.74
OHIOS	SUGARBEET	19.44	0.00	0.00
OHIOS	tomatofrsh	6.83	-0.31	-47.70
OHIOS	tomatoproc	6.83	-0.31	-47.70
OHIOS	PASTURE	10.87	0.00	0.00
OHIONE	corn	-17.93	0.00	0.00
OHIONE	soybeans	11.71	56.17	94.12
OHIONE	SOFT	-11.35	0.00	0.00
OHIONE	oats	-45.40	-45.40	-268.76
OHIONE	silage	-17.93	0.00	0.00
OHIONE	hay	19.44	33.79	8.74
OHIONE	SUGARBEET	19.44	0.00	0.00
OHIONE	tomatofrsh	6.83	-0.31	-47.70
OHIONE	tomatoproc	6.83	-0.31	-47.70

OHIONE	PASTURE	10.87	0.00	0.00
oklahoma	cotton	124.68	95.44	48.00
oklahoma	corn	43.80	-9.41	-4.66
oklahoma	soybeans	44.72	11.55	27.98
oklahoma	HRWW	35.04	-1.06	-36.05
oklahoma	sorghum	-15.48	-11.01	5.26
oklahoma	barley	140.16	0.00	0.00
oklahoma	oats	140.16	-4.24	-144.20
oklahoma	silage	43.80	-9.41	-4.66
oklahoma	hay	0.11	11.41	15.76
oklahoma	PASTURE	4.69	0.00	0.00
oregon	corn	2.52	-4.43	-15.64
oregon	HRSW	115.78	21.44	-34.82
oregon	HRWW	115.78	21.44	-34.82
oregon	barley	463.12	85.76	-139.28
oregon	oats	463.12	85.76	-139.28
oregon	silage	2.52	-4.43	-15.64
oregon	hay	43.23	90.60	34.74
oregon	SUGARBEET	0.00	90.60	34.74
oregon	POTATOES	2.19	-7.14	6.76
oregon	PASTURE	57.17	0.00	0.00
pennsylvan	corn	-7.37	-7.19	-7.46
pennsylvan	soybeans	28.26	0.00	0.00
pennsylvan	SOFT	-13.17	-13.17	-25.93
pennsylvan	barley	-52.68	0.00	0.00
pennsylvan	oats	-52.68	0.00	0.00
pennsylvan	silage	-7.37	-7.19	-7.46
pennsylvan	hay	23.57	41.97	13.39
pennsylvan	POTATOES	9.10	-10.80	-9.48
pennsylvan	tomatofrsh	30.58	30.50	-19.05
pennsylvan	tomatoproc	30.58	30.50	-19.05
pennsylvan	PASTURE	16.47	0.00	0.00
rhodeislan	hay	2.32	22.26	-15.07
rhodeislan	POTATOES	9.10	-10.80	-9.48
rhodeislan	PASTURE	16.47	0.00	0.00
southcarol	cotton	40.00	80.28	48.00
southcarol	corn	-14.23	-6.88	16.43
southcarol	soybeans	-73.49	17.89	134.18
southcarol	SOFT	-17.41	-20.55	-21.58
southcarol	sorghum	-56.92	-9.18	108.29
southcarol	barley	-69.64	0.00	0.00

southcarol	oats	-69.64	0.00	0.00
southcarol	silage	-14.23	-6.88	16.43
southcarol	hay	-34.52	-19.04	19.36
southcarol	tomatofrsh	-0.14	-7.45	1.11
southcarol	PASTURE	8.06	0.00	0.00
southdakot	corn	18.88	-13.88	-15.28
southdakot	soybeans	60.97	54.69	15.38
southdakot	HRSW	20.86	7.58	-31.10
southdakot	HRWW	20.86	7.58	-31.10
southdakot	DURW	20.86	7.58	-31.10
southdakot	sorghum	66.11	45.74	0.00
southdakot	barley	83.44	30.32	-124.40
southdakot	oats	83.44	30.32	-124.40
southdakot	silage	18.88	-13.88	-15.28
southdakot	hay	14.82	34.90	12.82
southdakot	POTATOES	-5.23	-7.30	4.23
southdakot	PASTURE	20.60	0.00	0.00
tennessee	cotton	47.51	80.28	48.00
tennessee	corn	-12.00	-10.26	10.06
tennessee	soybeans	-49.74	28.48	87.43
tennessee	SOFT	-15.38	0.00	0.00
tennessee	sorghum	-27.71	0.00	0.00
tennessee	oats	-61.52	0.00	0.00
tennessee	silage	-12.00	0.00	0.00
tennessee	hay	-11.39	4.47	37.05
tennessee	POTATOES	9.10	0.00	0.00
tennessee	tomatofrsh	11.66	0.63	-13.87
tennessee	PASTURE	-0.10	0.00	0.00
TXHIPLAINS	cotton	53.02	58.12	48.00
TXHIPLAINS	corn	-1.22	-17.23	2.79
TXHIPLAINS	soybeans	217.94	25.90	21.59
TXHIPLAINS	HRWW	61.83	-9.06	-12.81
TXHIPLAINS	sorghum	15.27	22.02	-7.18
TXHIPLAINS	barley	247.32	-36.24	-51.24
TXHIPLAINS	oats	247.32	-36.24	-51.24
TXHIPLAINS	silage	-1.22	-17.23	2.79
TXHIPLAINS	hay	172.27	13.10	-15.30
TXHIPLAINS	SUGARBEET	172.27	13.10	-15.30
TXHIPLAINS	POTATOES	-6.13	-22.05	-5.25
TXHIPLAINS	PASTURE	13.95	0.00	0.00
TXROLINGPL	cotton	118.83	72.42	48.00



TXROLINGPL	corn	-1.22	-7.37	-25.34
TXROLINGPL	HRWW	77.61	-11.14	-32.38
TXROLINGPL	sorghum	180.23	40.25	-28.46
TXROLINGPL	barley	310.44	0.00	0.00
TXROLINGPL	oats	310.44	-44.56	-129.52
TXROLINGPL	silage	-1.22	-7.37	-25.34
TXROLINGPL	hay	172.27	13.10	-15.30
TXROLINGPL	POTATOES	-6.13	0.00	0.00
TXROLINGPL	PASTURE	13.95	0.00	0.00
TXCNTBLACK	cotton	78.50	59.34	48.00
TXCNTBLACK	corn	102.45	-6.19	-17.30
TXCNTBLACK	soybeans	13.79	0.00	0.00
TXCNTBLACK	HRWW	8.39	-15.13	-23.12
TXCNTBLACK	sorghum	95.93	40.17	-11.94
TXCNTBLACK	rice	0.00	-16.90	14.70
TXCNTBLACK	barley	33.56	0.00	0.00
TXCNTBLACK	oats	33.56	-60.52	-92.48
TXCNTBLACK	silage	102.45	-6.19	-17.30
TXCNTBLACK	hay	146.82	1.35	10.09
TXCNTBLACK	PASTURE	17.77	0.00	0.00
TXEAST	cotton	61.24	46.12	48.00
TXEAST	corn	16.17	-5.98	-6.75
TXEAST	soybeans	9.66	6.96	37.45
TXEAST	HRWW	8.39	-15.13	-23.12
TXEAST	sorghum	-6.78	-3.52	-16.75
TXEAST	rice	0.00	-14.90	14.78
TXEAST	oats	8.39	-15.13	-23.12
TXEAST	silage	16.17	0.00	0.00
TXEAST	hay	146.82	1.35	10.09
TXEAST	tomatofrsh	-4.51	-13.05	8.96
TXEAST	PASTURE	17.77	0.00	0.00
TXEDPLAT	cotton	39.85	62.28	48.00
TXEDPLAT	corn	26.97	-24.87	-7.51
TXEDPLAT	soybeans	-22.33	0.00	0.00
TXEDPLAT	HRWW	-35.69	-6.97	51.32
TXEDPLAT	sorghum	25.56	-0.50	-16.62
TXEDPLAT	barley	-142.76	0.00	0.00
TXEDPLAT	oats	-142.76	-27.88	205.28
TXEDPLAT	silage	26.97	-24.87	-7.51
TXEDPLAT	hay	153.82	-2.80	-5.63
TXEDPLAT	tomatofrsh	0.00	-13.05	8.96

TXEDPLAT	PASTURE	17.03	0.00	0.00
TXCOASTBE	cotton	19.46	18.35	48.00
TXCOASTBE	corn	26.97	-8.62	-11.99
TXCOASTBE	soybeans	-2.77	9.46	32.82
TXCOASTBE	HRWW	8.39	0.00	0.00
TXCOASTBE	sorghum	30.00	9.90	-16.28
TXCOASTBE	rice	0.00	-5.32	15.45
TXCOASTBE	oats	8.39	-15.13	-23.12
TXCOASTBE	hay	153.82	-2.80	-5.63
TXCOASTBE	tomatofrsh	-4.51	0.00	0.00
TXCOASTBE	PASTURE	17.03	0.00	0.00
TXSOUTH	cotton	-0.49	24.28	48.00
TXSOUTH	corn	26.97	-17.15	23.79
TXSOUTH	soybeans	0.00	-9.49	37.48
TXSOUTH	HRWW	8.39	-15.13	-23.12
TXSOUTH	sorghum	-53.54	-2.67	6.41
TXSOUTH	oats	8.39	-15.13	-23.12
TXSOUTH	silage	26.97	-17.15	23.79
TXSOUTH	hay	153.82	-2.80	-5.63
TXSOUTH	POTATOES	0.00	-22.05	-5.25
TXSOUTH	tomatofrsh	-4.51	-13.05	8.96
TXSOUTH	orangefrsh	0.00	59.18	1.50
TXSOUTH	orangeproc	0.00	59.18	1.50
TXSOUTH	grpfrtfrsh	0.00	59.18	1.50
TXSOUTH	grpfrtproc	0.00	59.18	1.50
TXSOUTH	PASTURE	17.03	0.00	0.00
TXTRANSPEC	cotton	55.84	94.00	48.00
TXTRANSPEC	corn	-1.22	0.00	0.00
TXTRANSPEC	HRWW	-2.63	-13.98	13.88
TXTRANSPEC	sorghum	0.00	4.22	-4.13
TXTRANSPEC	barley	0.00	-55.92	55.52
TXTRANSPEC	oats	0.00	-55.92	55.52
TXTRANSPEC	hay	177.62	9.51	-14.45
TXTRANSPEC	PASTURE	5.37	0.00	0.00
utah	corn	0.00	43.94	14.97
utah	HRSW	211.17	-3.23	-16.69
utah	HRWW	211.17	-3.23	-16.69
utah	barley	844.68	-12.92	-66.76
utah	oats	844.68	-12.92	-66.76
utah	silage	66.74	43.94	14.97
utah	hay	82.14	34.22	16.55

utah	SUGARBEET	82.14	0.00	0.00
utah	POTATOES	0.00	-22.80	6.70
utah	PASTURE	65.15	0.00	0.00
vermont	hay	2.32	22.26	-15.07
vermont	PASTURE	16.47	0.00	0.00
virginia	cotton	85.25	80.28	48.00
virginia	corn	-41.85	-15.64	45.40
virginia	soybeans	-46.83	42.02	82.29
virginia	SOFT	15.82	-17.41	-43.54
virginia	sorghum	-42.58	0.00	0.00
virginia	barley	63.28	-69.64	-174.16
virginia	oats	63.28	0.00	0.00
virginia	silage	-41.85	-15.64	45.40
virginia	hay	-9.71	6.31	-42.75
virginia	POTATOES	9.10	-10.80	-9.48
virginia	tomatofrsh	11.66	0.63	-13.87
virginia	tomatoproc	11.66	0.63	-13.87
virginia	PASTURE	8.77	0.00	0.00
washington	corn	2.52	216.37	-14.18
washington	HRSW	60.22	22.96	-42.35
washington	HRWW	60.22	22.96	-42.35
washington	barley	240.88	91.84	-169.40
washington	oats	240.88	91.84	-169.40
washington	silage	2.52	216.37	-14.18
washington	hay	42.43	86.42	45.28
washington	SUGARBEET	0.00	86.42	45.28
washington	POTATOES	-4.40	0.53	7.63
washington	PASTURE	54.36	0.00	0.00
westvirgin	corn	-31.14	0.00	0.00
westvirgin	SOFT	-9.10	0.00	0.00
westvirgin	barley	-36.40	0.00	0.00
westvirgin	oats	-36.40	0.00	0.00
westvirgin	silage	-31.14	0.00	0.00
westvirgin	hay	2.32	18.42	48.82
westvirgin	PASTURE	-0.10	0.00	0.00
wisconsin	corn	-13.09	-17.57	-48.00
wisconsin	soybeans	72.85	76.68	9.09
wisconsin	HRSW	-2.89	-3.91	-29.63
wisconsin	HRWW	-2.89	-3.91	-29.63
wisconsin	barley	-11.56	0.00	0.00
wisconsin	oats	-11.56	-15.64	-118.52

wisconsin	silage	-13.09	-17.57	-48.00
wisconsin	hay	34.47	49.83	5.93
wisconsin	POTATOES	15.00	-7.55	-11.45
wisconsin	PASTURE	28.10	0.00	0.00
wyoming	corn	66.74	-0.41	-15.93
wyoming	HRSW	56.13	9.15	-37.54
wyoming	HRWW	56.13	9.15	-37.54
wyoming	barley	224.52	36.60	-150.16
wyoming	oats	224.52	36.60	-150.16
wyoming	silage	66.74	-0.41	-15.93
wyoming	hay	18.67	39.57	4.02
wyoming	SUGARBEET	0.00	39.57	4.02
wyoming	POTATOES	0.00	-7.30	4.23
wyoming	PASTURE	31.68	0.00	0.00

Table D1.7 Full data set for Hadley PNNL Scenario run for 2030 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	31.15	72.77	36.19
alabama	corn	23.81	29.69	146.41
alabama	soybeans	5.88	11.32	-3.41
alabama	SOFT	70.00	0.00	0.00
alabama	sorghum	10.25	0.00	0.00
alabama	oats	280.00	0.00	0.00
alabama	silage	23.81	0.00	0.00
alabama	hay	13.27	14.15	24.35
alabama	POTATOES	22.10	-3.90	-13.50
alabama	tomatofrsh	8.54	3.26	-3.77
alabama	PASTURE	32.93	0.00	0.00
arizona	cotton	0.00	100.63	36.19
arizona	corn	-15.38	16.39	5.94
arizona	HRWW	66.67	-2.90	-22.60
arizona	DURW	66.67	-2.90	-22.60
arizona	sorghum	0.00	16.21	-7.82
arizona	barley	0.00	-11.60	-90.40
arizona	silage	-15.38	16.39	5.94
arizona	hay	42.11	29.13	11.74
arizona	SUGARBEET	42.11	0.00	0.00
arizona	POTATOES	0.00	-1.00	7.70
arizona	orangefrsh	0.00	69.90	3.30
arizona	orangeproc	0.00	69.90	3.30
arizona	grpfrtfrsh	0.00	69.90	3.30
arizona	grpfrtproc	0.00	69.90	3.30
arizona	PASTURE	3.81	0.00	0.00
arkansas	cotton	41.00	72.77	36.19
arkansas	corn	5.00	15.00	83.38
arkansas	soybeans	-5.26	11.32	-3.41
arkansas	SOFT	62.50	4.10	-8.00
arkansas	sorghum	10.25	-2.44	-14.29
arkansas	rice	0.00	2.32	-3.22
arkansas	oats	250.00	4.10	-8.00
arkansas	silage	5.00	15.00	83.38
arkansas	hay	13.27	14.15	24.35
arkansas	tomatofrsh	8.54	3.26	-3.77
arkansas	PASTURE	16.97	0.00	0.00

CALIFORNIN	cotton	21.09	52.37	36.19
CALIFORNIN	corn	-8.70	-7.69	5.55
CALIFORNIN	HRWW	32.00	-16.20	-50.20
CALIFORNIN	sorghum	35.01	16.21	-7.82
CALIFORNIN	rice	0.00	6.84	-0.43
CALIFORNIN	barley	128.00	-64.80	-200.80
CALIFORNIN	oats	128.00	-64.80	-200.80
CALIFORNIN	silage	-8.70	-7.69	5.55
CALIFORNIN	hay	40.91	19.23	11.53
CALIFORNIN	SUGARBEET	0.00	19.23	11.53
CALIFORNIN	POTATOES	0.00	-2.25	3.10
CALIFORNIN	tomatofrsh	0.00	-9.06	0.13
CALIFORNIN	tomatoproc	0.00	-9.06	0.13
CALIFORNIN	orangefrsh	0.00	45.70	-20.20
CALIFORNIN	orangeproc	0.00	45.70	-20.20
CALIFORNIN	grpfrtfrsh	0.00	45.70	-20.20
CALIFORNIN	grpfrtproc	0.00	45.70	-20.20
CALIFORNIN	PASTURE	52.93	0.00	0.00
CALIFORNIS	cotton	0.00	52.37	36.19
CALIFORNIS	corn	-75.00	-7.69	5.55
CALIFORNIS	DURW	32.00	-16.20	-50.20
CALIFORNIS	sorghum	35.01	0.00	0.00
CALIFORNIS	rice	0.45	0.00	0.00
CALIFORNIS	barley	128.00	-16.20	-50.20
CALIFORNIS	oats	128.00	-16.20	-50.20
CALIFORNIS	silage	-75.00	-7.69	5.55
CALIFORNIS	hay	40.91	19.23	11.53
CALIFORNIS	SUGARBEET	0.00	19.23	11.53
CALIFORNIS	POTATOES	8.95	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-9.06	0.13
CALIFORNIS	tomatoproc	0.00	-9.06	0.13
CALIFORNIS	orangefrsh	0.00	36.20	-1.80
CALIFORNIS	orangeproc	0.00	36.20	-1.80
CALIFORNIS	grpfrtfrsh	0.00	36.20	-1.80
CALIFORNIS	grpfrtproc	0.00	36.20	-1.80
CALIFORNIS	PASTURE	70.88	0.00	0.00
colorado	corn	-31.25	54.05	71.16
colorado	HRSW	27.78	11.70	-2.10
colorado	HRWW	27.78	11.70	-2.10
colorado	sorghum	35.01	16.21	-7.82
colorado	barley	111.11	23.40	-4.20

colorado	oats	111.11	23.40	-4.20
colorado	silage	-31.25	54.05	71.16
colorado	hay	30.30	59.74	67.92
colorado	SUGARBEET	0.00	59.74	67.92
colorado	POTATOES	0.00	-1.00	7.70
colorado	PASTURE	12.76	0.00	0.00
conn	silage	25.58	0.00	0.00
conn	hay	41.25	0.00	0.00
conn	POTATOES	22.10	0.00	0.00
conn	PASTURE	20.54	0.00	0.00
delaware	corn	16.00	16.00	76.38
delaware	soybeans	31.25	10.96	-14.75
delaware	SOFT	62.50	1.90	-16.30
delaware	barley	250.00	1.90	-16.30
delaware	silage	16.00	0.00	0.00
delaware	hay	41.25	0.00	0.00
delaware	POTATOES	22.10	-3.90	-13.50
delaware	tomatoproc	24.02	23.10	-34.92
delaware	PASTURE	20.54	0.00	0.00
florida	cotton	30.58	72.77	36.19
florida	corn	-3.57	1.75	313.64
florida	soybeans	6.67	7.62	-2.63
florida	SOFT	12.12	4.10	-8.00
florida	oats	48.48	0.00	0.00
florida	silage	-3.57	1.75	313.64
florida	hay	13.27	14.15	24.35
florida	SUGARCANE	-0.99	-0.99	-11.03
florida	tomatofrsh	-2.01	-0.31	2.86
florida	orangefrsh	0.00	25.37	14.67
florida	orangeproc	0.00	25.37	14.67
florida	grpfrtfrsh	0.00	25.37	14.67
florida	grpfrtproc	0.00	25.37	14.67
florida	PASTURE	10.90	0.00	0.00
georgia	cotton	32.52	72.77	36.19
georgia	corn	1.92	5.77	214.71
georgia	soybeans	5.88	7.62	-2.63
georgia	SOFT	40.00	4.10	-8.00
georgia	sorghum	3.33	-3.16	-13.58
georgia	oats	160.00	4.10	-8.00
georgia	silage	1.92	5.77	214.71
georgia	hay	13.27	14.15	24.35

georgia	tomatofrsh	8.54	3.26	-3.77
georgia	PASTURE	27.28	0.00	0.00
idaho	corn	-55.56	15.00	3.97
idaho	HRSW	-18.52	-7.40	-11.20
idaho	HRWW	-18.52	-7.40	-11.20
idaho	barley	-74.07	-29.60	-44.80
idaho	oats	-74.07	-29.60	-44.80
idaho	silage	0.00	15.00	3.97
idaho	hay	24.53	36.00	18.68
idaho	SUGARBEET	0.00	36.00	18.68
idaho	POTATOES	-7.00	-8.40	3.70
idaho	PASTURE	58.99	0.00	0.00
ILLINOISN	corn	17.54	16.95	42.39
ILLINOISN	soybeans	10.53	16.24	-12.70
ILLINOISN	SOFT	68.00	4.10	-8.00
ILLINOISN	sorghum	13.81	0.00	0.00
ILLINOISN	oats	272.00	4.10	-8.00
ILLINOISN	silage	17.54	16.95	42.39
ILLINOISN	hay	47.76	50.70	44.94
ILLINOISN	POTATOES	7.40	0.00	0.00
ILLINOISN	PASTURE	20.44	0.00	0.00
ILLINOISS	corn	17.54	16.95	42.39
ILLINOISS	soybeans	10.53	16.24	-12.70
ILLINOISS	SOFT	68.00	4.10	-8.00
ILLINOISS	sorghum	13.81	0.39	-17.06
ILLINOISS	oats	272.00	0.00	0.00
ILLINOISS	silage	17.54	0.00	0.00
ILLINOISS	hay	47.76	50.70	44.94
ILLINOISS	PASTURE	20.44	0.00	0.00
INDIANAN	corn	7.69	7.58	43.76
INDIANAN	soybeans	4.55	14.61	-22.47
INDIANAN	SOFT	61.54	1.90	-16.30
INDIANAN	sorghum	13.81	0.00	0.00
INDIANAN	oats	246.15	0.00	0.00
INDIANAN	silage	7.69	7.58	43.76
INDIANAN	hay	36.11	37.33	27.20
INDIANAN	POTATOES	7.40	-5.50	-5.80
INDIANAN	tomatofrsh	12.33	6.35	-28.97
INDIANAN	tomatoproc	12.33	6.35	-28.97
INDIANAN	PASTURE	17.13	0.00	0.00
INDIANAS	corn	7.69	7.58	43.76



INDIANAS	soybeans	4.55	14.61	-22.47
INDIANAS	SOFT	61.54	1.90	-16.30
INDIANAS	sorghum	13.81	0.00	0.00
INDIANAS	oats	246.15	0.00	0.00
INDIANAS	silage	7.69	0.00	0.00
INDIANAS	hay	36.11	37.33	27.20
INDIANAS	tomatofrsh	12.33	6.35	-28.97
INDIANAS	tomatoproc	12.33	6.35	-28.97
INDIANAS	PASTURE	17.13	0.00	0.00
IOWAW	corn	16.67	18.33	57.76
IOWAW	soybeans	5.26	12.62	-13.91
IOWAW	SOFT	51.72	0.00	0.00
IOWAW	sorghum	45.49	0.00	0.00
IOWAW	oats	206.90	0.00	0.00
IOWAW	silage	16.67	0.00	0.00
IOWAW	hay	25.33	30.77	66.19
IOWAW	PASTURE	22.48	0.00	0.00
IOWACENT	corn	16.67	18.33	57.76
IOWACENT	soybeans	5.26	12.62	-13.91
IOWACENT	SOFT	51.72	0.00	0.00
IOWACENT	sorghum	45.49	0.00	0.00
IOWACENT	oats	206.90	1.30	-22.00
IOWACENT	silage	16.67	0.00	0.00
IOWACENT	hay	25.33	30.77	66.19
IOWACENT	PASTURE	22.48	0.00	0.00
IOWANE	corn	16.67	18.33	57.76
IOWANE	soybeans	5.26	12.62	-13.91
IOWANE	SOFT	51.72	0.00	0.00
IOWANE	sorghum	13.81	0.00	0.00
IOWANE	oats	206.90	0.00	0.00
IOWANE	silage	16.67	0.00	0.00
IOWANE	hay	25.33	30.77	66.19
IOWANE	POTATOES	19.50	0.20	-8.80
IOWANE	PASTURE	22.48	0.00	0.00
IOWAS	corn	16.67	18.33	57.76
IOWAS	soybeans	5.26	12.62	-13.91
IOWAS	SOFT	51.72	0.00	0.00
IOWAS	sorghum	13.81	0.00	0.00
IOWAS	oats	206.90	0.00	0.00
IOWAS	silage	16.67	0.00	0.00
IOWAS	hay	25.33	30.77	66.19

IOWAS	PASTURE	22.48	0.00	0.00
kansas	corn	-17.31	14.52	38.28
kansas	soybeans	-17.65	13.61	-4.30
kansas	HRWW	17.65	7.87	-7.93
kansas	sorghum	10.22	-1.19	-9.33
kansas	barley	70.59	31.47	-31.73
kansas	oats	70.59	31.47	-31.73
kansas	silage	-17.31	14.52	38.28
kansas	hay	9.68	38.64	51.18
kansas	SUGARBEET	9.68	0.00	0.00
kansas	PASTURE	19.77	0.00	0.00
kentucky	corn	4.35	9.72	50.11
kentucky	soybeans	4.55	13.61	-15.02
kentucky	SOFT	62.50	0.00	0.00
kentucky	sorghum	24.26	0.00	0.00
kentucky	barley	250.00	0.00	0.00
kentucky	oats	250.00	0.00	0.00
kentucky	silage	4.35	0.00	0.00
kentucky	hay	26.88	28.42	40.90
kentucky	PASTURE	16.89	0.00	0.00
louisiana	cotton	26.17	72.77	36.19
louisiana	corn	19.05	26.23	171.58
louisiana	soybeans	11.76	11.32	-3.41
louisiana	SOFT	41.46	4.10	-8.00
louisiana	sorghum	10.25	-2.44	-14.29
louisiana	rice	0.00	2.32	-3.22
louisiana	silage	19.05	0.00	0.00
louisiana	hay	13.27	14.15	24.35
louisiana	SUGARCANE	2.32	2.32	-3.22
louisiana	tomatofrsh	8.54	3.26	-3.77
louisiana	PASTURE	16.97	0.00	0.00
maine	oats	214.29	0.00	0.00
maine	silage	35.14	0.00	0.00
maine	hay	41.25	43.53	58.66
maine	POTATOES	6.60	3.30	6.20
maine	PASTURE	14.11	0.00	0.00
maryland	corn	15.00	15.00	47.73
maryland	soybeans	23.08	10.96	-14.75
maryland	SOFT	57.14	1.90	-16.30
maryland	barley	228.57	1.90	-16.30
maryland	oats	228.57	0.00	0.00

maryland	silage	15.00	15.00	47.73
maryland	hay	41.25	43.53	58.66
maryland	POTATOES	22.10	-3.90	-13.50
maryland	tomatofrsh	17.34	8.24	-11.76
maryland	tomatoproc	17.34	8.24	-11.76
maryland	PASTURE	18.52	0.00	0.00
mass	silage	24.39	0.00	0.00
mass	hay	41.25	43.53	58.66
mass	POTATOES	6.60	0.00	0.00
mass	tomatofrsh	24.02	23.10	-34.92
mass	PASTURE	14.11	0.00	0.00
michigan	corn	36.36	42.22	68.91
michigan	soybeans	38.46	22.45	-19.77
michigan	SOFT	56.67	4.90	-17.40
michigan	barley	226.67	0.00	0.00
michigan	oats	226.67	4.90	-17.40
michigan	silage	36.36	42.22	68.91
michigan	hay	41.94	49.23	59.36
michigan	SUGARBEET	41.94	49.23	59.36
michigan	POTATOES	33.10	-0.80	-10.60
michigan	tomatofrsh	41.26	29.50	-17.99
michigan	tomatoproc	41.26	29.50	-17.99
michigan	PASTURE	23.64	0.00	0.00
minnesota	corn	14.00	23.53	55.71
minnesota	soybeans	20.00	36.38	-16.74
minnesota	HRSW	40.00	4.90	-17.40
minnesota	HRWW	40.00	4.90	-17.40
minnesota	DURW	40.00	4.90	-17.40
minnesota	barley	160.00	19.60	-69.60
minnesota	oats	160.00	19.60	-69.60
minnesota	silage	14.00	23.53	55.71
minnesota	hay	19.23	42.86	88.44
minnesota	SUGARBEET	19.23	42.86	88.44
minnesota	POTATOES	19.50	0.20	-8.80
minnesota	PASTURE	16.19	0.00	0.00
mississippi	cotton	43.69	72.77	36.19
mississippi	corn	5.00	16.95	116.65
mississippi	soybeans	5.88	11.32	-3.41
mississippi	SOFT	61.76	4.10	-8.00
mississippi	sorghum	10.25	-2.44	-14.29
mississippi	rice	0.00	2.36	-4.59

mississippi	silage	5.00	16.95	116.65
mississippi	hay	13.27	14.15	24.35
mississippi	PASTURE	32.93	0.00	0.00
missouri	cotton	38.99	42.99	36.19
missouri	corn	6.35	12.50	29.69
missouri	soybeans	-5.00	13.61	-4.30
missouri	SOFT	58.06	4.10	-8.00
missouri	sorghum	8.69	-4.42	-16.09
missouri	rice	0.00	2.32	-3.22
missouri	oats	232.26	0.00	0.00
missouri	silage	6.35	12.50	29.69
missouri	hay	28.41	30.93	26.60
missouri	PASTURE	31.78	0.00	0.00
montana	corn	0.00	36.59	17.00
montana	HRSW	26.92	0.20	-14.00
montana	HRWW	26.92	0.20	-14.00
montana	DURW	26.92	0.20	-14.00
montana	barley	107.69	0.80	-56.00
montana	oats	107.69	0.80	-56.00
montana	silage	-5.26	36.59	17.00
montana	hay	26.67	46.99	31.51
montana	SUGARBEET	0.00	46.99	31.51
montana	POTATOES	-7.00	-8.40	3.70
montana	PASTURE	19.90	0.00	0.00
nebraska	corn	-2.08	30.36	40.11
nebraska	soybeans	6.25	26.61	-0.89
nebraska	HRWW	42.86	11.70	-2.10
nebraska	sorghum	35.01	16.21	-7.82
nebraska	barley	171.43	46.80	-8.40
nebraska	oats	171.43	46.80	-8.40
nebraska	silage	-2.08	30.36	40.11
nebraska	hay	20.00	47.37	49.31
nebraska	SUGARBEET	0.00	47.37	49.31
nebraska	POTATOES	-6.70	-6.30	2.20
nebraska	PASTURE	19.00	0.00	0.00
nevada	HRSW	0.00	-7.40	-11.20
nevada	HRWW	0.00	-7.40	-11.20
nevada	barley	0.00	-14.80	-22.40
nevada	hay	0.00	8.49	-0.94
nevada	POTATOES	0.00	-8.40	3.70
nevada	PASTURE	8.82	0.00	0.00

newhampshi	silage	30.95	0.00	0.00
newhampshi	hay	41.25	0.00	0.00
newhampshi	PASTURE	20.54	0.00	0.00
newjersey	corn	23.53	25.00	64.13
newjersey	soybeans	37.50	10.96	-14.75
newjersey	SOFT	72.73	1.90	-16.30
newjersey	barley	290.91	0.00	0.00
newjersey	oats	290.91	0.00	0.00
newjersey	silage	23.53	0.00	0.00
newjersey	hay	41.25	43.53	58.66
newjersey	POTATOES	22.10	-3.90	-13.50
newjersey	tomatofrsh	24.02	23.10	-34.92
newjersey	tomatoproc	24.02	23.10	-34.92
newjersey	PASTURE	20.54	0.00	0.00
newmexico	cotton	33.04	29.40	36.19
newmexico	corn	-15.38	57.78	78.88
newmexico	HRWW	50.00	-2.90	-22.60
newmexico	sorghum	35.01	16.21	-7.82
newmexico	barley	200.00	-2.90	-22.60
newmexico	silage	-15.38	57.78	78.88
newmexico	hay	33.33	47.76	64.71
newmexico	SUGARBEET	33.33	0.00	0.00
newmexico	POTATOES	0.00	-1.00	7.70
newmexico	PASTURE	12.76	0.00	0.00
newyork	corn	27.27	29.55	78.61
newyork	soybeans	30.77	0.00	0.00
newyork	SOFT	64.29	0.00	0.00
newyork	oats	257.14	1.90	-16.30
newyork	silage	27.27	29.55	78.61
newyork	hay	41.25	43.53	58.66
newyork	POTATOES	22.10	-3.90	-13.50
newyork	tomatofrsh	24.02	23.10	-34.92
newyork	tomatoproc	24.02	23.10	-34.92
newyork	PASTURE	20.54	0.00	0.00
northcarol	cotton	27.08	48.30	36.19
northcarol	corn	10.00	11.76	108.65
northcarol	soybeans	14.29	10.96	-14.75
northcarol	SOFT	43.75	4.10	-8.00
northcarol	sorghum	8.58	0.00	0.00
northcarol	barley	175.00	0.00	0.00
northcarol	oats	175.00	4.10	-8.00

northcarol	silage	10.00	11.76	108.65
northcarol	hay	13.27	14.15	24.35
northcarol	POTATOES	22.10	-3.90	-13.50
northcarol	tomatofrsh	17.34	8.24	-11.76
northcarol	PASTURE	18.52	0.00	0.00
northdakot	corn	-19.51	24.07	48.69
northdakot	soybeans	-7.69	26.61	-0.89
northdakot	HRSW	6.67	5.70	-17.40
northdakot	HRWW	6.67	5.70	-17.40
northdakot	DURW	6.67	5.70	-17.40
northdakot	barley	26.67	22.80	-69.60
northdakot	oats	26.67	22.80	-69.60
northdakot	silage	-19.51	24.07	48.69
northdakot	hay	-9.26	40.26	61.13
northdakot	SUGARBEET	-9.26	40.26	61.13
northdakot	POTATOES	20.70	2.10	-6.90
northdakot	PASTURE	21.99	0.00	0.00
OHIONW	corn	15.00	19.67	54.24
OHIONW	soybeans	15.00	14.61	-22.47
OHIONW	SOFT	62.07	1.90	-16.30
OHIONW	oats	248.28	0.00	0.00
OHIONW	silage	15.00	0.00	0.00
OHIONW	hay	37.50	39.76	55.09
OHIONW	SUGARBEET	37.50	39.76	55.09
OHIONW	POTATOES	7.40	-5.50	-5.80
OHIONW	tomatofrsh	13.64	7.50	-39.08
OHIONW	tomatoproc	13.64	7.50	-39.08
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	15.00	19.67	54.24
OHIOS	soybeans	15.00	14.61	-22.47
OHIOS	SOFT	62.07	1.90	-16.30
OHIOS	oats	248.28	0.00	0.00
OHIOS	silage	15.00	0.00	0.00
OHIOS	hay	37.50	39.76	55.09
OHIOS	SUGARBEET	37.50	0.00	0.00
OHIOS	tomatofrsh	13.64	7.50	-39.08
OHIOS	tomatoproc	13.64	7.50	-39.08
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	15.00	0.00	0.00
OHIONE	soybeans	15.00	14.61	-22.47
OHIONE	SOFT	62.07	0.00	0.00

OHIONE	oats	248.28	7.60	-65.20
OHIONE	silage	15.00	0.00	0.00
OHIONE	hay	37.50	39.76	55.09
OHIONE	SUGARBEET	37.50	0.00	0.00
OHIONE	tomatofrsh	13.64	7.50	-39.08
OHIONE	tomatoproc	13.64	7.50	-39.08
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	62.55	68.16	36.19
oklahoma	corn	1.75	7.35	21.20
oklahoma	soybeans	-11.76	13.61	-4.30
oklahoma	HRWW	34.21	4.20	0.70
oklahoma	sorghum	7.98	-5.73	-5.47
oklahoma	barley	136.84	0.00	0.00
oklahoma	oats	136.84	16.80	2.80
oklahoma	silage	1.75	7.35	21.20
oklahoma	hay	13.79	19.42	31.61
oklahoma	PASTURE	19.00	0.00	0.00
oregon	corn	-8.70	15.52	13.61
oregon	HRSW	20.00	4.60	-11.60
oregon	HRWW	20.00	4.60	-11.60
oregon	barley	80.00	9.20	-23.20
oregon	oats	80.00	9.20	-23.20
oregon	silage	-8.70	15.52	13.61
oregon	hay	20.75	35.71	29.15
oregon	SUGARBEET	0.00	35.71	29.15
oregon	POTATOES	8.95	-2.25	3.10
oregon	PASTURE	56.29	0.00	0.00
pennsylvan	corn	34.69	36.73	58.25
pennsylvan	soybeans	42.86	0.00	0.00
pennsylvan	SOFT	48.28	1.90	-16.30
pennsylvan	sorghum	8.58	0.00	0.00
pennsylvan	barley	193.10	0.00	0.00
pennsylvan	oats	193.10	0.00	0.00
pennsylvan	silage	34.69	36.73	58.25
pennsylvan	hay	41.25	43.53	58.66
pennsylvan	POTATOES	22.10	-3.90	-13.50
pennsylvan	tomatofrsh	24.02	23.10	-34.92
pennsylvan	tomatoproc	24.02	23.10	-34.92
pennsylvan	PASTURE	20.54	0.00	0.00
rhodeislan	silage	28.57	0.00	0.00
rhodeislan	hay	41.25	43.53	58.66

rhodeislan	POTATOES	22.10	-3.90	-13.50
rhodeislan	PASTURE	20.54	0.00	0.00
southcarol	cotton	31.79	48.30	36.19
southcarol	corn	5.56	9.26	267.95
southcarol	soybeans	7.14	9.00	-6.74
southcarol	SOFT	37.93	4.10	-8.00
southcarol	sorghum	8.05	-3.18	-13.33
southcarol	barley	151.72	0.00	0.00
southcarol	oats	151.72	0.00	0.00
southcarol	silage	5.56	9.26	267.95
southcarol	hay	13.27	14.15	24.35
southcarol	tomatofrsh	11.27	3.87	-11.39
southcarol	PASTURE	28.10	0.00	0.00
southdakot	corn	-2.56	27.78	34.36
southdakot	soybeans	-7.69	26.61	-0.89
southdakot	HRSW	29.03	1.30	-22.00
southdakot	HRWW	29.03	1.30	-22.00
southdakot	DURW	29.03	1.30	-22.00
southdakot	sorghum	45.49	15.18	-12.86
southdakot	barley	116.13	5.20	-88.00
southdakot	oats	116.13	5.20	-88.00
southdakot	silage	-2.56	27.78	34.36
southdakot	hay	14.58	43.94	50.40
southdakot	POTATOES	20.70	2.10	-6.90
southdakot	PASTURE	22.97	0.00	0.00
tennessee	cotton	27.93	48.30	36.19
tennessee	corn	7.35	15.71	77.69
tennessee	soybeans	5.00	12.17	-10.03
tennessee	SOFT	70.97	0.00	0.00
tennessee	sorghum	24.26	0.00	0.00
tennessee	oats	283.87	0.00	0.00
tennessee	silage	7.35	0.00	0.00
tennessee	hay	26.88	28.42	40.90
tennessee	POTATOES	22.10	0.00	0.00
tennessee	tomatofrsh	17.34	8.24	-11.76
tennessee	PASTURE	13.45	0.00	0.00
TXHIPLAINS	cotton	28.95	36.25	36.19
TXHIPLAINS	corn	1.85	10.00	21.96
TXHIPLAINS	soybeans	-12.50	13.61	-4.30
TXHIPLAINS	HRWW	24.32	4.70	-11.90
TXHIPLAINS	sorghum	10.39	-3.12	-5.27



TXHIPLAINS	barley	97.30	18.80	-47.60
TXHIPLAINS	oats	97.30	18.80	-47.60
TXHIPLAINS	silage	1.85	10.00	21.96
TXHIPLAINS	hay	313.33	28.75	-19.31
TXHIPLAINS	SUGARBEET	313.33	28.75	-19.31
TXHIPLAINS	POTATOES	-8.50	-1.00	7.70
TXHIPLAINS	PASTURE	19.40	0.00	0.00
TXROLINGPL	cotton	48.50	50.68	36.19
TXROLINGPL	corn	1.85	10.00	21.96
TXROLINGPL	HRWW	24.32	4.70	-11.90
TXROLINGPL	sorghum	10.39	-3.12	-5.27
TXROLINGPL	barley	97.30	0.00	0.00
TXROLINGPL	oats	97.30	18.80	-47.60
TXROLINGPL	silage	1.85	10.00	21.96
TXROLINGPL	hay	313.33	28.75	-19.31
TXROLINGPL	POTATOES	-8.50	0.00	0.00
TXROLINGPL	PASTURE	19.40	0.00	0.00
TXCNTBLACK	cotton	31.21	41.94	36.19
TXCNTBLACK	corn	1.85	10.00	21.96
TXCNTBLACK	soybeans	-12.50	0.00	0.00
TXCNTBLACK	HRWW	24.32	4.70	-11.90
TXCNTBLACK	sorghum	10.39	-3.12	-5.27
TXCNTBLACK	rice	0.00	0.84	2.16
TXCNTBLACK	barley	97.30	0.00	0.00
TXCNTBLACK	oats	97.30	4.70	-11.90
TXCNTBLACK	silage	1.85	10.00	21.96
TXCNTBLACK	hay	313.33	28.75	-19.31
TXCNTBLACK	PASTURE	11.50	0.00	0.00
TXEAST	cotton	29.54	30.56	36.19
TXEAST	corn	1.85	10.00	21.96
TXEAST	soybeans	-12.50	11.32	-3.41
TXEAST	HRWW	24.32	4.70	-11.90
TXEAST	sorghum	10.39	-3.12	-5.27
TXEAST	rice	0.00	0.84	2.16
TXEAST	oats	97.30	4.70	-11.90
TXEAST	silage	1.85	0.00	0.00
TXEAST	hay	313.33	28.75	-19.31
TXEAST	tomatofrsh	8.54	3.26	-3.77
TXEAST	PASTURE	11.50	0.00	0.00
TXEDPLAT	cotton	19.07	44.22	36.19
TXEDPLAT	corn	1.85	10.00	21.96

TXEDPLAT	soybeans	-12.50	0.00	0.00
TXEDPLAT	HRWW	24.32	4.70	-11.90
TXEDPLAT	sorghum	10.39	-3.12	-5.27
TXEDPLAT	barley	97.30	0.00	0.00
TXEDPLAT	oats	97.30	4.70	-11.90
TXEDPLAT	silage	1.85	10.00	21.96
TXEDPLAT	hay	313.33	28.75	-19.31
TXEDPLAT	tomatofrsh	0.00	3.26	-3.77
TXEDPLAT	PASTURE	16.60	0.00	0.00
TXCOASTBE	cotton	7.67	15.73	36.19
TXCOASTBE	corn	1.85	10.00	21.96
TXCOASTBE	soybeans	-12.50	11.32	-3.41
TXCOASTBE	HRWW	24.32	0.00	0.00
TXCOASTBE	sorghum	10.39	-3.12	-5.27
TXCOASTBE	rice	0.00	0.84	2.16
TXCOASTBE	oats	97.30	4.70	-11.90
TXCOASTBE	hay	313.33	28.75	-19.31
TXCOASTBE	tomatofrsh	8.54	0.00	0.00
TXCOASTBE	PASTURE	16.60	0.00	0.00
TXSOUTH	cotton	-0.61	16.73	36.19
TXSOUTH	corn	1.85	10.00	21.96
TXSOUTH	soybeans	0.00	11.32	-3.41
TXSOUTH	HRWW	24.32	4.70	-11.90
TXSOUTH	sorghum	10.39	-3.12	-5.27
TXSOUTH	oats	97.30	4.70	-11.90
TXSOUTH	silage	1.85	10.00	21.96
TXSOUTH	hay	313.33	28.75	-19.31
TXSOUTH	POTATOES	0.00	-1.00	7.70
TXSOUTH	tomatofrsh	8.54	3.26	-3.77
TXSOUTH	orangefrsh	0.00	46.90	-7.30
TXSOUTH	orangeproc	0.00	46.90	-7.30
TXSOUTH	grpfrtfrsh	0.00	46.90	-7.30
TXSOUTH	grpfrtproc	0.00	46.90	-7.30
TXSOUTH	PASTURE	16.60	0.00	0.00
TXTRANSPEC	cotton	26.40	66.03	36.19
TXTRANSPEC	corn	1.85	0.00	0.00
TXTRANSPEC	HRWW	24.32	4.70	-11.90
TXTRANSPEC	sorghum	0.00	-5.31	-4.78
TXTRANSPEC	barley	0.00	4.70	-11.90
TXTRANSPEC	oats	0.00	4.70	-11.90
TXTRANSPEC	hay	313.33	28.75	-19.31

TXTRANSPEC	PASTURE	7.56	0.00	0.00
utah	corn	0.00	30.77	23.22
utah	HRSW	33.33	-7.40	-11.20
utah	HRWW	33.33	-7.40	-11.20
utah	barley	133.33	-14.80	-22.40
utah	oats	133.33	-14.80	-22.40
utah	silage	-75.00	30.77	23.22
utah	hay	20.83	38.83	30.10
utah	SUGARBEET	20.83	0.00	0.00
utah	POTATOES	0.00	-8.40	3.70
utah	PASTURE	8.82	0.00	0.00
vermont	silage	36.36	0.00	0.00
vermont	hay	41.25	43.53	58.66
vermont	PASTURE	20.54	0.00	0.00
virginia	cotton	45.64	48.30	36.19
virginia	corn	16.13	15.63	40.87
virginia	soybeans	15.79	10.96	-14.75
virginia	SOFT	44.83	1.90	-16.30
virginia	sorghum	8.58	0.00	0.00
virginia	barley	179.31	1.90	-16.30
virginia	oats	179.31	0.00	0.00
virginia	silage	16.13	15.63	40.87
virginia	hay	41.25	43.53	58.66
virginia	POTATOES	22.10	-3.90	-13.50
virginia	tomatofrsh	17.34	8.24	-11.76
virginia	tomatoproc	17.34	8.24	-11.76
virginia	PASTURE	18.52	0.00	0.00
washington	corn	-11.76	40.48	27.85
washington	HRSW	17.65	4.60	-11.60
washington	HRWW	17.65	4.60	-11.60
washington	barley	70.59	18.40	-46.40
washington	oats	70.59	18.40	-46.40
washington	silage	-11.76	40.48	27.85
washington	hay	24.59	52.94	44.65
washington	SUGARBEET	0.00	52.94	44.65
washington	POTATOES	2.70	2.10	3.30
washington	PASTURE	55.20	0.00	0.00
westvirgin	corn	12.70	0.00	0.00
westvirgin	SOFT	45.95	0.00	0.00
westvirgin	barley	183.78	0.00	0.00
westvirgin	oats	183.78	0.00	0.00

westvirgin	silage	12.70	0.00	0.00
westvirgin	hay	26.88	28.42	40.90
westvirgin	PASTURE	13.45	0.00	0.00
wisconsin	corn	28.26	34.78	128.85
wisconsin	soybeans	30.77	17.94	-19.50
wisconsin	HRSW	60.00	0.00	0.00
wisconsin	HRWW	60.00	0.00	0.00
wisconsin	barley	240.00	0.00	0.00
wisconsin	oats	240.00	0.00	0.00
wisconsin	silage	28.26	34.78	128.85
wisconsin	hay	46.27	54.41	109.50
wisconsin	POTATOES	19.50	0.20	-8.80
wisconsin	PASTURE	24.40	0.00	0.00
wyoming	corn	-35.71	42.22	31.38
wyoming	HRSW	10.00	1.30	-22.00
wyoming	HRWW	10.00	1.30	-22.00
wyoming	barley	40.00	2.60	-44.00
wyoming	oats	40.00	2.60	-44.00
wyoming	silage	-35.71	42.22	31.38
wyoming	hay	13.33	45.83	49.76
wyoming	SUGARBEET	0.00	45.83	49.76
wyoming	POTATOES	0.00	2.10	-6.90
wyoming	PASTURE	30.13	0.00	0.00

Table D1.8 Full data set for Hadley PNNL Scenario run for 2090 without Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	79.34	131.93	59.81
alabama	corn	22.22	25.00	56.74
alabama	soybeans	11.76	19.73	-7.20
alabama	SOFT	70.00	0.00	0.00
alabama	sorghum	16.27	0.00	0.00
alabama	oats	280.00	0.00	0.00
alabama	silage	22.22	0.00	0.00
alabama	hay	29.59	29.25	19.14
alabama	POTATOES	21.90	-7.80	-16.70
alabama	tomatofrsh	3.36	-2.08	7.55
alabama	PASTURE	59.75	0.00	0.00
arizona	cotton	0.00	182.43	59.81
arizona	corn	50.00	8.20	-0.84
arizona	HRWW	173.33	3.20	-50.20
arizona	DURW	173.33	3.20	-50.20
arizona	sorghum	0.00	20.88	-33.88
arizona	barley	0.00	12.80	-200.80
arizona	silage	50.00	8.20	-0.84
arizona	hay	115.79	23.62	9.79
arizona	SUGARBEET	115.79	0.00	0.00
arizona	POTATOES	0.00	-7.80	8.40
arizona	orangefrsh	0.00	111.60	3.90
arizona	orangeproc	0.00	111.60	3.90
arizona	grpfrtfrsh	0.00	111.60	3.90
arizona	grpfrtproc	0.00	111.60	3.90
arizona	PASTURE	26.29	0.00	0.00
arkansas	cotton	104.43	131.93	59.81
arkansas	corn	1.59	-1.67	17.44
arkansas	soybeans	-15.79	19.73	-7.20
arkansas	SOFT	65.62	8.90	-44.90
arkansas	sorghum	16.27	-5.22	-32.47
arkansas	rice	0.00	9.85	-5.47
arkansas	oats	262.50	8.90	-44.90
arkansas	silage	1.59	-1.67	17.44
arkansas	hay	29.59	29.25	19.14
arkansas	tomatofrsh	3.36	-2.08	7.55
arkansas	PASTURE	53.35	0.00	0.00

CALIFORNIN	cotton	53.71	94.95	59.81
CALIFORNIN	corn	166.67	5.77	11.05
CALIFORNIN	HRWW	40.00	-28.30	-73.60
CALIFORNIN	sorghum	106.99	20.88	-33.88
CALIFORNIN	rice	0.00	7.18	1.95
CALIFORNIN	barley	160.00	-113.20	-294.40
CALIFORNIN	oats	160.00	-113.20	-294.40
CALIFORNIN	silage	166.67	5.77	11.05
CALIFORNIN	hay	86.36	17.31	9.40
CALIFORNIN	SUGARBEET	0.00	17.31	9.40
CALIFORNIN	POTATOES	0.00	-12.25	12.65
CALIFORNIN	tomatofrsh	0.00	-19.65	1.84
CALIFORNIN	tomatoproc	0.00	-19.65	1.84
CALIFORNIN	orangefrsh	0.00	79.90	-27.20
CALIFORNIN	orangeproc	0.00	79.90	-27.20
CALIFORNIN	grpfrtfrsh	0.00	79.90	-27.20
CALIFORNIN	grpfrtproc	0.00	79.90	-27.20
CALIFORNIN	PASTURE	82.96	0.00	0.00
CALIFORNIS	cotton	0.00	94.95	59.81
CALIFORNIS	corn	166.67	5.77	11.05
CALIFORNIS	DURW	40.00	-28.30	-73.60
CALIFORNIS	sorghum	106.99	0.00	0.00
CALIFORNIS	rice	-12.89	0.00	0.00
CALIFORNIS	barley	160.00	-28.30	-73.60
CALIFORNIS	oats	160.00	-28.30	-73.60
CALIFORNIS	silage	166.67	5.77	11.05
CALIFORNIS	hay	86.36	17.31	9.40
CALIFORNIS	SUGARBEET	0.00	17.31	9.40
CALIFORNIS	POTATOES	7.60	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	-19.65	1.84
CALIFORNIS	tomatoproc	0.00	-19.65	1.84
CALIFORNIS	orangefrsh	0.00	57.60	-0.60
CALIFORNIS	orangeproc	0.00	57.60	-0.60
CALIFORNIS	grpfrtfrsh	0.00	57.60	-0.60
CALIFORNIS	grpfrtproc	0.00	57.60	-0.60
CALIFORNIS	PASTURE	131.54	0.00	0.00
colorado	corn	6.25	72.97	78.25
colorado	HRSW	55.56	22.50	-18.50
colorado	HRWW	55.56	22.50	-18.50
colorado	sorghum	106.99	20.88	-33.88
colorado	barley	222.22	45.00	-37.00

colorado	oats	222.22	45.00	-37.00
colorado	silage	6.25	72.97	78.25
colorado	hay	36.36	59.74	84.26
colorado	SUGARBEET	0.00	59.74	84.26
colorado	POTATOES	0.00	-7.80	8.40
colorado	PASTURE	24.60	0.00	0.00
conn	silage	23.26	0.00	0.00
conn	hay	43.75	0.00	0.00
conn	POTATOES	21.90	0.00	0.00
conn	PASTURE	28.97	0.00	0.00
delaware	corn	12.00	14.00	84.66
delaware	soybeans	12.50	20.49	-12.90
delaware	SOFT	95.83	8.50	-48.00
delaware	barley	383.33	8.50	-48.00
delaware	silage	12.00	0.00	0.00
delaware	hay	43.75	0.00	0.00
delaware	POTATOES	21.90	-7.80	-16.70
delaware	tomatoproc	42.16	40.93	-49.21
delaware	PASTURE	28.97	0.00	0.00
florida	cotton	77.90	131.93	59.81
florida	corn	-21.43	-15.79	346.36
florida	soybeans	-6.67	12.57	-18.42
florida	SOFT	48.57	8.90	-44.90
florida	oats	48.57	0.00	0.00
florida	silage	-21.43	-15.79	346.36
florida	hay	29.59	29.25	19.14
florida	SUGARCANE	6.51	6.51	2.07
florida	tomatofrsh	-22.06	-14.41	26.67
florida	orangefrsh	0.00	44.97	29.43
florida	orangeproc	0.00	44.97	29.43
florida	grpfrtfrsh	0.00	44.97	29.43
florida	grpfrtproc	0.00	44.97	29.43
florida	PASTURE	19.96	0.00	0.00
georgia	cotton	82.82	131.93	59.81
georgia	corn	1.92	3.85	99.02
georgia	soybeans	7.14	12.57	-18.42
georgia	SOFT	48.57	8.90	-44.90
georgia	sorghum	5.59	-6.29	-32.10
georgia	oats	194.29	8.90	-44.90
georgia	silage	1.92	3.85	99.02
georgia	hay	29.59	29.25	19.14

georgia	tomatofrsh	3.36	-2.08	7.55
georgia	PASTURE	49.29	0.00	0.00
idaho	corn	44.44	40.00	17.78
idaho	HRSW	29.63	-7.30	-17.20
idaho	HRWW	29.63	-7.30	-17.20
idaho	barley	118.52	-29.20	-68.80
idaho	oats	118.52	-29.20	-68.80
idaho	silage	0.00	40.00	17.78
idaho	hay	39.62	56.00	48.82
idaho	SUGARBEET	0.00	56.00	48.82
idaho	POTATOES	-32.90	-34.30	13.70
idaho	PASTURE	83.20	0.00	0.00
ILLINOISN	corn	19.30	16.95	20.75
ILLINOISN	soybeans	10.53	32.24	-36.07
ILLINOISN	SOFT	68.00	8.90	-44.90
ILLINOISN	sorghum	36.79	0.00	0.00
ILLINOISN	oats	272.00	8.90	-44.90
ILLINOISN	silage	19.30	16.95	20.75
ILLINOISN	hay	55.22	52.11	31.50
ILLINOISN	POTATOES	14.30	0.00	0.00
ILLINOISN	PASTURE	35.15	0.00	0.00
ILLINOISS	corn	19.30	16.95	20.75
ILLINOISS	soybeans	10.53	32.24	-36.07
ILLINOISS	SOFT	68.00	8.90	-44.90
ILLINOISS	sorghum	36.79	0.46	-54.03
ILLINOISS	oats	272.00	0.00	0.00
ILLINOISS	silage	19.30	0.00	0.00
ILLINOISS	hay	55.22	52.11	31.50
ILLINOISS	PASTURE	35.15	0.00	0.00
INDIANAN	corn	7.69	7.58	15.84
INDIANAN	soybeans	10.53	31.84	-41.41
INDIANAN	SOFT	61.54	8.50	-48.00
INDIANAN	sorghum	36.79	0.00	0.00
INDIANAN	oats	246.15	0.00	0.00
INDIANAN	silage	7.69	7.58	15.84
INDIANAN	hay	48.61	42.67	20.39
INDIANAN	POTATOES	14.30	-8.60	-12.30
INDIANAN	tomatofrsh	22.02	14.12	-57.94
INDIANAN	tomatoproc	22.02	14.12	-57.94
INDIANAN	PASTURE	28.49	0.00	0.00
INDIANAS	corn	7.69	7.58	15.84



INDIANAS	soybeans	10.53	31.84	-41.41
INDIANAS	SOFT	61.54	8.50	-48.00
INDIANAS	sorghum	36.79	0.00	0.00
INDIANAS	oats	246.15	0.00	0.00
INDIANAS	silage	7.69	0.00	0.00
INDIANAS	hay	48.61	42.67	20.39
INDIANAS	tomatofrsh	22.02	14.12	-57.94
INDIANAS	tomatoproc	22.02	14.12	-57.94
INDIANAS	PASTURE	28.49	0.00	0.00
IOWAW	corn	20.00	20.00	29.67
IOWAW	soybeans	10.53	29.85	-43.05
IOWAW	SOFT	48.28	0.00	0.00
IOWAW	sorghum	121.74	0.00	0.00
IOWAW	oats	193.10	0.00	0.00
IOWAW	silage	20.00	0.00	0.00
IOWAW	hay	38.67	37.18	40.07
IOWAW	PASTURE	40.05	0.00	0.00
IOWACENT	corn	20.00	20.00	29.67
IOWACENT	soybeans	10.53	29.85	-43.05
IOWACENT	SOFT	48.28	0.00	0.00
IOWACENT	sorghum	121.74	0.00	0.00
IOWACENT	oats	193.10	7.10	-28.90
IOWACENT	silage	20.00	0.00	0.00
IOWACENT	hay	38.67	37.18	40.07
IOWACENT	PASTURE	40.05	0.00	0.00
IOWANE	corn	20.00	20.00	29.67
IOWANE	soybeans	10.53	29.85	-43.05
IOWANE	SOFT	48.28	0.00	0.00
IOWANE	sorghum	36.79	0.00	0.00
IOWANE	oats	193.10	0.00	0.00
IOWANE	silage	20.00	0.00	0.00
IOWANE	hay	38.67	37.18	40.07
IOWANE	POTATOES	26.20	1.50	-13.80
IOWANE	PASTURE	40.05	0.00	0.00
IOWAS	corn	20.00	20.00	29.67
IOWAS	soybeans	10.53	29.85	-43.05
IOWAS	SOFT	48.28	0.00	0.00
IOWAS	sorghum	36.79	0.00	0.00
IOWAS	oats	193.10	0.00	0.00
IOWAS	silage	20.00	0.00	0.00
IOWAS	hay	38.67	37.18	40.07

IOWAS	PASTURE	40.05	0.00	0.00
kansas	corn	6.25	6.45	19.49
kansas	soybeans	-17.65	25.40	-19.71
kansas	HRWW	52.94	16.40	-34.27
kansas	sorghum	42.20	-6.44	-36.01
kansas	barley	211.76	65.60	-137.07
kansas	oats	211.76	65.60	-137.07
kansas	silage	6.25	6.45	19.49
kansas	hay	25.81	52.27	57.95
kansas	SUGARBEET	25.81	0.00	0.00
kansas	PASTURE	29.22	0.00	0.00
kentucky	corn	11.59	8.33	6.12
kentucky	soybeans	-4.76	27.92	-31.62
kentucky	SOFT	75.00	0.00	0.00
kentucky	sorghum	45.93	0.00	0.00
kentucky	barley	300.00	0.00	0.00
kentucky	oats	300.00	0.00	0.00
kentucky	silage	11.59	0.00	0.00
kentucky	hay	27.96	27.37	6.17
kentucky	PASTURE	27.07	0.00	0.00
louisiana	cotton	66.67	131.93	59.81
louisiana	corn	6.35	6.56	94.86
louisiana	soybeans	-11.76	19.73	-7.20
louisiana	SOFT	29.27	8.90	-44.90
louisiana	sorghum	16.27	-5.22	-32.47
louisiana	rice	0.00	9.85	-5.47
louisiana	silage	6.35	0.00	0.00
louisiana	hay	29.59	29.25	19.14
louisiana	SUGARCANE	9.85	9.85	-5.47
louisiana	tomatofrsh	3.36	-2.08	7.55
louisiana	PASTURE	53.35	0.00	0.00
maine	oats	242.86	0.00	0.00
maine	silage	32.43	0.00	0.00
maine	hay	43.75	35.29	55.18
maine	POTATOES	16.00	3.70	-2.70
maine	PASTURE	20.89	0.00	0.00
maryland	corn	15.00	17.50	111.36
maryland	soybeans	15.38	20.49	-12.90
maryland	SOFT	82.14	8.50	-48.00
maryland	barley	328.57	8.50	-48.00
maryland	oats	328.57	0.00	0.00

maryland	silage	15.00	17.50	111.36
maryland	hay	43.75	35.29	55.18
maryland	POTATOES	21.90	-7.80	-16.70
maryland	tomatofrsh	24.40	17.65	5.04
maryland	tomatoproc	24.40	17.65	5.04
maryland	PASTURE	19.86	0.00	0.00
mass	silage	24.39	0.00	0.00
mass	hay	43.75	35.29	55.18
mass	POTATOES	16.00	0.00	0.00
mass	tomatofrsh	42.16	40.93	-49.21
mass	PASTURE	20.89	0.00	0.00
michigan	corn	47.73	51.11	72.10
michigan	soybeans	53.85	44.97	-27.00
michigan	SOFT	70.00	11.50	-20.00
michigan	barley	280.00	0.00	0.00
michigan	oats	280.00	11.50	-20.00
michigan	silage	47.73	51.11	72.10
michigan	hay	45.16	50.77	70.32
michigan	SUGARBEET	45.16	50.77	70.32
michigan	POTATOES	40.00	-1.50	-12.40
michigan	tomatofrsh	70.69	57.64	-22.30
michigan	tomatoproc	70.69	57.64	-22.30
michigan	PASTURE	35.26	0.00	0.00
minnesota	corn	32.00	35.29	61.29
minnesota	soybeans	40.00	78.93	-19.40
minnesota	HRSW	50.00	11.50	-20.00
minnesota	HRWW	50.00	11.50	-20.00
minnesota	DURW	50.00	11.50	-20.00
minnesota	barley	200.00	46.00	-80.00
minnesota	oats	200.00	46.00	-80.00
minnesota	silage	32.00	35.29	61.29
minnesota	hay	33.33	45.24	87.99
minnesota	SUGARBEET	33.33	45.24	87.99
minnesota	POTATOES	26.20	1.50	-13.80
minnesota	PASTURE	24.81	0.00	0.00
mississippi	cotton	111.29	131.93	59.81
mississippi	corn	-5.00	5.08	41.68
mississippi	soybeans	-17.65	19.73	-7.20
mississippi	SOFT	55.88	8.90	-44.90
mississippi	sorghum	16.27	-5.22	-32.47
mississippi	rice	0.00	15.00	-10.55

mississippi	silage	-5.00	5.08	41.68
mississippi	hay	29.59	29.25	19.14
mississippi	PASTURE	59.75	0.00	0.00
missouri	cotton	99.33	77.93	59.81
missouri	corn	7.94	7.81	2.50
missouri	soybeans	-5.00	25.40	-19.71
missouri	SOFT	70.97	8.90	-44.90
missouri	sorghum	22.49	-6.82	-45.22
missouri	rice	0.00	9.85	-5.47
missouri	oats	283.87	0.00	0.00
missouri	silage	7.94	7.81	2.50
missouri	hay	38.64	35.05	17.51
missouri	PASTURE	42.86	0.00	0.00
montana	corn	0.00	51.22	22.13
montana	HRSW	26.92	-0.30	-26.10
montana	HRWW	26.92	-0.30	-26.10
montana	DURW	26.92	-0.30	-26.10
montana	barley	107.69	-1.20	-104.40
montana	oats	107.69	-1.20	-104.40
montana	silage	-28.57	51.22	22.13
montana	hay	15.56	44.58	49.71
montana	SUGARBEET	0.00	44.58	49.71
montana	POTATOES	-32.90	-34.30	13.70
montana	PASTURE	21.05	0.00	0.00
nebraska	corn	6.25	25.00	36.06
nebraska	soybeans	-17.65	46.33	-7.14
nebraska	HRWW	46.43	22.50	-18.50
nebraska	sorghum	106.99	20.88	-33.88
nebraska	barley	185.71	90.00	-74.00
nebraska	oats	185.71	90.00	-74.00
nebraska	silage	6.25	25.00	36.06
nebraska	hay	30.91	50.00	56.52
nebraska	SUGARBEET	0.00	50.00	56.52
nebraska	POTATOES	-37.80	-27.60	8.40
nebraska	PASTURE	9.63	0.00	0.00
nevada	HRSW	0.00	-7.30	-17.20
nevada	HRWW	0.00	-7.30	-17.20
nevada	barley	0.00	-14.60	-34.40
nevada	hay	0.00	16.04	7.15
nevada	POTATOES	0.00	-34.30	13.70
nevada	PASTURE	84.04	0.00	0.00

newhampshi	silage	28.57	0.00	0.00
newhampshi	hay	43.75	0.00	0.00
newhampshi	PASTURE	28.97	0.00	0.00
newjersey	corn	23.53	23.08	77.15
newjersey	soybeans	25.00	20.49	-12.90
newjersey	SOFT	113.64	8.50	-48.00
newjersey	barley	454.55	0.00	0.00
newjersey	oats	454.55	0.00	0.00
newjersey	silage	23.53	0.00	0.00
newjersey	hay	43.75	35.29	55.18
newjersey	POTATOES	21.90	-7.80	-16.70
newjersey	tomatofrsh	42.16	40.93	-49.21
newjersey	tomatoproc	42.16	40.93	-49.21
newjersey	PASTURE	28.97	0.00	0.00
newmexico	cotton	84.16	53.31	59.81
newmexico	corn	-7.69	40.00	76.80
newmexico	HRWW	78.57	3.20	-50.20
newmexico	sorghum	106.99	20.88	-33.88
newmexico	barley	314.29	3.20	-50.20
newmexico	silage	-7.69	40.00	76.80
newmexico	hay	72.22	59.74	84.26
newmexico	SUGARBEET	72.22	0.00	0.00
newmexico	POTATOES	0.00	-7.80	8.40
newmexico	PASTURE	24.60	0.00	0.00
newyork	corn	31.82	31.82	80.60
newyork	soybeans	46.15	0.00	0.00
newyork	SOFT	89.29	0.00	0.00
newyork	oats	357.14	8.50	-48.00
newyork	silage	31.82	31.82	80.60
newyork	hay	43.75	35.29	55.18
newyork	POTATOES	21.90	-7.80	-16.70
newyork	tomatofrsh	42.16	40.93	-49.21
newyork	tomatoproc	42.16	40.93	-49.21
newyork	PASTURE	28.97	0.00	0.00
northcarol	cotton	68.97	87.56	59.81
northcarol	corn	8.00	7.84	43.27
northcarol	soybeans	7.14	20.49	-12.90
northcarol	SOFT	59.37	8.90	-44.90
northcarol	sorghum	8.73	0.00	0.00
northcarol	barley	237.50	0.00	0.00
northcarol	oats	237.50	8.90	-44.90

northcarol	silage	8.00	7.84	43.27
northcarol	hay	29.59	29.25	19.14
northcarol	POTATOES	21.90	-7.80	-16.70
northcarol	tomatofrsh	24.40	17.65	5.04
northcarol	PASTURE	19.86	0.00	0.00
northdakot	corn	-14.63	20.37	41.96
northdakot	soybeans	20.00	46.33	-7.14
northdakot	HRSW	13.33	6.90	-19.00
northdakot	HRWW	13.33	6.90	-19.00
northdakot	DURW	13.33	6.90	-19.00
northdakot	barley	53.33	27.60	-76.00
northdakot	oats	53.33	27.60	-76.00
northdakot	silage	-14.63	20.37	41.96
northdakot	hay	-1.85	37.66	69.37
northdakot	SUGARBEET	-1.85	37.66	69.37
northdakot	POTATOES	10.90	-0.80	-3.80
northdakot	PASTURE	32.17	0.00	0.00
OHIONW	corn	16.67	19.67	37.43
OHIONW	soybeans	10.00	31.84	-41.41
OHIONW	SOFT	79.31	8.50	-48.00
OHIONW	oats	317.24	0.00	0.00
OHIONW	silage	16.67	0.00	0.00
OHIONW	hay	40.00	38.55	37.41
OHIONW	SUGARBEET	40.00	38.55	37.41
OHIONW	POTATOES	14.30	-8.60	-12.30
OHIONW	tomatofrsh	21.14	12.11	-58.62
OHIONW	tomatoproc	21.14	12.11	-58.62
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	16.67	19.67	37.43
OHIOS	soybeans	10.00	31.84	-41.41
OHIOS	SOFT	79.31	8.50	-48.00
OHIOS	oats	317.24	0.00	0.00
OHIOS	silage	16.67	0.00	0.00
OHIOS	hay	40.00	38.55	37.41
OHIOS	SUGARBEET	40.00	0.00	0.00
OHIOS	tomatofrsh	21.14	12.11	-58.62
OHIOS	tomatoproc	21.14	12.11	-58.62
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	16.67	0.00	0.00
OHIONE	soybeans	10.00	31.84	-41.41
OHIONE	SOFT	79.31	0.00	0.00

OHIONE	oats	317.24	34.00	-192.00
OHIONE	silage	16.67	0.00	0.00
OHIONE	hay	40.00	38.55	37.41
OHIONE	SUGARBEET	40.00	0.00	0.00
OHIONE	tomatofrsh	21.14	12.11	-58.62
OHIONE	tomatoproc	21.14	12.11	-58.62
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	159.33	123.56	59.81
oklahoma	corn	5.26	-1.67	-3.33
oklahoma	soybeans	-23.53	25.40	-19.71
oklahoma	HRWW	44.74	13.60	-35.30
oklahoma	sorghum	48.03	-13.35	-31.31
oklahoma	barley	178.95	0.00	0.00
oklahoma	oats	178.95	54.40	-141.20
oklahoma	silage	5.26	-1.67	-3.33
oklahoma	hay	28.74	35.92	31.28
oklahoma	PASTURE	33.27	0.00	0.00
oregon	corn	17.39	22.41	12.73
oregon	HRSW	34.29	11.75	-21.50
oregon	HRWW	34.29	11.75	-21.50
oregon	barley	137.14	23.50	-43.00
oregon	oats	137.14	23.50	-43.00
oregon	silage	17.39	22.41	12.73
oregon	hay	35.85	39.29	44.71
oregon	SUGARBEET	0.00	39.29	44.71
oregon	POTATOES	7.60	-12.25	12.65
oregon	PASTURE	74.00	0.00	0.00
pennsylvan	corn	40.82	42.86	49.08
pennsylvan	soybeans	57.14	0.00	0.00
pennsylvan	SOFT	72.41	8.50	-48.00
pennsylvan	sorghum	8.73	0.00	0.00
pennsylvan	barley	289.66	0.00	0.00
pennsylvan	oats	289.66	0.00	0.00
pennsylvan	silage	40.82	42.86	49.08
pennsylvan	hay	43.75	35.29	55.18
pennsylvan	POTATOES	21.90	-7.80	-16.70
pennsylvan	tomatofrsh	42.16	40.93	-49.21
pennsylvan	tomatoproc	42.16	40.93	-49.21
pennsylvan	PASTURE	28.97	0.00	0.00
rhodeislan	silage	34.29	0.00	0.00
rhodeislan	hay	43.75	35.29	55.18

rhodeislan	POTATOES	21.90	-7.80	-16.70
rhodeislan	PASTURE	28.97	0.00	0.00
southcarol	cotton	80.96	87.56	59.81
southcarol	corn	9.26	12.96	94.87
southcarol	soybeans	7.14	14.67	-13.11
southcarol	SOFT	55.17	8.90	-44.90
southcarol	sorghum	13.03	-8.53	-34.76
southcarol	barley	220.69	0.00	0.00
southcarol	oats	220.69	0.00	0.00
southcarol	silage	9.26	12.96	94.87
southcarol	hay	29.59	29.25	19.14
southcarol	tomatofrsh	19.37	12.72	6.96
southcarol	PASTURE	58.75	0.00	0.00
southdakot	corn	-17.95	25.93	34.14
southdakot	soybeans	20.00	46.33	-7.14
southdakot	HRSW	22.58	7.10	-28.90
southdakot	HRWW	22.58	7.10	-28.90
southdakot	DURW	22.58	7.10	-28.90
southdakot	sorghum	121.74	19.91	-40.45
southdakot	barley	90.32	28.40	-115.60
southdakot	oats	90.32	28.40	-115.60
southdakot	silage	-17.95	25.93	34.14
southdakot	hay	16.67	43.94	68.03
southdakot	POTATOES	10.90	-0.80	-3.80
southdakot	PASTURE	35.48	0.00	0.00
tennessee	cotton	71.15	87.56	59.81
tennessee	corn	13.24	14.29	24.56
tennessee	soybeans	5.00	21.07	-24.22
tennessee	SOFT	80.65	0.00	0.00
tennessee	sorghum	45.93	0.00	0.00
tennessee	oats	322.58	0.00	0.00
tennessee	silage	13.24	0.00	0.00
tennessee	hay	27.96	27.37	6.17
tennessee	POTATOES	21.90	0.00	0.00
tennessee	tomatofrsh	24.40	17.65	5.04
tennessee	PASTURE	17.39	0.00	0.00
TXHIPLAINS	cotton	73.73	65.71	59.81
TXHIPLAINS	corn	-5.56	-5.00	12.59
TXHIPLAINS	soybeans	-18.75	25.40	-19.71
TXHIPLAINS	HRWW	2.70	18.60	-17.50
TXHIPLAINS	sorghum	89.94	-8.51	-32.05



TXHIPLAINS	barley	10.81	74.40	-70.00
TXHIPLAINS	oats	10.81	74.40	-70.00
TXHIPLAINS	silage	-5.56	-5.00	12.59
TXHIPLAINS	hay	380.00	35.00	-9.43
TXHIPLAINS	SUGARBEET	380.00	35.00	-9.43
TXHIPLAINS	POTATOES	-5.60	-7.80	8.40
TXHIPLAINS	PASTURE	39.02	0.00	0.00
TXROLINGPL	cotton	123.55	91.88	59.81
TXROLINGPL	corn	-5.56	-5.00	12.59
TXROLINGPL	HRWW	2.70	18.60	-17.50
TXROLINGPL	sorghum	89.94	-8.51	-32.05
TXROLINGPL	barley	10.81	0.00	0.00
TXROLINGPL	oats	10.81	74.40	-70.00
TXROLINGPL	silage	-5.56	-5.00	12.59
TXROLINGPL	hay	380.00	35.00	-9.43
TXROLINGPL	POTATOES	-5.60	0.00	0.00
TXROLINGPL	PASTURE	39.02	0.00	0.00
TXCNTBLACK	cotton	79.50	76.04	59.81
TXCNTBLACK	corn	-5.56	-5.00	12.59
TXCNTBLACK	soybeans	-18.75	0.00	0.00
TXCNTBLACK	HRWW	2.70	18.60	-17.50
TXCNTBLACK	sorghum	89.94	-8.51	-32.05
TXCNTBLACK	rice	0.00	8.79	-0.43
TXCNTBLACK	barley	10.81	0.00	0.00
TXCNTBLACK	oats	10.81	18.60	-17.50
TXCNTBLACK	silage	-5.56	-5.00	12.59
TXCNTBLACK	hay	380.00	35.00	-9.43
TXCNTBLACK	PASTURE	34.57	0.00	0.00
TXEAST	cotton	75.24	55.40	59.81
TXEAST	corn	-5.56	-5.00	12.59
TXEAST	soybeans	-18.75	19.73	-7.20
TXEAST	HRWW	2.70	18.60	-17.50
TXEAST	sorghum	89.94	-8.51	-32.05
TXEAST	rice	0.00	8.79	-0.43
TXEAST	oats	10.81	18.60	-17.50
TXEAST	silage	-5.56	0.00	0.00
TXEAST	hay	380.00	35.00	-9.43
TXEAST	tomatofrsh	3.36	-2.08	7.55
TXEAST	PASTURE	34.57	0.00	0.00
TXEDPLAT	cotton	48.56	80.17	59.81
TXEDPLAT	corn	-5.56	-5.00	12.59

TXEDPLAT	soybeans	-18.75	0.00	0.00
TXEDPLAT	HRWW	2.70	18.60	-17.50
TXEDPLAT	sorghum	89.94	-8.51	-32.05
TXEDPLAT	barley	10.81	0.00	0.00
TXEDPLAT	oats	10.81	18.60	-17.50
TXEDPLAT	silage	-5.56	-5.00	12.59
TXEDPLAT	hay	380.00	35.00	-9.43
TXEDPLAT	tomatofrsh	0.00	-2.08	7.55
TXEDPLAT	PASTURE	47.29	0.00	0.00
TXCOASTBE	cotton	19.54	28.53	59.81
TXCOASTBE	corn	-5.56	-5.00	12.59
TXCOASTBE	soybeans	-18.75	19.73	-7.20
TXCOASTBE	HRWW	2.70	0.00	0.00
TXCOASTBE	sorghum	89.94	-8.51	-32.05
TXCOASTBE	rice	0.00	8.79	-0.43
TXCOASTBE	oats	10.81	18.60	-17.50
TXCOASTBE	hay	380.00	35.00	-9.43
TXCOASTBE	tomatofrsh	3.36	0.00	0.00
TXCOASTBE	PASTURE	47.29	0.00	0.00
TXSOUTH	cotton	-1.56	30.32	59.81
TXSOUTH	corn	-5.56	-5.00	12.59
TXSOUTH	soybeans	0.00	19.73	-7.20
TXSOUTH	HRWW	2.70	18.60	-17.50
TXSOUTH	sorghum	89.94	-8.51	-32.05
TXSOUTH	oats	10.81	18.60	-17.50
TXSOUTH	silage	-5.56	-5.00	12.59
TXSOUTH	hay	380.00	35.00	-9.43
TXSOUTH	POTATOES	0.00	-7.80	8.40
TXSOUTH	tomatofrsh	3.36	-2.08	7.55
TXSOUTH	orangefrsh	0.00	103.60	13.80
TXSOUTH	orangeproc	0.00	103.60	13.80
TXSOUTH	grpfrtfrsh	0.00	103.60	13.80
TXSOUTH	grpfrtproc	0.00	103.60	13.80
TXSOUTH	PASTURE	47.29	0.00	0.00
TXTRANSPEC	cotton	67.26	119.70	59.81
TXTRANSPEC	corn	-5.56	0.00	0.00
TXTRANSPEC	HRWW	2.70	18.60	-17.50
TXTRANSPEC	sorghum	0.00	-12.84	-18.48
TXTRANSPEC	barley	0.00	18.60	-17.50
TXTRANSPEC	oats	0.00	18.60	-17.50
TXTRANSPEC	hay	380.00	35.00	-9.43

TXTRANSPEC	PASTURE	14.32	0.00	0.00
utah	corn	0.00	21.15	16.37
utah	HRSW	150.00	-7.30	-17.20
utah	HRWW	150.00	-7.30	-17.20
utah	barley	600.00	-14.60	-34.40
utah	oats	600.00	-14.60	-34.40
utah	silage	-50.00	21.15	16.37
utah	hay	83.33	33.98	35.75
utah	SUGARBEET	83.33	0.00	0.00
utah	POTATOES	0.00	-34.30	13.70
utah	PASTURE	84.04	0.00	0.00
vermont	silage	34.09	0.00	0.00
vermont	hay	43.75	35.29	55.18
vermont	PASTURE	28.97	0.00	0.00
virginia	cotton	116.25	87.56	59.81
virginia	corn	12.90	12.50	2.03
virginia	soybeans	10.53	20.49	-12.90
virginia	SOFT	68.97	8.50	-48.00
virginia	sorghum	8.73	0.00	0.00
virginia	barley	275.86	8.50	-48.00
virginia	oats	275.86	0.00	0.00
virginia	silage	12.90	12.50	2.03
virginia	hay	43.75	35.29	55.18
virginia	POTATOES	21.90	-7.80	-16.70
virginia	tomatofrsh	24.40	17.65	5.04
virginia	tomatoproc	24.40	17.65	5.04
virginia	PASTURE	19.86	0.00	0.00
washington	corn	29.41	64.29	37.01
washington	HRSW	35.29	11.75	-21.50
washington	HRWW	35.29	11.75	-21.50
washington	barley	141.18	47.00	-86.00
washington	oats	141.18	47.00	-86.00
washington	silage	29.41	64.29	37.01
washington	hay	32.79	56.86	67.40
washington	SUGARBEET	0.00	56.86	67.40
washington	POTATOES	-13.50	-3.40	18.70
washington	PASTURE	81.73	0.00	0.00
westvirgin	corn	17.46	0.00	0.00
westvirgin	SOFT	54.05	0.00	0.00
westvirgin	barley	216.22	0.00	0.00
westvirgin	oats	216.22	0.00	0.00

westvirgin	silage	17.46	0.00	0.00
westvirgin	hay	27.96	27.37	6.17
westvirgin	PASTURE	17.39	0.00	0.00
wisconsin	corn	47.83	52.17	112.36
wisconsin	soybeans	61.54	39.78	-36.00
wisconsin	HRSW	60.00	0.00	0.00
wisconsin	HRWW	60.00	0.00	0.00
wisconsin	barley	240.00	0.00	0.00
wisconsin	oats	240.00	0.00	0.00
wisconsin	silage	47.83	52.17	112.36
wisconsin	hay	50.75	52.94	101.39
wisconsin	POTATOES	26.20	1.50	-13.80
wisconsin	PASTURE	36.79	0.00	0.00
wyoming	corn	-28.57	37.78	27.86
wyoming	HRSW	20.00	7.10	-28.90
wyoming	HRWW	20.00	7.10	-28.90
wyoming	barley	80.00	14.20	-57.80
wyoming	oats	80.00	14.20	-57.80
wyoming	silage	-28.57	37.78	27.86
wyoming	hay	16.67	41.67	65.57
wyoming	SUGARBEET	0.00	41.67	65.57
wyoming	POTATOES	0.00	-0.80	-3.80
wyoming	PASTURE	46.36	0.00	0.00

Table D2.1 Full data set for Canadian Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	17.33	46.47	-10.54
alabama	corn	-8.20	-15.80	-39.10
alabama	soybeans	-2.34	23.41	68.18
alabama	SOFT	-8.90	0.00	0.00
alabama	sorghum	25.95	0.00	0.00
alabama	oats	-8.90	0.00	0.00
alabama	silage	-8.20	0.00	0.00
alabama	hay	-62.10	-24.47	58.05
alabama	POTATOES	21.80	-8.70	-11.80
alabama	tomatofrsh	4.04	-11.21	-6.29
alabama	PASTURE	-53.48	0.00	0.00
arizona	cotton	0.00	64.26	-10.54
arizona	corn	19.20	-7.30	-35.10
arizona	HRWW	43.80	-5.80	-21.90
arizona	DURW	43.80	-5.80	-21.90
arizona	sorghum	0.00	49.49	16.29
arizona	barley	0.00	-23.20	-87.60
arizona	silage	19.20	-7.30	-35.10
arizona	hay	-10.55	4.71	3.85
arizona	SUGARBEET	-10.55	0.00	0.00
arizona	POTATOES	0.00	-3.90	17.00
arizona	orangefrsh	0.00	66.90	7.60
arizona	orangeproc	0.00	66.90	7.60
arizona	grpfrtfrsh	0.00	66.90	7.60
arizona	grpfrtproc	0.00	66.90	7.60
arizona	PASTURE	-8.37	0.00	0.00
arkansas	cotton	22.80	46.47	-10.54
arkansas	corn	3.60	-14.50	-23.20
arkansas	soybeans	-2.34	23.41	68.18
arkansas	SOFT	-8.90	-8.60	19.50
arkansas	sorghum	25.95	19.37	6.06
arkansas	rice	0.00	6.34	-3.22
arkansas	oats	-8.90	-8.60	19.50
arkansas	silage	3.60	-14.50	-23.20
arkansas	hay	-53.74	-27.19	27.85
arkansas	tomatofrsh	4.04	-11.21	-6.29
arkansas	PASTURE	-47.37	0.00	0.00

CALIFORNIN	cotton	11.73	33.44	-10.54
CALIFORNIN	corn	19.20	-7.30	-35.10
CALIFORNIN	HRWW	11.90	0.50	-10.10
CALIFORNIN	sorghum	52.88	49.49	16.29
CALIFORNIN	rice	0.00	15.20	12.96
CALIFORNIN	barley	47.60	2.00	-40.40
CALIFORNIN	oats	47.60	2.00	-40.40
CALIFORNIN	silage	19.20	-7.30	-35.10
CALIFORNIN	hay	45.27	25.39	0.55
CALIFORNIN	SUGARBEET	0.00	25.39	0.55
CALIFORNIN	POTATOES	0.00	-1.50	2.40
CALIFORNIN	tomatofrsh	0.00	9.57	6.82
CALIFORNIN	tomatoproc	0.00	9.57	6.82
CALIFORNIN	orangefrsh	0.00	41.70	-43.50
CALIFORNIN	orangeproc	0.00	41.70	-43.50
CALIFORNIN	grpfrtfrsh	0.00	41.70	-43.50
CALIFORNIN	grpfrtproc	0.00	41.70	-43.50
CALIFORNIN	PASTURE	59.87	0.00	0.00
CALIFORNIS	cotton	0.00	33.44	-10.54
CALIFORNIS	corn	19.20	-7.30	-35.10
CALIFORNIS	DURW	11.90	0.50	-10.10
CALIFORNIS	sorghum	52.88	0.00	0.00
CALIFORNIS	rice	2.58	0.00	0.00
CALIFORNIS	barley	11.90	0.50	-10.10
CALIFORNIS	oats	11.90	0.50	-10.10
CALIFORNIS	silage	19.20	-7.30	-35.10
CALIFORNIS	hay	48.45	103.83	12.39
CALIFORNIS	SUGARBEET	0.00	103.83	12.39
CALIFORNIS	POTATOES	-7.75	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	9.57	6.82
CALIFORNIS	tomatoproc	0.00	9.57	6.82
CALIFORNIS	orangefrsh	0.00	26.00	-5.20
CALIFORNIS	orangeproc	0.00	26.00	-5.20
CALIFORNIS	grpfrtfrsh	0.00	26.00	-5.20
CALIFORNIS	grpfrtproc	0.00	26.00	-5.20
CALIFORNIS	PASTURE	90.61	0.00	0.00
colorado	corn	24.70	-11.30	-42.50
colorado	HRSW	-0.10	8.40	19.30
colorado	HRWW	-0.10	8.40	19.30
colorado	sorghum	52.88	49.49	16.29
colorado	barley	-0.20	16.80	38.60

colorado	oats	-0.20	16.80	38.60
colorado	silage	24.70	-11.30	-42.50
colorado	hay	-2.13	8.69	-4.73
colorado	SUGARBEET	0.00	8.69	-4.73
colorado	POTATOES	0.00	-3.90	17.00
colorado	PASTURE	3.25	0.00	0.00
conn	hay	-9.79	0.00	0.00
conn	POTATOES	21.80	0.00	0.00
conn	PASTURE	1.77	0.00	0.00
delaware	corn	0.30	-8.70	-45.80
delaware	soybeans	27.46	11.51	16.13
delaware	SOFT	3.10	1.20	-12.20
delaware	barley	3.10	1.20	-12.20
delaware	silage	0.30	0.00	0.00
delaware	hay	-9.79	0.00	0.00
delaware	POTATOES	21.80	-8.70	-11.80
delaware	tomatoproc	29.27	29.56	-14.29
delaware	PASTURE	1.77	0.00	0.00
florida	cotton	17.01	46.47	-10.54
florida	corn	-8.20	-15.80	-39.10
florida	soybeans	12.10	25.80	44.74
florida	SOFT	-8.90	-8.60	19.50
florida	oats	-8.90	0.00	0.00
florida	silage	-8.20	-15.80	-39.10
florida	hay	-37.80	-26.81	32.90
florida	SUGARCANE	4.94	4.94	-32.41
florida	tomatofrsh	-12.30	-12.67	-10.48
florida	orangefrsh	0.00	8.97	4.07
florida	orangeproc	0.00	8.97	4.07
florida	grpfrtfrsh	0.00	8.97	4.07
florida	grpfrtproc	0.00	8.97	4.07
florida	PASTURE	-17.11	0.00	0.00
georgia	cotton	18.09	46.47	-10.54
georgia	corn	-8.20	-15.80	-39.10
georgia	soybeans	12.10	25.80	44.74
georgia	SOFT	-8.90	-8.60	19.50
georgia	sorghum	24.04	16.86	-1.85
georgia	oats	-8.90	-8.60	19.50
georgia	silage	-8.20	-15.80	-39.10
georgia	hay	-59.70	-21.82	34.16
georgia	tomatofrsh	4.04	-11.21	-6.29

georgia	PASTURE	-45.06	0.00	0.00
idaho	corn	19.20	-7.30	-35.10
idaho	HRSW	108.00	6.75	-20.85
idaho	HRWW	108.00	6.75	-20.85
idaho	barley	432.00	27.00	-83.40
idaho	oats	432.00	27.00	-83.40
idaho	silage	0.00	-7.30	-35.10
idaho	hay	30.72	57.70	11.80
idaho	SUGARBEET	0.00	57.70	11.80
idaho	POTATOES	2.00	-3.60	1.60
idaho	PASTURE	58.66	0.00	0.00
ILLINOISN	corn	18.50	-6.60	-29.00
ILLINOISN	soybeans	49.16	18.18	4.92
ILLINOISN	SOFT	-8.90	-8.60	19.50
ILLINOISN	sorghum	48.95	0.00	0.00
ILLINOISN	oats	-8.90	-8.60	19.50
ILLINOISN	silage	18.50	-6.60	-29.00
ILLINOISN	hay	-5.30	9.04	-4.02
ILLINOISN	POTATOES	-23.50	0.00	0.00
ILLINOISN	PASTURE	5.40	0.00	0.00
ILLINOISS	corn	18.50	-6.60	-29.00
ILLINOISS	soybeans	49.16	18.18	4.92
ILLINOISS	SOFT	-8.90	-8.60	19.50
ILLINOISS	sorghum	48.95	18.21	-20.38
ILLINOISS	oats	-8.90	0.00	0.00
ILLINOISS	silage	18.50	0.00	0.00
ILLINOISS	hay	-5.30	9.04	-4.02
ILLINOISS	PASTURE	5.40	0.00	0.00
INDIANAN	corn	-4.50	-11.00	-19.10
INDIANAN	soybeans	17.81	22.55	39.65
INDIANAN	SOFT	3.10	1.20	-12.20
INDIANAN	sorghum	48.95	0.00	0.00
INDIANAN	oats	3.10	0.00	0.00
INDIANAN	silage	-4.50	-11.00	-19.10
INDIANAN	hay	-14.84	-3.27	29.10
INDIANAN	POTATOES	-23.50	-18.10	7.30
INDIANAN	tomatofrsh	-6.50	-8.68	-33.64
INDIANAN	tomatoproc	-6.50	-8.68	-33.64
INDIANAN	PASTURE	-4.96	0.00	0.00
INDIANAS	corn	-4.50	-11.00	-19.10
INDIANAS	soybeans	17.81	22.55	39.65



INDIANAS	SOFT	3.10	1.20	-12.20
INDIANAS	sorghum	48.95	0.00	0.00
INDIANAS	oats	3.10	0.00	0.00
INDIANAS	silage	-4.50	0.00	0.00
INDIANAS	hay	-14.84	-3.27	29.10
INDIANAS	tomatofrsh	-6.50	-8.68	-33.64
INDIANAS	tomatoproc	-6.50	-8.68	-33.64
INDIANAS	PASTURE	-4.96	0.00	0.00
IOWAW	corn	18.40	-4.40	-48.50
IOWAW	soybeans	30.44	17.15	-32.45
IOWAW	SOFT	26.50	0.00	0.00
IOWAW	sorghum	142.91	0.00	0.00
IOWAW	oats	26.50	0.00	0.00
IOWAW	silage	18.40	0.00	0.00
IOWAW	hay	-31.44	5.01	-97.55
IOWAW	PASTURE	0.62	0.00	0.00
IOWACENT	corn	18.40	-4.40	-48.50
IOWACENT	soybeans	30.44	17.15	-32.45
IOWACENT	SOFT	26.50	0.00	0.00
IOWACENT	sorghum	142.91	0.00	0.00
IOWACENT	oats	26.50	-3.70	-37.30
IOWACENT	silage	18.40	0.00	0.00
IOWACENT	hay	-31.44	5.01	-97.55
IOWACENT	PASTURE	0.62	0.00	0.00
IOWANE	corn	18.40	-4.40	-48.50
IOWANE	soybeans	30.44	17.15	-32.45
IOWANE	SOFT	18.20	0.00	0.00
IOWANE	sorghum	48.95	0.00	0.00
IOWANE	oats	18.20	0.00	0.00
IOWANE	silage	18.40	0.00	0.00
IOWANE	hay	-31.44	5.01	-97.55
IOWANE	POTATOES	23.50	-12.70	-16.00
IOWANE	PASTURE	0.62	0.00	0.00
IOWAS	corn	18.40	-4.40	-48.50
IOWAS	soybeans	30.44	17.15	-32.45
IOWAS	SOFT	18.20	0.00	0.00
IOWAS	sorghum	48.95	0.00	0.00
IOWAS	oats	18.20	0.00	0.00
IOWAS	silage	18.40	0.00	0.00
IOWAS	hay	-31.44	5.01	-97.55
IOWAS	PASTURE	0.62	0.00	0.00

kansas	corn	3.60	-14.50	-23.20
kansas	soybeans	35.94	10.66	31.18
kansas	HRWW	-14.73	2.33	14.10
kansas	sorghum	17.77	13.16	9.82
kansas	barley	-58.93	9.33	56.40
kansas	oats	-58.93	9.33	56.40
kansas	silage	3.60	-14.50	-23.20
kansas	hay	-21.80	-16.02	-0.46
kansas	SUGARBEET	-21.80	0.00	0.00
kansas	PASTURE	-11.62	0.00	0.00
kentucky	corn	-4.50	-11.00	-19.10
kentucky	soybeans	14.26	22.09	40.32
kentucky	SOFT	3.10	0.00	0.00
kentucky	sorghum	19.87	0.00	0.00
kentucky	barley	3.10	0.00	0.00
kentucky	oats	3.10	0.00	0.00
kentucky	silage	-4.50	0.00	0.00
kentucky	hay	-16.10	-7.33	37.04
kentucky	PASTURE	-8.74	0.00	0.00
louisiana	cotton	14.56	46.47	-10.54
louisiana	corn	-8.20	-15.80	-39.10
louisiana	soybeans	-2.34	23.41	68.18
louisiana	SOFT	-8.90	-8.60	19.50
louisiana	sorghum	25.95	19.37	6.06
louisiana	rice	0.00	6.34	-3.22
louisiana	silage	-8.20	0.00	0.00
louisiana	hay	-53.74	-27.19	27.85
louisiana	SUGARCANE	6.34	6.34	-3.22
louisiana	tomatofrsh	4.04	-11.21	-6.29
louisiana	PASTURE	-47.37	0.00	0.00
maine	hay	-5.31	19.43	-53.04
maine	POTATOES	34.00	4.80	-13.30
maine	PASTURE	13.43	0.00	0.00
maryland	corn	0.30	-8.70	-45.80
maryland	soybeans	27.46	11.51	16.13
maryland	SOFT	3.10	1.20	-12.20
maryland	barley	3.10	1.20	-12.20
maryland	oats	3.10	0.00	0.00
maryland	silage	0.30	-8.70	-45.80
maryland	hay	-22.58	-8.18	-17.59
maryland	POTATOES	21.80	-8.70	-11.80

maryland	tomatofrsh	23.99	8.08	-33.61
maryland	tomatoproc	23.99	8.08	-33.61
maryland	PASTURE	-4.81	0.00	0.00
mass	hay	-5.31	19.43	-53.04
mass	POTATOES	34.00	0.00	0.00
mass	tomatofrsh	29.27	29.56	-14.29
mass	PASTURE	13.43	0.00	0.00
michigan	corn	80.55	70.35	-10.45
michigan	soybeans	101.10	38.54	0.38
michigan	SOFT	7.00	-11.40	-24.20
michigan	barley	7.00	0.00	0.00
michigan	oats	7.00	-11.40	-24.20
michigan	silage	80.55	70.35	-10.45
michigan	hay	-8.72	8.04	-6.48
michigan	SUGARBEET	-8.72	8.04	-6.48
michigan	POTATOES	25.50	-12.90	-8.30
michigan	tomatofrsh	42.13	37.50	-7.19
michigan	tomatoproc	42.13	37.50	-7.19
michigan	PASTURE	11.35	0.00	0.00
minnesota	corn	80.55	70.35	-10.45
minnesota	soybeans	94.94	54.53	-17.69
minnesota	HRSW	7.00	-11.40	-24.20
minnesota	HRWW	7.00	-11.40	-24.20
minnesota	DURW	7.00	-11.40	-24.20
minnesota	barley	28.00	-45.60	-96.80
minnesota	oats	28.00	-45.60	-96.80
minnesota	silage	80.55	70.35	-10.45
minnesota	hay	-5.09	16.56	-50.97
minnesota	SUGARBEET	-5.09	16.56	-50.97
minnesota	POTATOES	23.50	-12.70	-16.00
minnesota	PASTURE	15.89	0.00	0.00
mississippi	cotton	24.30	46.47	-10.54
mississippi	corn	-8.20	-15.80	-39.10
mississippi	soybeans	-2.34	23.41	68.18
mississippi	SOFT	-8.90	-8.60	19.50
mississippi	sorghum	25.95	19.37	6.06
mississippi	rice	0.00	8.07	54.13
mississippi	silage	-8.20	-15.80	-39.10
mississippi	hay	-62.10	-24.47	58.05
mississippi	PASTURE	-53.48	0.00	0.00
missouri	cotton	21.69	27.45	-10.54

missouri	corn	3.60	-14.50	-23.20
missouri	soybeans	35.94	10.66	31.18
missouri	SOFT	-8.90	-8.60	19.50
missouri	sorghum	23.10	8.11	-3.91
missouri	rice	0.00	6.34	-3.22
missouri	oats	-35.60	0.00	0.00
missouri	silage	3.60	-14.50	-23.20
missouri	hay	-2.66	-3.12	4.21
missouri	PASTURE	13.46	0.00	0.00
montana	corn	0.00	-7.30	-35.10
montana	HRSW	11.20	1.30	-13.30
montana	HRWW	11.20	1.30	-13.30
montana	DURW	11.20	1.30	-13.30
montana	barley	44.80	5.20	-53.20
montana	oats	44.80	5.20	-53.20
montana	silage	19.20	-7.30	-35.10
montana	hay	4.51	20.37	10.28
montana	SUGARBEET	0.00	20.37	10.28
montana	POTATOES	2.00	-3.60	1.60
montana	PASTURE	11.62	0.00	0.00
nebraska	corn	24.70	-11.30	-42.50
nebraska	soybeans	73.82	32.81	39.58
nebraska	HRWW	-0.10	8.40	19.30
nebraska	sorghum	52.88	49.49	16.29
nebraska	barley	-0.40	33.60	77.20
nebraska	oats	-0.40	33.60	77.20
nebraska	silage	24.70	-11.30	-42.50
nebraska	hay	-16.20	-2.68	12.88
nebraska	SUGARBEET	0.00	-2.68	12.88
nebraska	POTATOES	-9.90	-9.30	3.80
nebraska	PASTURE	-0.92	0.00	0.00
nevada	HRSW	0.00	6.75	-20.85
nevada	HRWW	0.00	6.75	-20.85
nevada	barley	0.00	13.50	-41.70
nevada	hay	0.00	-10.36	-5.00
nevada	POTATOES	0.00	-3.60	1.60
nevada	PASTURE	36.37	0.00	0.00
newhampshi	hay	-9.79	0.00	0.00
newhampshi	PASTURE	1.77	0.00	0.00
newjersey	corn	0.30	-8.70	-45.80
newjersey	soybeans	27.46	11.51	16.13

newjersey	SOFT	3.10	1.20	-12.20
newjersey	barley	3.10	0.00	0.00
newjersey	oats	3.10	0.00	0.00
newjersey	silage	0.30	0.00	0.00
newjersey	hay	-9.79	7.74	15.15
newjersey	POTATOES	21.80	-8.70	-11.80
newjersey	tomatofrsh	29.27	29.56	-14.29
newjersey	tomatoproc	29.27	29.56	-14.29
newjersey	PASTURE	1.77	0.00	0.00
newmexico	cotton	18.38	18.78	-10.54
newmexico	corn	24.70	-11.30	-42.50
newmexico	HRWW	43.80	-5.80	-21.90
newmexico	sorghum	52.88	49.49	16.29
newmexico	barley	43.80	-5.80	-21.90
newmexico	silage	24.70	-11.30	-42.50
newmexico	hay	-2.13	8.69	-4.73
newmexico	SUGARBEET	-2.13	0.00	0.00
newmexico	POTATOES	0.00	-3.90	17.00
newmexico	PASTURE	3.25	0.00	0.00
newyork	corn	0.30	-8.70	-45.80
newyork	soybeans	27.46	0.00	0.00
newyork	SOFT	3.10	0.00	0.00
newyork	oats	3.10	1.20	-12.20
newyork	silage	0.30	-8.70	-45.80
newyork	hay	-9.79	7.74	15.15
newyork	POTATOES	21.80	-8.70	-11.80
newyork	tomatofrsh	29.27	29.56	-14.29
newyork	tomatoproc	29.27	29.56	-14.29
newyork	PASTURE	1.77	0.00	0.00
northcarol	cotton	15.06	30.84	-10.54
northcarol	corn	-8.20	-15.80	-39.10
northcarol	soybeans	27.46	11.51	16.13
northcarol	SOFT	-8.90	-8.60	19.50
northcarol	sorghum	27.54	0.00	0.00
northcarol	barley	-8.90	0.00	0.00
northcarol	oats	-8.90	-8.60	19.50
northcarol	silage	-8.20	-15.80	-39.10
northcarol	hay	-22.58	-8.18	-17.59
northcarol	POTATOES	21.80	-8.70	-11.80
northcarol	tomatofrsh	23.99	8.08	-33.61
northcarol	PASTURE	-4.81	0.00	0.00

northdakot	corn	24.90	8.30	-16.00
northdakot	soybeans	73.82	32.81	39.58
northdakot	HRSW	18.20	2.50	-1.20
northdakot	HRWW	18.20	2.50	-1.20
northdakot	DURW	18.20	2.50	-1.20
northdakot	barley	72.80	10.00	-4.80
northdakot	oats	72.80	10.00	-4.80
northdakot	silage	24.90	8.30	-16.00
northdakot	hay	12.84	22.16	-13.30
northdakot	SUGARBEET	12.84	22.16	-13.30
northdakot	POTATOES	11.40	-2.50	-6.00
northdakot	PASTURE	30.28	0.00	0.00
OHIONW	corn	0.30	-8.70	-45.80
OHIONW	soybeans	17.81	22.55	39.65
OHIONW	SOFT	3.10	1.20	-12.20
OHIONW	oats	12.40	0.00	0.00
OHIONW	silage	0.30	0.00	0.00
OHIONW	hay	-6.03	4.83	-7.77
OHIONW	SUGARBEET	-6.03	4.83	-7.77
OHIONW	POTATOES	-23.50	-18.10	7.30
OHIONW	tomatofrsh	1.93	-2.39	-31.03
OHIONW	tomatoproc	1.93	-2.39	-31.03
OHIONW	PASTURE	6.06	0.00	0.00
OHIOS	corn	0.30	-8.70	-45.80
OHIOS	soybeans	17.81	22.55	39.65
OHIOS	SOFT	3.10	1.20	-12.20
OHIOS	oats	12.40	0.00	0.00
OHIOS	silage	0.30	0.00	0.00
OHIOS	hay	-6.03	4.83	-7.77
OHIOS	SUGARBEET	-6.03	0.00	0.00
OHIOS	tomatofrsh	1.93	-2.39	-31.03
OHIOS	tomatoproc	1.93	-2.39	-31.03
OHIOS	PASTURE	6.06	0.00	0.00
OHIONE	corn	0.30	0.00	0.00
OHIONE	soybeans	17.81	22.55	39.65
OHIONE	SOFT	3.10	0.00	0.00
OHIONE	oats	12.40	4.80	-48.80
OHIONE	silage	0.30	0.00	0.00
OHIONE	hay	-6.03	4.83	-7.77
OHIONE	SUGARBEET	-6.03	0.00	0.00
OHIONE	tomatofrsh	1.93	-2.39	-31.03

OHIONE	tomatoproc	1.93	-2.39	-31.03
OHIONE	PASTURE	6.06	0.00	0.00
oklahoma	cotton	34.79	43.52	-10.54
oklahoma	corn	3.60	-14.50	-23.20
oklahoma	soybeans	35.94	10.66	31.18
oklahoma	HRWW	-52.30	-12.30	60.90
oklahoma	sorghum	11.52	6.98	-1.52
oklahoma	barley	-209.20	0.00	0.00
oklahoma	oats	-209.20	-49.20	243.60
oklahoma	silage	3.60	-14.50	-23.20
oklahoma	hay	-33.68	-22.89	27.77
oklahoma	PASTURE	-25.70	0.00	0.00
oregon	corn	19.20	-7.30	-35.10
oregon	HRSW	16.25	0.25	-5.20
oregon	HRWW	16.25	0.25	-5.20
oregon	barley	32.50	0.50	-10.40
oregon	oats	32.50	0.50	-10.40
oregon	silage	19.20	-7.30	-35.10
oregon	hay	13.13	54.62	17.78
oregon	SUGARBEET	0.00	54.62	17.78
oregon	POTATOES	-7.75	-1.50	2.40
oregon	PASTURE	29.08	0.00	0.00
pennsylvan	corn	0.30	-8.70	-45.80
pennsylvan	soybeans	27.46	0.00	0.00
pennsylvan	SOFT	3.10	1.20	-12.20
pennsylvan	sorghum	27.54	0.00	0.00
pennsylvan	barley	3.10	0.00	0.00
pennsylvan	oats	3.10	0.00	0.00
pennsylvan	silage	0.30	-8.70	-45.80
pennsylvan	hay	-9.79	7.74	15.15
pennsylvan	POTATOES	21.80	-8.70	-11.80
pennsylvan	tomatofrsh	29.27	29.56	-14.29
pennsylvan	tomatoproc	29.27	29.56	-14.29
pennsylvan	PASTURE	1.77	0.00	0.00
rhodeislan	hay	-9.79	7.74	15.15
rhodeislan	POTATOES	21.80	-8.70	-11.80
rhodeislan	PASTURE	1.77	0.00	0.00
southcarol	cotton	17.68	30.84	-10.54
southcarol	corn	-8.20	-15.80	-39.10
southcarol	soybeans	1.33	13.35	30.71
southcarol	SOFT	-8.90	-8.60	19.50

southcarol	sorghum	22.24	19.09	11.90
southcarol	barley	-8.90	0.00	0.00
southcarol	oats	-8.90	0.00	0.00
southcarol	silage	-8.20	-15.80	-39.10
southcarol	hay	-64.88	-29.45	50.34
southcarol	tomatofrsh	-4.75	-8.43	10.13
southcarol	PASTURE	-55.83	0.00	0.00
southdakot	corn	19.20	-7.30	-35.10
southdakot	soybeans	73.82	32.81	39.58
southdakot	HRSW	26.50	-3.70	-37.30
southdakot	HRWW	26.50	-3.70	-37.30
southdakot	DURW	26.50	-3.70	-37.30
southdakot	sorghum	142.91	45.06	-11.98
southdakot	barley	106.00	-14.80	-149.20
southdakot	oats	106.00	-14.80	-149.20
southdakot	silage	19.20	-7.30	-35.10
southdakot	hay	2.61	11.00	-5.12
southdakot	POTATOES	11.40	-2.50	-6.00
southdakot	PASTURE	16.40	0.00	0.00
tennessee	cotton	15.54	30.84	-10.54
tennessee	corn	-8.20	-15.80	-39.10
tennessee	soybeans	17.26	13.56	48.44
tennessee	SOFT	3.10	0.00	0.00
tennessee	sorghum	19.87	0.00	0.00
tennessee	oats	3.10	0.00	0.00
tennessee	silage	-8.20	0.00	0.00
tennessee	hay	-25.37	-16.30	83.30
tennessee	POTATOES	21.80	0.00	0.00
tennessee	tomatofrsh	23.99	8.08	-33.61
tennessee	PASTURE	-19.17	0.00	0.00
TXHIPLAINS	cotton	16.10	23.15	-10.54
TXHIPLAINS	corn	3.60	-14.50	-23.20
TXHIPLAINS	soybeans	35.94	10.66	31.18
TXHIPLAINS	HRWW	-18.00	-5.50	-45.60
TXHIPLAINS	sorghum	55.36	19.43	-2.23
TXHIPLAINS	barley	-72.00	-22.00	-182.40
TXHIPLAINS	oats	-72.00	-22.00	-182.40
TXHIPLAINS	silage	3.60	-14.50	-23.20
TXHIPLAINS	hay	-5.82	-2.84	-5.23
TXHIPLAINS	SUGARBEET	-5.82	-2.84	-5.23
TXHIPLAINS	POTATOES	-17.00	-3.90	17.00



TXHIPLAINS	PASTURE	9.92	0.00	0.00
TXROLINGPL	cotton	26.98	32.36	-10.54
TXROLINGPL	corn	3.60	-14.50	-23.20
TXROLINGPL	HRWW	-18.00	-5.50	-45.60
TXROLINGPL	sorghum	55.36	19.43	-2.23
TXROLINGPL	barley	-72.00	0.00	0.00
TXROLINGPL	oats	-72.00	-22.00	-182.40
TXROLINGPL	silage	3.60	-14.50	-23.20
TXROLINGPL	hay	-5.82	-2.84	-5.23
TXROLINGPL	POTATOES	-17.00	0.00	0.00
TXROLINGPL	PASTURE	9.92	0.00	0.00
TXCNTBLACK	cotton	17.36	26.78	-10.54
TXCNTBLACK	corn	3.60	-14.50	-23.20
TXCNTBLACK	soybeans	35.94	0.00	0.00
TXCNTBLACK	HRWW	-18.00	-5.50	-45.60
TXCNTBLACK	sorghum	55.36	19.43	-2.23
TXCNTBLACK	rice	0.00	5.75	-14.66
TXCNTBLACK	barley	-18.00	0.00	0.00
TXCNTBLACK	oats	-18.00	-5.50	-45.60
TXCNTBLACK	silage	3.60	-14.50	-23.20
TXCNTBLACK	hay	-36.59	-21.85	-5.72
TXCNTBLACK	PASTURE	-2.51	0.00	0.00
TXEAST	cotton	16.43	19.51	-10.54
TXEAST	corn	-8.20	-15.80	-39.10
TXEAST	soybeans	-2.34	23.41	68.18
TXEAST	HRWW	-18.00	-5.50	-45.60
TXEAST	sorghum	55.36	19.43	-2.23
TXEAST	rice	0.00	5.75	-14.66
TXEAST	oats	-18.00	-5.50	-45.60
TXEAST	silage	-8.20	0.00	0.00
TXEAST	hay	-36.59	-21.85	-5.72
TXEAST	tomatofrsh	4.04	-11.21	-6.29
TXEAST	PASTURE	-2.51	0.00	0.00
TXEDPLAT	cotton	10.60	28.24	-10.54
TXEDPLAT	corn	24.70	-11.30	-42.50
TXEDPLAT	soybeans	-2.34	0.00	0.00
TXEDPLAT	HRWW	-18.00	-5.50	-45.60
TXEDPLAT	sorghum	55.36	19.43	-2.23
TXEDPLAT	barley	-18.00	0.00	0.00
TXEDPLAT	oats	-18.00	-5.50	-45.60
TXEDPLAT	silage	24.70	-11.30	-42.50

TXEDPLAT	hay	-25.27	-20.24	7.06
TXEDPLAT	tomatofrsh	0.00	-11.21	-6.29
TXEDPLAT	PASTURE	15.39	0.00	0.00
TXCOASTBE	cotton	4.27	10.05	-10.54
TXCOASTBE	corn	-8.20	-15.80	-39.10
TXCOASTBE	soybeans	-2.34	23.41	68.18
TXCOASTBE	HRWW	-18.00	0.00	0.00
TXCOASTBE	sorghum	55.36	19.43	-2.23
TXCOASTBE	rice	0.00	5.75	-14.66
TXCOASTBE	oats	-18.00	-5.50	-45.60
TXCOASTBE	hay	-25.27	-20.24	7.06
TXCOASTBE	tomatofrsh	4.04	0.00	0.00
TXCOASTBE	PASTURE	15.39	0.00	0.00
TXSOUTH	cotton	-0.34	10.68	-10.54
TXSOUTH	corn	24.70	-11.30	-42.50
TXSOUTH	soybeans	0.00	23.41	68.18
TXSOUTH	HRWW	-18.00	-5.50	-45.60
TXSOUTH	sorghum	55.36	19.43	-2.23
TXSOUTH	oats	-18.00	-5.50	-45.60
TXSOUTH	silage	24.70	-11.30	-42.50
TXSOUTH	hay	-25.27	-20.24	7.06
TXSOUTH	POTATOES	0.00	-3.90	17.00
TXSOUTH	tomatofrsh	4.04	-11.21	-6.29
TXSOUTH	orangefrsh	0.00	45.50	-14.40
TXSOUTH	orangeproc	0.00	45.50	-14.40
TXSOUTH	grpfrtfrsh	0.00	45.50	-14.40
TXSOUTH	grpfrtproc	0.00	45.50	-14.40
TXSOUTH	PASTURE	15.39	0.00	0.00
TXTRANSPEC	cotton	14.69	42.16	-10.54
TXTRANSPEC	corn	3.60	0.00	0.00
TXTRANSPEC	HRWW	-18.00	-5.50	-45.60
TXTRANSPEC	sorghum	0.00	13.21	-0.26
TXTRANSPEC	barley	0.00	-5.50	-45.60
TXTRANSPEC	oats	0.00	-5.50	-45.60
TXTRANSPEC	hay	4.99	-3.02	1.93
TXTRANSPEC	PASTURE	6.72	0.00	0.00
utah	corn	0.00	-7.30	-35.10
utah	HRSW	108.00	6.75	-20.85
utah	HRWW	108.00	6.75	-20.85
utah	barley	216.00	13.50	-41.70
utah	oats	216.00	13.50	-41.70

utah	silage	19.20	-7.30	-35.10
utah	hay	26.24	-10.36	-5.00
utah	SUGARBEET	26.24	0.00	0.00
utah	POTATOES	0.00	-3.60	1.60
utah	PASTURE	36.37	0.00	0.00
vermont	hay	-9.79	7.74	15.15
vermont	PASTURE	1.77	0.00	0.00
virginia	cotton	25.39	30.84	-10.54
virginia	corn	0.30	-8.70	-45.80
virginia	soybeans	27.46	11.51	16.13
virginia	SOFT	3.10	1.20	-12.20
virginia	sorghum	27.54	0.00	0.00
virginia	barley	3.10	1.20	-12.20
virginia	oats	3.10	0.00	0.00
virginia	silage	0.30	-8.70	-45.80
virginia	hay	-22.58	-8.18	-17.59
virginia	POTATOES	21.80	-8.70	-11.80
virginia	tomatofrsh	23.99	8.08	-33.61
virginia	tomatoproc	23.99	8.08	-33.61
virginia	PASTURE	-4.81	0.00	0.00
washington	corn	19.20	-7.30	-35.10
washington	HRSW	16.25	0.25	-5.20
washington	HRWW	16.25	0.25	-5.20
washington	barley	65.00	1.00	-20.80
washington	oats	65.00	1.00	-20.80
washington	silage	19.20	-7.30	-35.10
washington	hay	7.78	30.25	13.97
washington	SUGARBEET	0.00	30.25	13.97
washington	POTATOES	-0.30	4.80	-3.50
washington	PASTURE	10.54	0.00	0.00
westvirgin	corn	-8.20	0.00	0.00
westvirgin	SOFT	3.10	0.00	0.00
westvirgin	barley	3.10	0.00	0.00
westvirgin	oats	3.10	0.00	0.00
westvirgin	silage	-8.20	0.00	0.00
westvirgin	hay	-25.37	-16.30	83.30
westvirgin	PASTURE	-19.17	0.00	0.00
wisconsin	corn	4.50	1.40	-47.50
wisconsin	soybeans	60.17	28.62	-14.50
wisconsin	silage	4.50	1.40	-47.50
wisconsin	hay	1.94	12.00	-27.05

wisconsin	POTATOES	23.50	-12.70	-16.00
wisconsin	PASTURE	19.52	0.00	0.00
wyoming	corn	19.20	-7.30	-35.10
wyoming	HRSW	26.50	-3.70	-37.30
wyoming	HRWW	26.50	-3.70	-37.30
wyoming	barley	53.00	-7.40	-74.60
wyoming	oats	53.00	-7.40	-74.60
wyoming	silage	19.20	-7.30	-35.10
wyoming	hay	5.96	12.87	-12.53
wyoming	SUGARBEET	0.00	12.87	-12.53
wyoming	POTATOES	0.00	-2.50	-6.00
wyoming	PASTURE	26.00	0.00	0.00

Table D2.2 Full data set for Canadian Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	93.16	158.23	106.54
alabama	corn	-6.20	-10.60	-39.10
alabama	soybeans	-13.93	15.32	151.52
alabama	SOFT	-2.90	0.00	0.00
alabama	sorghum	30.06	0.00	0.00
alabama	oats	-2.90	0.00	0.00
alabama	silage	-6.20	0.00	0.00
alabama	hay	-35.21	-15.84	128.60
alabama	POTATOES	-17.60	-9.30	12.70
alabama	tomatofrsh	2.91	-19.77	-25.16
alabama	PASTURE	20.04	0.00	0.00
arizona	cotton	0.00	218.80	106.54
arizona	corn	15.50	-14.30	-65.90
arizona	HRWW	604.50	-14.90	-59.40
arizona	DURW	604.50	-14.90	-59.40
arizona	sorghum	0.00	26.69	-7.49
arizona	barley	0.00	-59.60	-237.60
arizona	silage	15.50	-14.30	-65.90
arizona	hay	63.89	34.83	0.00
arizona	SUGARBEET	63.89	0.00	0.00
arizona	POTATOES	0.00	-75.50	-54.10
arizona	orangefrsh	0.00	114.60	-0.70
arizona	orangeproc	0.00	114.60	-0.70
arizona	grpfrtfrsh	0.00	114.60	-0.70
arizona	grpfrtproc	0.00	114.60	-0.70
arizona	PASTURE	59.62	0.00	0.00
arkansas	cotton	122.63	158.23	106.54
arkansas	corn	4.80	-22.00	-53.30
arkansas	soybeans	-13.93	15.32	151.52
arkansas	SOFT	-2.90	-7.00	-12.60
arkansas	sorghum	30.06	6.19	14.72
arkansas	rice	0.00	1.25	50.16
arkansas	oats	-2.90	-7.00	-12.60
arkansas	silage	4.80	-22.00	-53.30
arkansas	hay	-38.36	-20.99	33.52
arkansas	tomatofrsh	2.91	-19.77	-25.16
arkansas	PASTURE	-3.59	0.00	0.00

CALIFORNIN	cotton	63.07	113.88	106.54
CALIFORNIN	corn	15.50	-14.30	-65.90
CALIFORNIN	HRWW	-20.80	-11.30	-24.50
CALIFORNIN	sorghum	107.46	26.69	-7.49
CALIFORNIN	rice	0.00	13.34	8.66
CALIFORNIN	barley	-83.20	-45.20	-98.00
CALIFORNIN	oats	-83.20	-45.20	-98.00
CALIFORNIN	silage	15.50	-14.30	-65.90
CALIFORNIN	hay	91.55	39.10	7.13
CALIFORNIN	SUGARBEET	0.00	39.10	7.13
CALIFORNIN	POTATOES	0.00	-12.55	8.90
CALIFORNIN	tomatofrsh	0.00	48.20	-14.17
CALIFORNIN	tomatoproc	0.00	48.20	-14.17
CALIFORNIN	orangefrsh	0.00	90.00	-55.30
CALIFORNIN	orangeproc	0.00	90.00	-55.30
CALIFORNIN	grpfrtfrsh	0.00	90.00	-55.30
CALIFORNIN	grpfrtproc	0.00	90.00	-55.30
CALIFORNIN	PASTURE	108.76	0.00	0.00
CALIFORNIS	cotton	0.00	113.88	106.54
CALIFORNIS	corn	15.50	-14.30	-65.90
CALIFORNIS	DURW	-20.80	-11.30	-24.50
CALIFORNIS	sorghum	107.46	0.00	0.00
CALIFORNIS	rice	-3.79	0.00	0.00
CALIFORNIS	barley	-20.80	-11.30	-24.50
CALIFORNIS	oats	-20.80	-11.30	-24.50
CALIFORNIS	silage	15.50	-14.30	-65.90
CALIFORNIS	hay	104.78	147.88	22.27
CALIFORNIS	SUGARBEET	0.00	147.88	22.27
CALIFORNIS	tomatofrsh	0.00	48.20	-14.17
CALIFORNIS	tomatoproc	0.00	48.20	-14.17
CALIFORNIS	orangefrsh	0.00	50.70	-11.00
CALIFORNIS	orangeproc	0.00	50.70	-11.00
CALIFORNIS	grpfrtfrsh	0.00	50.70	-11.00
CALIFORNIS	grpfrtproc	0.00	50.70	-11.00
CALIFORNIS	PASTURE	160.44	0.00	0.00
colorado	corn	33.50	-14.00	-65.80
colorado	HRSW	-0.50	4.10	26.50
colorado	HRWW	-0.50	4.10	26.50
colorado	sorghum	107.46	26.69	-7.49
colorado	barley	-1.00	8.20	53.00
colorado	oats	-1.00	8.20	53.00

colorado	silage	33.50	-14.00	-65.80
colorado	hay	-14.75	16.31	40.96
colorado	SUGARBEET	0.00	16.31	40.96
colorado	POTATOES	0.00	-75.50	-54.10
colorado	PASTURE	-10.13	0.00	0.00
conn	hay	3.57	0.00	0.00
conn	POTATOES	-17.60	0.00	0.00
conn	PASTURE	14.58	0.00	0.00
delaware	corn	-1.30	-10.50	-58.70
delaware	soybeans	27.41	7.50	-17.97
delaware	SOFT	16.20	4.30	-42.60
delaware	barley	16.20	4.30	-42.60
delaware	silage	-1.30	0.00	0.00
delaware	hay	3.57	0.00	0.00
delaware	POTATOES	-17.60	-9.30	12.70
delaware	tomatoproc	30.18	42.50	96.83
delaware	PASTURE	14.58	0.00	0.00
florida	cotton	91.47	158.23	106.54
florida	corn	-6.20	-10.60	-39.10
florida	soybeans	-19.87	14.97	90.79
florida	SOFT	-2.90	-7.00	-12.60
florida	oats	-2.90	0.00	0.00
florida	silage	-6.20	-10.60	-39.10
florida	hay	-34.56	-33.15	159.02
florida	SUGARCANE	10.85	10.85	-60.00
florida	tomatofrsh	-21.97	-20.56	17.14
florida	orangefrsh	0.00	125.93	506.07
florida	orangeproc	0.00	125.93	506.07
florida	grpfrtfrsh	0.00	125.93	506.07
florida	grpfrtproc	0.00	125.93	506.07
florida	PASTURE	-2.92	0.00	0.00
georgia	cotton	97.25	158.23	106.54
georgia	corn	-6.20	-10.60	-39.10
georgia	soybeans	-19.87	14.97	90.79
georgia	SOFT	-2.90	-7.00	-12.60
georgia	sorghum	9.04	4.78	-1.23
georgia	oats	-2.90	-7.00	-12.60
georgia	silage	-6.20	-10.60	-39.10
georgia	hay	-45.36	-23.08	138.51
georgia	tomatofrsh	2.91	-19.77	-25.16
georgia	PASTURE	-2.20	0.00	0.00

idaho	corn	15.50	-14.30	-65.90
idaho	HRSW	188.00	11.35	-27.20
idaho	HRWW	188.00	11.35	-27.20
idaho	barley	752.00	45.40	-108.80
idaho	oats	752.00	45.40	-108.80
idaho	silage	0.00	-14.30	-65.90
idaho	hay	51.67	61.24	29.91
idaho	SUGARBEET	0.00	61.24	29.91
idaho	POTATOES	-21.40	-20.10	20.40
idaho	PASTURE	108.41	0.00	0.00
ILLINOISN	corn	24.80	-10.50	-60.30
ILLINOISN	soybeans	95.67	26.13	-37.30
ILLINOISN	SOFT	-2.90	-7.00	-12.60
ILLINOISN	sorghum	57.95	0.00	0.00
ILLINOISN	oats	-2.90	-7.00	-12.60
ILLINOISN	silage	24.80	-10.50	-60.30
ILLINOISN	hay	12.72	11.17	-38.12
ILLINOISN	POTATOES	-38.80	0.00	0.00
ILLINOISN	PASTURE	24.50	0.00	0.00
ILLINOISS	corn	24.80	-10.50	-60.30
ILLINOISS	soybeans	95.67	26.13	-37.30
ILLINOISS	SOFT	-2.90	-7.00	-12.60
ILLINOISS	sorghum	57.95	13.47	-51.18
ILLINOISS	oats	-2.90	0.00	0.00
ILLINOISS	silage	24.80	0.00	0.00
ILLINOISS	hay	12.72	11.17	-38.12
ILLINOISS	PASTURE	24.50	0.00	0.00
INDIANAN	corn	-3.90	-15.50	-60.00
INDIANAN	soybeans	63.92	27.99	-14.54
INDIANAN	SOFT	16.20	4.30	-42.60
INDIANAN	sorghum	57.95	0.00	0.00
INDIANAN	oats	16.20	0.00	0.00
INDIANAN	silage	-3.90	-15.50	-60.00
INDIANAN	hay	2.38	2.79	-2.75
INDIANAN	POTATOES	-38.80	-27.50	1.10
INDIANAN	tomatofrsh	4.76	-0.45	-59.81
INDIANAN	tomatoproc	4.76	-0.45	-59.81
INDIANAN	PASTURE	13.71	0.00	0.00
INDIANAS	corn	-3.90	-15.50	-60.00
INDIANAS	soybeans	63.92	27.99	-14.54
INDIANAS	SOFT	16.20	4.30	-42.60



INDIANAS	sorghum	57.95	0.00	0.00
INDIANAS	oats	16.20	0.00	0.00
INDIANAS	silage	-3.90	0.00	0.00
INDIANAS	hay	2.38	2.79	-2.75
INDIANAS	tomatofrsh	4.76	-0.45	-59.81
INDIANAS	tomatoproc	4.76	-0.45	-59.81
INDIANAS	PASTURE	13.71	0.00	0.00
IOWAW	corn	16.70	-15.20	-67.50
IOWAW	soybeans	41.13	23.06	-50.33
IOWAW	SOFT	16.20	0.00	0.00
IOWAW	sorghum	208.08	0.00	0.00
IOWAW	oats	16.20	0.00	0.00
IOWAW	silage	16.70	0.00	0.00
IOWAW	hay	12.36	-0.64	-52.81
IOWAW	PASTURE	27.32	0.00	0.00
IOWACENT	corn	16.70	-15.20	-67.50
IOWACENT	soybeans	41.13	23.06	-50.33
IOWACENT	SOFT	16.20	0.00	0.00
IOWACENT	sorghum	208.08	0.00	0.00
IOWACENT	oats	16.20	-9.40	-44.20
IOWACENT	silage	16.70	0.00	0.00
IOWACENT	hay	12.36	-0.64	-52.81
IOWACENT	PASTURE	27.32	0.00	0.00
IOWANE	corn	16.70	-15.20	-67.50
IOWANE	soybeans	41.13	23.06	-50.33
IOWANE	SOFT	2.00	0.00	0.00
IOWANE	sorghum	57.95	0.00	0.00
IOWANE	oats	2.00	0.00	0.00
IOWANE	silage	16.70	0.00	0.00
IOWANE	hay	12.36	-0.64	-52.81
IOWANE	POTATOES	-9.20	-19.20	-7.20
IOWANE	PASTURE	27.32	0.00	0.00
IOWAS	corn	16.70	-15.20	-67.50
IOWAS	soybeans	41.13	23.06	-50.33
IOWAS	SOFT	2.00	0.00	0.00
IOWAS	sorghum	57.95	0.00	0.00
IOWAS	oats	2.00	0.00	0.00
IOWAS	silage	16.70	0.00	0.00
IOWAS	hay	12.36	-0.64	-52.81
IOWAS	PASTURE	27.32	0.00	0.00
kansas	corn	4.80	-22.00	-53.30

kansas	soybeans	90.70	9.42	-5.73
kansas	HRWW	-13.17	-1.30	-2.60
kansas	sorghum	50.20	-1.26	-29.47
kansas	barley	-52.67	-5.20	-10.40
kansas	oats	-52.67	-5.20	-10.40
kansas	silage	4.80	-22.00	-53.30
kansas	hay	-17.40	-27.14	-2.35
kansas	SUGARBEET	-17.40	0.00	0.00
kansas	PASTURE	-12.94	0.00	0.00
kentucky	corn	-3.90	-15.50	-60.00
kentucky	soybeans	62.85	24.79	12.25
kentucky	SOFT	16.20	0.00	0.00
kentucky	sorghum	46.49	0.00	0.00
kentucky	barley	16.20	0.00	0.00
kentucky	oats	16.20	0.00	0.00
kentucky	silage	-3.90	0.00	0.00
kentucky	hay	-0.88	0.16	23.48
kentucky	PASTURE	4.69	0.00	0.00
louisiana	cotton	78.28	158.23	106.54
louisiana	corn	-6.20	-10.60	-39.10
louisiana	soybeans	-13.93	15.32	151.52
louisiana	SOFT	-2.90	-7.00	-12.60
louisiana	sorghum	30.06	6.19	14.72
louisiana	rice	0.00	1.25	50.16
louisiana	silage	-6.20	0.00	0.00
louisiana	hay	-38.36	-20.99	33.52
louisiana	SUGARCANE	1.25	1.25	50.16
louisiana	tomatofrsh	2.91	-19.77	-25.16
louisiana	PASTURE	-3.59	0.00	0.00
maine	hay	-11.50	32.71	159.75
maine	POTATOES	-17.40	3.70	22.10
maine	PASTURE	5.85	0.00	0.00
maryland	corn	-1.30	-10.50	-58.70
maryland	soybeans	27.41	7.50	-17.97
maryland	SOFT	16.20	4.30	-42.60
maryland	barley	16.20	4.30	-42.60
maryland	oats	16.20	0.00	0.00
maryland	silage	-1.30	-10.50	-58.70
maryland	hay	-10.61	-3.96	-32.83
maryland	POTATOES	-17.60	-9.30	12.70
maryland	tomatofrsh	-6.15	-22.91	-34.45

maryland	tomatoproc	-6.15	-22.91	-34.45
maryland	PASTURE	1.53	0.00	0.00
mass	hay	-11.50	32.71	159.75
mass	POTATOES	-17.40	0.00	0.00
mass	tomatofrsh	30.18	42.50	96.83
mass	PASTURE	5.85	0.00	0.00
michigan	corn	104.05	91.45	-11.35
michigan	soybeans	166.58	61.89	7.60
michigan	SOFT	-0.20	-12.90	-26.20
michigan	barley	-0.20	0.00	0.00
michigan	oats	-0.20	-12.90	-26.20
michigan	silage	104.05	91.45	-11.35
michigan	hay	12.11	23.10	-16.37
michigan	SUGARBEET	12.11	23.10	-16.37
michigan	POTATOES	-17.30	-18.60	1.10
michigan	tomatofrsh	58.30	50.05	42.45
michigan	tomatoproc	58.30	50.05	42.45
michigan	PASTURE	33.99	0.00	0.00
minnesota	corn	104.05	91.45	-11.35
minnesota	soybeans	72.17	129.75	49.93
minnesota	HRSW	-0.20	-12.90	-26.20
minnesota	HRWW	-0.20	-12.90	-26.20
minnesota	DURW	-0.20	-12.90	-26.20
minnesota	barley	-0.80	-51.60	-104.80
minnesota	oats	-0.80	-51.60	-104.80
minnesota	silage	104.05	91.45	-11.35
minnesota	hay	-15.33	21.08	92.76
minnesota	SUGARBEET	-15.33	21.08	92.76
minnesota	POTATOES	-9.20	-19.20	-7.20
minnesota	PASTURE	1.69	0.00	0.00
mississippi	cotton	130.68	158.23	106.54
mississippi	corn	-6.20	-10.60	-39.10
mississippi	soybeans	-13.93	15.32	151.52
mississippi	SOFT	-2.90	-7.00	-12.60
mississippi	sorghum	30.06	6.19	14.72
mississippi	rice	0.00	11.14	133.03
mississippi	silage	-6.20	-10.60	-39.10
mississippi	hay	-35.21	-15.84	128.60
mississippi	PASTURE	20.04	0.00	0.00
missouri	cotton	116.63	93.47	106.54
missouri	corn	4.80	-22.00	-53.30

missouri	soybeans	90.70	9.42	-5.73
missouri	SOFT	-2.90	-7.00	-12.60
missouri	sorghum	33.61	-2.96	-55.22
missouri	rice	0.00	1.25	50.16
missouri	oats	-11.60	0.00	0.00
missouri	silage	4.80	-22.00	-53.30
missouri	hay	13.41	-3.93	-17.79
missouri	PASTURE	27.28	0.00	0.00
montana	corn	0.00	-14.30	-65.90
montana	HRSW	0.10	-15.20	-15.40
montana	HRWW	0.10	-15.20	-15.40
montana	DURW	0.10	-15.20	-15.40
montana	barley	0.40	-60.80	-61.60
montana	oats	0.40	-60.80	-61.60
montana	silage	15.50	-14.30	-65.90
montana	hay	-20.97	-9.13	25.86
montana	SUGARBEET	0.00	-9.13	25.86
montana	POTATOES	-21.40	-20.10	20.40
montana	PASTURE	-22.76	0.00	0.00
nebraska	corn	33.50	-14.00	-65.80
nebraska	soybeans	122.71	34.43	38.69
nebraska	HRWW	-0.50	4.10	26.50
nebraska	sorghum	107.46	26.69	-7.49
nebraska	barley	-2.00	16.40	106.00
nebraska	oats	-2.00	16.40	106.00
nebraska	silage	33.50	-14.00	-65.80
nebraska	hay	-10.54	-26.33	15.96
nebraska	SUGARBEET	0.00	-26.33	15.96
nebraska	POTATOES	-70.30	-50.10	13.50
nebraska	PASTURE	2.53	0.00	0.00
nevada	HRSW	0.00	11.35	-27.20
nevada	HRWW	0.00	11.35	-27.20
nevada	barley	0.00	22.70	-54.40
nevada	hay	0.00	36.72	2.86
nevada	POTATOES	0.00	-20.10	20.40
nevada	PASTURE	131.35	0.00	0.00
newhampshi	hay	3.57	0.00	0.00
newhampshi	PASTURE	14.58	0.00	0.00
newjersey	corn	-1.30	-10.50	-58.70
newjersey	soybeans	27.41	7.50	-17.97
newjersey	SOFT	16.20	4.30	-42.60

newjersey	barley	16.20	0.00	0.00
newjersey	oats	16.20	0.00	0.00
newjersey	silage	-1.30	0.00	0.00
newjersey	hay	3.57	21.99	40.08
newjersey	POTATOES	-17.60	-9.30	12.70
newjersey	tomatofrsh	30.18	42.50	96.83
newjersey	tomatoproc	30.18	42.50	96.83
newjersey	PASTURE	14.58	0.00	0.00
newmexico	cotton	98.82	63.93	106.54
newmexico	corn	33.50	-14.00	-65.80
newmexico	HRWW	604.50	-14.90	-59.40
newmexico	sorghum	107.46	26.69	-7.49
newmexico	barley	604.50	-14.90	-59.40
newmexico	silage	33.50	-14.00	-65.80
newmexico	hay	-14.75	16.31	40.96
newmexico	SUGARBEET	-14.75	0.00	0.00
newmexico	POTATOES	0.00	-75.50	-54.10
newmexico	PASTURE	-10.13	0.00	0.00
newyork	corn	-1.30	-10.50	-58.70
newyork	soybeans	27.41	0.00	0.00
newyork	SOFT	16.20	0.00	0.00
newyork	oats	16.20	4.30	-42.60
newyork	silage	-1.30	-10.50	-58.70
newyork	hay	3.57	21.99	40.08
newyork	POTATOES	-17.60	-9.30	12.70
newyork	tomatofrsh	30.18	42.50	96.83
newyork	tomatoproc	30.18	42.50	96.83
newyork	PASTURE	14.58	0.00	0.00
northcarol	cotton	80.99	105.02	106.54
northcarol	corn	-6.20	-10.60	-39.10
northcarol	soybeans	27.41	7.50	-17.97
northcarol	SOFT	-2.90	-7.00	-12.60
northcarol	sorghum	30.03	0.00	0.00
northcarol	barley	-2.90	0.00	0.00
northcarol	oats	-2.90	-7.00	-12.60
northcarol	silage	-6.20	-10.60	-39.10
northcarol	hay	-10.61	-3.96	-32.83
northcarol	POTATOES	-17.60	-9.30	12.70
northcarol	tomatofrsh	-6.15	-22.91	-34.45
northcarol	PASTURE	1.53	0.00	0.00
northdakot	corn	10.60	-9.50	-20.70

northdakot	soybeans	122.71	34.43	38.69
northdakot	HRSW	2.00	-3.10	-2.30
northdakot	HRWW	2.00	-3.10	-2.30
northdakot	DURW	2.00	-3.10	-2.30
northdakot	barley	8.00	-12.40	-9.20
northdakot	oats	8.00	-12.40	-9.20
northdakot	silage	10.60	-9.50	-20.70
northdakot	hay	-23.36	12.26	67.21
northdakot	SUGARBEET	-23.36	12.26	67.21
northdakot	POTATOES	-63.90	-28.00	33.60
northdakot	PASTURE	-9.18	0.00	0.00
OHIONW	corn	-1.30	-10.50	-58.70
OHIONW	soybeans	63.92	27.99	-14.54
OHIONW	SOFT	16.20	4.30	-42.60
OHIONW	oats	64.80	0.00	0.00
OHIONW	silage	-1.30	0.00	0.00
OHIONW	hay	1.39	9.01	20.00
OHIONW	SUGARBEET	1.39	9.01	20.00
OHIONW	POTATOES	-38.80	-27.50	1.10
OHIONW	tomatofrsh	3.38	-2.35	-50.57
OHIONW	tomatoproc	3.38	-2.35	-50.57
OHIONW	PASTURE	10.69	0.00	0.00
OHIOS	corn	-1.30	-10.50	-58.70
OHIOS	soybeans	63.92	27.99	-14.54
OHIOS	SOFT	16.20	4.30	-42.60
OHIOS	oats	64.80	0.00	0.00
OHIOS	silage	-1.30	0.00	0.00
OHIOS	hay	1.39	9.01	20.00
OHIOS	SUGARBEET	1.39	0.00	0.00
OHIOS	tomatofrsh	3.38	-2.35	-50.57
OHIOS	tomatoproc	3.38	-2.35	-50.57
OHIOS	PASTURE	10.69	0.00	0.00
OHIONE	corn	-1.30	0.00	0.00
OHIONE	soybeans	63.92	27.99	-14.54
OHIONE	SOFT	16.20	0.00	0.00
OHIONE	oats	64.80	17.20	-170.40
OHIONE	silage	-1.30	0.00	0.00
OHIONE	hay	1.39	9.01	20.00
OHIONE	SUGARBEET	1.39	0.00	0.00
OHIONE	tomatofrsh	3.38	-2.35	-50.57
OHIONE	tomatoproc	3.38	-2.35	-50.57

OHIONE	PASTURE	10.69	0.00	0.00
oklahoma	cotton	187.09	148.20	106.54
oklahoma	corn	4.80	-22.00	-53.30
oklahoma	soybeans	90.70	9.42	-5.73
oklahoma	HRWW	-20.70	-6.90	19.80
oklahoma	sorghum	85.64	-5.88	-45.59
oklahoma	barley	-82.80	0.00	0.00
oklahoma	oats	-82.80	-27.60	79.20
oklahoma	silage	4.80	-22.00	-53.30
oklahoma	hay	-16.35	-23.11	27.25
oklahoma	PASTURE	-7.83	0.00	0.00
oregon	corn	15.50	-14.30	-65.90
oregon	HRSW	137.90	7.25	-27.20
oregon	HRWW	137.90	7.25	-27.20
oregon	barley	275.80	14.50	-54.40
oregon	oats	275.80	14.50	-54.40
oregon	silage	15.50	-14.30	-65.90
oregon	hay	38.44	59.17	33.85
oregon	SUGARBEET	0.00	59.17	33.85
oregon	POTATOES	0.00	-12.55	8.90
oregon	PASTURE	69.33	0.00	0.00
pennsylvan	corn	-1.30	-10.50	-58.70
pennsylvan	soybeans	27.41	0.00	0.00
pennsylvan	SOFT	16.20	4.30	-42.60
pennsylvan	sorghum	30.03	0.00	0.00
pennsylvan	barley	16.20	0.00	0.00
pennsylvan	oats	16.20	0.00	0.00
pennsylvan	silage	-1.30	-10.50	-58.70
pennsylvan	hay	3.57	21.99	40.08
pennsylvan	POTATOES	-17.60	-9.30	12.70
pennsylvan	tomatofrsh	30.18	42.50	96.83
pennsylvan	tomatoproc	30.18	42.50	96.83
pennsylvan	PASTURE	14.58	0.00	0.00
rhodeislan	hay	3.57	21.99	40.08
rhodeislan	POTATOES	-17.60	-9.30	12.70
rhodeislan	PASTURE	14.58	0.00	0.00
southcarol	cotton	95.07	105.02	106.54
southcarol	corn	-6.20	-10.60	-39.10
southcarol	soybeans	-11.25	7.27	21.35
southcarol	SOFT	-2.90	-7.00	-12.60
southcarol	sorghum	24.46	4.76	-10.95

southcarol	barley	-2.90	0.00	0.00
southcarol	oats	-2.90	0.00	0.00
southcarol	silage	-6.20	-10.60	-39.10
southcarol	hay	-34.65	-22.61	53.62
southcarol	tomatofrsh	-22.46	-31.65	8.23
southcarol	PASTURE	1.24	0.00	0.00
southdakot	corn	15.50	-14.30	-65.90
southdakot	soybeans	122.71	34.43	38.69
southdakot	HRSW	16.20	-9.40	-44.20
southdakot	HRWW	16.20	-9.40	-44.20
southdakot	DURW	16.20	-9.40	-44.20
southdakot	sorghum	208.08	31.35	-20.70
southdakot	barley	64.80	-37.60	-176.80
southdakot	oats	64.80	-37.60	-176.80
southdakot	silage	15.50	-14.30	-65.90
southdakot	hay	-1.84	-9.56	7.39
southdakot	POTATOES	-63.90	-28.00	33.60
southdakot	PASTURE	7.56	0.00	0.00
tennessee	cotton	83.54	105.02	106.54
tennessee	corn	-6.20	-10.60	-39.10
tennessee	soybeans	-7.37	9.97	92.39
tennessee	SOFT	16.20	0.00	0.00
tennessee	sorghum	46.49	0.00	0.00
tennessee	oats	16.20	0.00	0.00
tennessee	silage	-6.20	0.00	0.00
tennessee	hay	-20.62	-1.82	136.41
tennessee	POTATOES	-17.60	0.00	0.00
tennessee	tomatofrsh	-6.15	-22.91	-34.45
tennessee	PASTURE	-12.09	0.00	0.00
TXHIPLAINS	cotton	86.58	78.81	106.54
TXHIPLAINS	corn	4.80	-22.00	-53.30
TXHIPLAINS	soybeans	90.70	9.42	-5.73
TXHIPLAINS	HRWW	-28.00	13.50	-19.50
TXHIPLAINS	sorghum	116.24	6.28	-12.37
TXHIPLAINS	barley	-112.00	54.00	-78.00
TXHIPLAINS	oats	-112.00	54.00	-78.00
TXHIPLAINS	silage	4.80	-22.00	-53.30
TXHIPLAINS	hay	-20.49	-34.58	15.10
TXHIPLAINS	SUGARBEET	-20.49	-34.58	15.10
TXHIPLAINS	POTATOES	6.60	-75.50	-54.10
TXHIPLAINS	PASTURE	-12.55	0.00	0.00



TXROLINGPL	cotton	145.07	110.20	106.54
TXROLINGPL	corn	4.80	-22.00	-53.30
TXROLINGPL	HRWW	-28.00	13.50	-19.50
TXROLINGPL	sorghum	116.24	6.28	-12.37
TXROLINGPL	barley	-112.00	0.00	0.00
TXROLINGPL	oats	-112.00	54.00	-78.00
TXROLINGPL	silage	4.80	-22.00	-53.30
TXROLINGPL	hay	-20.49	-34.58	15.10
TXROLINGPL	POTATOES	6.60	0.00	0.00
TXROLINGPL	PASTURE	-12.55	0.00	0.00
TXCNTBLACK	cotton	93.35	91.20	106.54
TXCNTBLACK	corn	4.80	-22.00	-53.30
TXCNTBLACK	soybeans	90.70	0.00	0.00
TXCNTBLACK	HRWW	-28.00	13.50	-19.50
TXCNTBLACK	sorghum	116.24	6.28	-12.37
TXCNTBLACK	rice	0.00	4.08	11.21
TXCNTBLACK	barley	-28.00	0.00	0.00
TXCNTBLACK	oats	-28.00	13.50	-19.50
TXCNTBLACK	silage	4.80	-22.00	-53.30
TXCNTBLACK	hay	-22.79	-18.64	58.58
TXCNTBLACK	PASTURE	27.53	0.00	0.00
TXEAST	cotton	88.35	66.45	106.54
TXEAST	corn	-6.20	-10.60	-39.10
TXEAST	soybeans	-13.93	15.32	151.52
TXEAST	HRWW	-28.00	13.50	-19.50
TXEAST	sorghum	116.24	6.28	-12.37
TXEAST	rice	0.00	4.08	11.21
TXEAST	oats	-28.00	13.50	-19.50
TXEAST	silage	-6.20	0.00	0.00
TXEAST	hay	-22.79	-18.64	58.58
TXEAST	tomatofrsh	2.91	-19.77	-25.16
TXEAST	PASTURE	27.53	0.00	0.00
TXEDPLAT	cotton	57.03	96.15	106.54
TXEDPLAT	corn	33.50	-14.00	-65.80
TXEDPLAT	soybeans	-13.93	0.00	0.00
TXEDPLAT	HRWW	-28.00	13.50	-19.50
TXEDPLAT	sorghum	116.24	6.28	-12.37
TXEDPLAT	barley	-28.00	0.00	0.00
TXEDPLAT	oats	-28.00	13.50	-19.50
TXEDPLAT	silage	33.50	-14.00	-65.80
TXEDPLAT	hay	-26.27	-22.62	15.48

TXEDPLAT	tomatofrsh	0.00	-19.77	-25.16
TXEDPLAT	PASTURE	-11.16	0.00	0.00
TXCOASTBE	cotton	22.94	34.21	106.54
TXCOASTBE	corn	-6.20	-10.60	-39.10
TXCOASTBE	soybeans	-13.93	15.32	151.52
TXCOASTBE	HRWW	-28.00	0.00	0.00
TXCOASTBE	sorghum	116.24	6.28	-12.37
TXCOASTBE	rice	0.00	4.08	11.21
TXCOASTBE	oats	-28.00	13.50	-19.50
TXCOASTBE	hay	-26.27	-22.62	15.48
TXCOASTBE	tomatofrsh	2.91	0.00	0.00
TXCOASTBE	PASTURE	-11.16	0.00	0.00
TXSOUTH	cotton	-1.83	36.37	106.54
TXSOUTH	corn	33.50	-14.00	-65.80
TXSOUTH	soybeans	0.00	15.32	151.52
TXSOUTH	HRWW	-28.00	13.50	-19.50
TXSOUTH	sorghum	116.24	6.28	-12.37
TXSOUTH	oats	-28.00	13.50	-19.50
TXSOUTH	silage	33.50	-14.00	-65.80
TXSOUTH	hay	-26.27	-22.62	15.48
TXSOUTH	POTATOES	0.00	-75.50	-54.10
TXSOUTH	tomatofrsh	2.91	-19.77	-25.16
TXSOUTH	orangefrsh	0.00	40.70	13.90
TXSOUTH	orangeproc	0.00	40.70	13.90
TXSOUTH	grpfrtfrsh	0.00	40.70	13.90
TXSOUTH	grpfrtproc	0.00	40.70	13.90
TXSOUTH	PASTURE	-11.16	0.00	0.00
TXTRANSPEC	cotton	78.97	143.57	106.54
TXTRANSPEC	corn	4.80	0.00	0.00
TXTRANSPEC	HRWW	-28.00	13.50	-19.50
TXTRANSPEC	sorghum	0.00	15.35	-11.11
TXTRANSPEC	barley	0.00	13.50	-19.50
TXTRANSPEC	oats	0.00	13.50	-19.50
TXTRANSPEC	hay	-5.64	-18.33	6.00
TXTRANSPEC	PASTURE	-7.13	0.00	0.00
utah	corn	0.00	-14.30	-65.90
utah	HRSW	188.00	11.35	-27.20
utah	HRWW	188.00	11.35	-27.20
utah	barley	376.00	22.70	-54.40
utah	oats	376.00	22.70	-54.40
utah	silage	15.50	-14.30	-65.90

utah	hay	119.41	36.72	2.86
utah	SUGARBEET	119.41	0.00	0.00
utah	POTATOES	0.00	-20.10	20.40
utah	PASTURE	131.35	0.00	0.00
vermont	hay	3.57	21.99	40.08
vermont	PASTURE	14.58	0.00	0.00
virginia	cotton	136.50	105.02	106.54
virginia	corn	-1.30	-10.50	-58.70
virginia	soybeans	27.41	7.50	-17.97
virginia	SOFT	16.20	4.30	-42.60
virginia	sorghum	30.03	0.00	0.00
virginia	barley	16.20	4.30	-42.60
virginia	oats	16.20	0.00	0.00
virginia	silage	-1.30	-10.50	-58.70
virginia	hay	-10.61	-3.96	-32.83
virginia	POTATOES	-17.60	-9.30	12.70
virginia	tomatofrsh	-6.15	-22.91	-34.45
virginia	tomatoproc	-6.15	-22.91	-34.45
virginia	PASTURE	1.53	0.00	0.00
washington	corn	15.50	-14.30	-65.90
washington	HRSW	137.90	7.25	-27.20
washington	HRWW	137.90	7.25	-27.20
washington	barley	551.60	29.00	-108.80
washington	oats	551.60	29.00	-108.80
washington	silage	15.50	-14.30	-65.90
washington	hay	33.50	54.06	38.45
washington	SUGARBEET	0.00	54.06	38.45
washington	POTATOES	-6.50	-1.40	12.00
washington	PASTURE	69.96	0.00	0.00
westvirgin	corn	-6.20	0.00	0.00
westvirgin	SOFT	16.20	0.00	0.00
westvirgin	barley	16.20	0.00	0.00
westvirgin	oats	16.20	0.00	0.00
westvirgin	silage	-6.20	0.00	0.00
westvirgin	hay	-20.62	-1.82	136.41
westvirgin	PASTURE	-12.09	0.00	0.00
wisconsin	corn	1.70	1.40	-68.90
wisconsin	soybeans	87.35	51.56	-20.50
wisconsin	silage	1.70	1.40	-68.90
wisconsin	hay	13.70	19.76	-25.61
wisconsin	POTATOES	-9.20	-19.20	-7.20

wisconsin	PASTURE	31.69	0.00	0.00
wyoming	corn	15.50	-14.30	-65.90
wyoming	HRSW	16.20	-9.40	-44.20
wyoming	HRWW	16.20	-9.40	-44.20
wyoming	barley	32.40	-18.80	-88.40
wyoming	oats	32.40	-18.80	-88.40
wyoming	silage	15.50	-14.30	-65.90
wyoming	hay	8.21	3.40	6.68
wyoming	SUGARBEET	0.00	3.40	6.68
wyoming	POTATOES	0.00	-28.00	33.60
wyoming	PASTURE	24.22	0.00	0.00

Table D2.3 Full data set for Hadley Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	31.15	72.77	36.19
alabama	corn	3.60	2.10	-52.20
alabama	soybeans	37.24	19.97	22.35
alabama	SOFT	9.40	0.00	0.00
alabama	sorghum	28.24	0.00	0.00
alabama	oats	9.40	0.00	0.00
alabama	silage	3.60	0.00	0.00
alabama	hay	-22.85	-4.93	7.20
alabama	POTATOES	22.10	-1.40	-9.60
alabama	tomatofrsh	13.98	4.65	-7.55
alabama	PASTURE	32.93	0.00	0.00
arizona	cotton	0.00	100.63	36.19
arizona	corn	17.60	-2.50	-27.50
arizona	HRWW	122.40	-2.90	-22.60
arizona	DURW	122.40	-2.90	-22.60
arizona	sorghum	0.00	28.10	-4.89
arizona	barley	0.00	-11.60	-90.40
arizona	silage	17.60	-2.50	-27.50
arizona	hay	-0.87	45.44	2.17
arizona	SUGARBEET	-0.87	0.00	0.00
arizona	POTATOES	0.00	-1.00	7.70
arizona	orangefrsh	0.00	69.90	3.30
arizona	orangeproc	0.00	69.90	3.30
arizona	grpfrtfrsh	0.00	69.90	3.30
arizona	grpfrtproc	0.00	69.90	3.30
arizona	PASTURE	3.81	0.00	0.00
arkansas	cotton	41.00	72.77	36.19
arkansas	corn	11.60	-3.60	-20.30
arkansas	soybeans	37.24	19.97	22.35
arkansas	SOFT	9.40	6.50	-5.80
arkansas	sorghum	28.24	23.89	-2.60
arkansas	rice	0.00	8.34	1.29
arkansas	oats	9.40	6.50	-5.80
arkansas	silage	11.60	-3.60	-20.30
arkansas	hay	-23.07	-7.56	6.02
arkansas	tomatofrsh	13.98	4.65	-7.55
arkansas	PASTURE	16.97	0.00	0.00

CALIFORNIN	cotton	21.09	52.37	36.19
CALIFORNIN	corn	17.60	-2.50	-27.50
CALIFORNIN	HRWW	20.50	5.50	-20.60
CALIFORNIN	sorghum	45.81	28.10	-4.89
CALIFORNIN	rice	0.00	16.26	15.86
CALIFORNIN	barley	82.00	22.00	-82.40
CALIFORNIN	oats	82.00	22.00	-82.40
CALIFORNIN	silage	17.60	-2.50	-27.50
CALIFORNIN	hay	29.41	35.18	-7.97
CALIFORNIN	SUGARBEET	0.00	35.18	-7.97
CALIFORNIN	POTATOES	0.00	-2.25	3.10
CALIFORNIN	tomatofrsh	0.00	8.97	1.18
CALIFORNIN	tomatoproc	0.00	8.97	1.18
CALIFORNIN	orangefrsh	0.00	45.70	-20.20
CALIFORNIN	orangeproc	0.00	45.70	-20.20
CALIFORNIN	grpfrtfrsh	0.00	45.70	-20.20
CALIFORNIN	grpfrtproc	0.00	45.70	-20.20
CALIFORNIN	PASTURE	52.93	0.00	0.00
CALIFORNIS	cotton	0.00	52.37	36.19
CALIFORNIS	corn	17.60	-2.50	-27.50
CALIFORNIS	DURW	20.50	5.50	-20.60
CALIFORNIS	sorghum	45.81	0.00	0.00
CALIFORNIS	rice	7.90	0.00	0.00
CALIFORNIS	barley	20.50	5.50	-20.60
CALIFORNIS	oats	20.50	5.50	-20.60
CALIFORNIS	silage	17.60	-2.50	-27.50
CALIFORNIS	hay	32.50	107.84	0.00
CALIFORNIS	SUGARBEET	0.00	107.84	0.00
CALIFORNIS	POTATOES	8.95	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	8.97	1.18
CALIFORNIS	tomatoproc	0.00	8.97	1.18
CALIFORNIS	orangefrsh	0.00	36.20	-1.80
CALIFORNIS	orangeproc	0.00	36.20	-1.80
CALIFORNIS	grpfrtfrsh	0.00	36.20	-1.80
CALIFORNIS	grpfrtproc	0.00	36.20	-1.80
CALIFORNIS	PASTURE	70.88	0.00	0.00
colorado	corn	23.60	-6.50	-39.40
colorado	HRSW	20.50	15.60	6.10
colorado	HRWW	20.50	15.60	6.10
colorado	sorghum	45.81	28.10	-4.89
colorado	barley	41.00	31.20	12.20

colorado	oats	41.00	31.20	12.20
colorado	silage	23.60	-6.50	-39.40
colorado	hay	6.24	23.48	-14.89
colorado	SUGARBEET	0.00	23.48	-14.89
colorado	POTATOES	0.00	-1.00	7.70
colorado	PASTURE	12.76	0.00	0.00
conn	hay	3.75	0.00	0.00
conn	POTATOES	22.10	0.00	0.00
conn	PASTURE	20.54	0.00	0.00
delaware	corn	5.30	-3.80	-38.50
delaware	soybeans	32.18	19.93	18.43
delaware	SOFT	8.20	1.90	-16.30
delaware	barley	8.20	1.90	-16.30
delaware	silage	5.30	0.00	0.00
delaware	hay	3.75	0.00	0.00
delaware	POTATOES	22.10	-1.40	-9.60
delaware	tomatoproc	32.07	32.53	-15.87
delaware	PASTURE	20.54	0.00	0.00
florida	cotton	30.58	72.77	36.19
florida	corn	3.60	2.10	-52.20
florida	soybeans	16.63	22.98	32.24
florida	SOFT	9.40	6.50	-5.80
florida	oats	9.40	0.00	0.00
florida	silage	3.60	2.10	-52.20
florida	hay	-23.20	-17.28	17.22
florida	SUGARCANE	6.19	6.19	-11.72
florida	tomatofrsh	-1.88	2.75	21.90
florida	orangefrsh	0.00	25.37	14.67
florida	orangeproc	0.00	25.37	14.67
florida	grpfrtfrsh	0.00	25.37	14.67
florida	grpfrtproc	0.00	25.37	14.67
florida	PASTURE	10.90	0.00	0.00
georgia	cotton	32.52	72.77	36.19
georgia	corn	3.60	2.10	-52.20
georgia	soybeans	16.63	22.98	32.24
georgia	SOFT	9.40	6.50	-5.80
georgia	sorghum	25.03	22.66	9.88
georgia	oats	9.40	6.50	-5.80
georgia	silage	3.60	2.10	-52.20
georgia	hay	-28.94	-7.65	16.15
georgia	tomatofrsh	13.98	4.65	-7.55

georgia	PASTURE	27.28	0.00	0.00
idaho	corn	17.60	-2.50	-27.50
idaho	HRSW	60.20	12.10	-13.05
idaho	HRWW	60.20	12.10	-13.05
idaho	barley	240.80	48.40	-52.20
idaho	oats	240.80	48.40	-52.20
idaho	silage	0.00	-2.50	-27.50
idaho	hay	27.77	82.17	0.49
idaho	SUGARBEET	0.00	82.17	0.49
idaho	POTATOES	-4.50	-4.20	5.40
idaho	PASTURE	58.99	0.00	0.00
ILLINOISN	corn	16.30	-3.30	-25.60
ILLINOISN	soybeans	44.02	17.83	-9.43
ILLINOISN	SOFT	9.40	6.50	-5.80
ILLINOISN	sorghum	41.83	0.00	0.00
ILLINOISN	oats	9.40	6.50	-5.80
ILLINOISN	silage	16.30	-3.30	-25.60
ILLINOISN	hay	4.89	25.67	-53.71
ILLINOISN	POTATOES	7.40	0.00	0.00
ILLINOISN	PASTURE	20.44	0.00	0.00
ILLINOISS	corn	16.30	-3.30	-25.60
ILLINOISS	soybeans	44.02	17.83	-9.43
ILLINOISS	SOFT	9.40	6.50	-5.80
ILLINOISS	sorghum	41.83	22.63	-13.74
ILLINOISS	oats	9.40	0.00	0.00
ILLINOISS	silage	16.30	0.00	0.00
ILLINOISS	hay	4.89	25.67	-53.71
ILLINOISS	PASTURE	20.44	0.00	0.00
INDIANAN	corn	7.60	-4.10	-34.70
INDIANAN	soybeans	55.16	22.55	-11.45
INDIANAN	SOFT	8.20	1.90	-16.30
INDIANAN	sorghum	41.83	0.00	0.00
INDIANAN	oats	8.20	0.00	0.00
INDIANAN	silage	7.60	-4.10	-34.70
INDIANAN	hay	3.35	24.90	-32.77
INDIANAN	POTATOES	7.40	-5.50	-5.80
INDIANAN	tomatofrsh	12.70	7.40	-36.45
INDIANAN	tomatoproc	12.70	7.40	-36.45
INDIANAN	PASTURE	17.13	0.00	0.00
INDIANAS	corn	7.60	-4.10	-34.70
INDIANAS	soybeans	55.16	22.55	-11.45



INDIANAS	SOFT	8.20	1.90	-16.30
INDIANAS	sorghum	41.83	0.00	0.00
INDIANAS	oats	8.20	0.00	0.00
INDIANAS	silage	7.60	0.00	0.00
INDIANAS	hay	3.35	24.90	-32.77
INDIANAS	tomatofrsh	12.70	7.40	-36.45
INDIANAS	tomatoproc	12.70	7.40	-36.45
INDIANAS	PASTURE	17.13	0.00	0.00
IOWAW	corn	11.60	-2.30	-26.10
IOWAW	soybeans	20.88	22.74	-1.32
IOWAW	SOFT	23.40	0.00	0.00
IOWAW	sorghum	97.45	0.00	0.00
IOWAW	oats	23.40	0.00	0.00
IOWAW	silage	11.60	0.00	0.00
IOWAW	hay	3.63	23.54	-49.38
IOWAW	PASTURE	22.48	0.00	0.00
IOWACENT	corn	11.60	-2.30	-26.10
IOWACENT	soybeans	20.88	22.74	-1.32
IOWACENT	SOFT	23.40	0.00	0.00
IOWACENT	sorghum	97.45	0.00	0.00
IOWACENT	oats	23.40	1.30	-22.00
IOWACENT	silage	11.60	0.00	0.00
IOWACENT	hay	3.63	23.54	-49.38
IOWACENT	PASTURE	22.48	0.00	0.00
IOWANE	corn	11.60	-2.30	-26.10
IOWANE	soybeans	20.88	22.74	-1.32
IOWANE	SOFT	20.10	0.00	0.00
IOWANE	sorghum	41.83	0.00	0.00
IOWANE	oats	20.10	0.00	0.00
IOWANE	silage	11.60	0.00	0.00
IOWANE	hay	3.63	23.54	-49.38
IOWANE	POTATOES	19.50	0.20	-8.80
IOWANE	PASTURE	22.48	0.00	0.00
IOWAS	corn	11.60	-2.30	-26.10
IOWAS	soybeans	20.88	22.74	-1.32
IOWAS	SOFT	20.10	0.00	0.00
IOWAS	sorghum	41.83	0.00	0.00
IOWAS	oats	20.10	0.00	0.00
IOWAS	silage	11.60	0.00	0.00
IOWAS	hay	3.63	23.54	-49.38
IOWAS	PASTURE	22.48	0.00	0.00

kansas	corn	11.60	-3.60	-20.30
kansas	soybeans	49.89	18.62	7.89
kansas	HRWW	16.03	8.67	-7.20
kansas	sorghum	25.41	21.07	2.78
kansas	barley	64.13	34.67	-28.80
kansas	oats	64.13	34.67	-28.80
kansas	silage	11.60	-3.60	-20.30
kansas	hay	2.43	17.97	-29.72
kansas	SUGARBEET	2.43	0.00	0.00
kansas	PASTURE	19.77	0.00	0.00
kentucky	corn	7.60	-4.10	-34.70
kentucky	soybeans	67.20	27.19	10.67
kentucky	SOFT	8.20	0.00	0.00
kentucky	sorghum	48.51	0.00	0.00
kentucky	barley	8.20	0.00	0.00
kentucky	oats	8.20	0.00	0.00
kentucky	silage	7.60	0.00	0.00
kentucky	hay	4.35	19.67	-32.05
kentucky	PASTURE	16.89	0.00	0.00
louisiana	cotton	26.17	72.77	36.19
louisiana	corn	3.60	2.10	-52.20
louisiana	soybeans	37.24	19.97	22.35
louisiana	SOFT	9.40	6.50	-5.80
louisiana	sorghum	28.24	23.89	-2.60
louisiana	rice	0.00	8.34	1.29
louisiana	silage	3.60	0.00	0.00
louisiana	hay	-23.07	-7.56	6.02
louisiana	SUGARCANE	8.34	8.34	1.29
louisiana	tomatofrsh	13.98	4.65	-7.55
louisiana	PASTURE	16.97	0.00	0.00
maine	hay	-3.47	26.99	-40.37
maine	POTATOES	6.60	3.30	6.20
maine	PASTURE	14.11	0.00	0.00
maryland	corn	5.30	-3.80	-38.50
maryland	soybeans	32.18	19.93	18.43
maryland	SOFT	8.20	1.90	-16.30
maryland	barley	8.20	1.90	-16.30
maryland	oats	8.20	0.00	0.00
maryland	silage	5.30	-3.80	-38.50
maryland	hay	-5.21	19.13	-64.61
maryland	POTATOES	22.10	-1.40	-9.60

maryland	tomatofrsh	39.63	19.69	-39.50
maryland	tomatoproc	39.63	19.69	-39.50
maryland	PASTURE	18.52	0.00	0.00
mass	hay	-3.47	26.99	-40.37
mass	POTATOES	6.60	0.00	0.00
mass	tomatofrsh	32.07	32.53	-15.87
mass	PASTURE	14.11	0.00	0.00
michigan	corn	50.00	33.60	-31.40
michigan	soybeans	95.16	29.84	-10.65
michigan	SOFT	15.40	4.90	-17.40
michigan	barley	15.40	0.00	0.00
michigan	oats	15.40	4.90	-17.40
michigan	silage	50.00	33.60	-31.40
michigan	hay	3.78	27.30	-45.01
michigan	SUGARBEET	3.78	27.30	-45.01
michigan	POTATOES	33.10	-0.80	-10.60
michigan	tomatofrsh	41.26	30.15	-10.79
michigan	tomatoproc	41.26	30.15	-10.79
michigan	PASTURE	23.64	0.00	0.00
minnesota	corn	50.00	33.60	-31.40
minnesota	soybeans	70.60	43.49	-14.18
minnesota	HRSW	15.40	4.90	-17.40
minnesota	HRWW	15.40	4.90	-17.40
minnesota	DURW	15.40	4.90	-17.40
minnesota	barley	61.60	19.60	-69.60
minnesota	oats	61.60	19.60	-69.60
minnesota	silage	50.00	33.60	-31.40
minnesota	hay	-5.12	32.03	-52.72
minnesota	SUGARBEET	-5.12	32.03	-52.72
minnesota	POTATOES	19.50	0.20	-8.80
minnesota	PASTURE	16.19	0.00	0.00
mississippi	cotton	43.69	72.77	36.19
mississippi	corn	3.60	2.10	-52.20
mississippi	soybeans	37.24	19.97	22.35
mississippi	SOFT	9.40	6.50	-5.80
mississippi	sorghum	28.24	23.89	-2.60
mississippi	rice	0.00	10.53	8.72
mississippi	silage	3.60	2.10	-52.20
mississippi	hay	-22.85	-4.93	7.20
mississippi	PASTURE	32.93	0.00	0.00
missouri	cotton	38.99	42.99	36.19

missouri	corn	11.60	-3.60	-20.30
missouri	soybeans	49.89	18.62	7.89
missouri	SOFT	9.40	6.50	-5.80
missouri	sorghum	23.93	18.71	-6.09
missouri	rice	0.00	8.34	1.29
missouri	oats	37.60	0.00	0.00
missouri	silage	11.60	-3.60	-20.30
missouri	hay	9.43	23.09	-45.99
missouri	PASTURE	31.78	0.00	0.00
montana	corn	0.00	-2.50	-27.50
montana	HRSW	20.90	5.80	-9.50
montana	HRWW	20.90	5.80	-9.50
montana	DURW	20.90	5.80	-9.50
montana	barley	83.60	23.20	-38.00
montana	oats	83.60	23.20	-38.00
montana	silage	17.60	-2.50	-27.50
montana	hay	13.97	22.29	-23.47
montana	SUGARBEET	0.00	22.29	-23.47
montana	POTATOES	-4.50	-4.20	5.40
montana	PASTURE	19.90	0.00	0.00
nebraska	corn	23.60	-6.50	-39.40
nebraska	soybeans	79.07	26.61	-0.89
nebraska	HRWW	20.50	15.60	6.10
nebraska	sorghum	45.81	28.10	-4.89
nebraska	barley	82.00	62.40	24.40
nebraska	oats	82.00	62.40	24.40
nebraska	silage	23.60	-6.50	-39.40
nebraska	hay	2.82	27.25	-21.98
nebraska	SUGARBEET	0.00	27.25	-21.98
nebraska	POTATOES	-6.70	-6.30	2.20
nebraska	PASTURE	19.00	0.00	0.00
nevada	HRSW	0.00	12.10	-13.05
nevada	HRWW	0.00	12.10	-13.05
nevada	barley	0.00	24.20	-26.10
nevada	hay	0.00	9.14	2.24
nevada	POTATOES	0.00	-4.20	5.40
nevada	PASTURE	8.82	0.00	0.00
newhampshi	hay	3.75	0.00	0.00
newhampshi	PASTURE	20.54	0.00	0.00
newjersey	corn	5.30	-3.80	-38.50
newjersey	soybeans	32.18	19.93	18.43

newjersey	SOFT	8.20	1.90	-16.30
newjersey	barley	8.20	0.00	0.00
newjersey	oats	8.20	0.00	0.00
newjersey	silage	5.30	0.00	0.00
newjersey	hay	3.75	27.00	-55.04
newjersey	POTATOES	22.10	-1.40	-9.60
newjersey	tomatofrsh	32.07	32.53	-15.87
newjersey	tomatoproc	32.07	32.53	-15.87
newjersey	PASTURE	20.54	0.00	0.00
newmexico	cotton	33.04	29.40	36.19
newmexico	corn	23.60	-6.50	-39.40
newmexico	HRWW	122.40	-2.90	-22.60
newmexico	sorghum	45.81	28.10	-4.89
newmexico	barley	122.40	-2.90	-22.60
newmexico	silage	23.60	-6.50	-39.40
newmexico	hay	6.24	23.48	-14.89
newmexico	SUGARBEET	6.24	0.00	0.00
newmexico	POTATOES	0.00	-1.00	7.70
newmexico	PASTURE	12.76	0.00	0.00
newyork	corn	5.30	-3.80	-38.50
newyork	soybeans	32.18	0.00	0.00
newyork	SOFT	8.20	0.00	0.00
newyork	oats	8.20	1.90	-16.30
newyork	silage	5.30	-3.80	-38.50
newyork	hay	3.75	27.00	-55.04
newyork	POTATOES	22.10	-1.40	-9.60
newyork	tomatofrsh	32.07	32.53	-15.87
newyork	tomatoproc	32.07	32.53	-15.87
newyork	PASTURE	20.54	0.00	0.00
northcarol	cotton	27.08	48.30	36.19
northcarol	corn	3.60	2.10	-52.20
northcarol	soybeans	32.18	19.93	18.43
northcarol	SOFT	9.40	6.50	-5.80
northcarol	sorghum	33.32	0.00	0.00
northcarol	barley	9.40	0.00	0.00
northcarol	oats	9.40	6.50	-5.80
northcarol	silage	3.60	2.10	-52.20
northcarol	hay	-5.21	19.13	-64.61
northcarol	POTATOES	22.10	-1.40	-9.60
northcarol	tomatofrsh	39.63	19.69	-39.50
northcarol	PASTURE	18.52	0.00	0.00

northdakot	corn	24.00	-0.10	-28.60
northdakot	soybeans	79.07	26.61	-0.89
northdakot	HRSW	20.10	9.30	-7.70
northdakot	HRWW	20.10	9.30	-7.70
northdakot	DURW	20.10	9.30	-7.70
northdakot	barley	80.40	37.20	-30.80
northdakot	oats	80.40	37.20	-30.80
northdakot	silage	24.00	-0.10	-28.60
northdakot	hay	2.39	31.08	-30.61
northdakot	SUGARBEET	2.39	31.08	-30.61
northdakot	POTATOES	20.70	2.10	-6.90
northdakot	PASTURE	21.99	0.00	0.00
OHIONW	corn	5.30	-3.80	-38.50
OHIONW	soybeans	55.16	22.55	-11.45
OHIONW	SOFT	8.20	1.90	-16.30
OHIONW	oats	32.80	0.00	0.00
OHIONW	silage	5.30	0.00	0.00
OHIONW	hay	2.46	21.50	-34.88
OHIONW	SUGARBEET	2.46	21.50	-34.88
OHIONW	POTATOES	7.40	-5.50	-5.80
OHIONW	tomatofrsh	13.64	7.50	-39.08
OHIONW	tomatoproc	13.64	7.50	-39.08
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	5.30	-3.80	-38.50
OHIOS	soybeans	55.16	22.55	-11.45
OHIOS	SOFT	8.20	1.90	-16.30
OHIOS	oats	32.80	0.00	0.00
OHIOS	silage	5.30	0.00	0.00
OHIOS	hay	2.46	21.50	-34.88
OHIOS	SUGARBEET	2.46	0.00	0.00
OHIOS	tomatofrsh	13.64	7.50	-39.08
OHIOS	tomatoproc	13.64	7.50	-39.08
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	5.30	0.00	0.00
OHIONE	soybeans	55.16	22.55	-11.45
OHIONE	SOFT	8.20	0.00	0.00
OHIONE	oats	32.80	7.60	-65.20
OHIONE	silage	5.30	0.00	0.00
OHIONE	hay	2.46	21.50	-34.88
OHIONE	SUGARBEET	2.46	0.00	0.00
OHIONE	tomatofrsh	13.64	7.50	-39.08

OHIONE	tomatoproc	13.64	7.50	-39.08
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	62.55	68.16	36.19
oklahoma	corn	11.60	-3.60	-20.30
oklahoma	soybeans	49.89	18.62	7.89
oklahoma	HRWW	6.20	4.20	0.70
oklahoma	sorghum	47.05	18.59	-1.82
oklahoma	barley	24.80	0.00	0.00
oklahoma	oats	24.80	16.80	2.80
oklahoma	silage	11.60	-3.60	-20.30
oklahoma	hay	-3.55	18.97	-16.70
oklahoma	PASTURE	19.00	0.00	0.00
oregon	corn	17.60	-2.50	-27.50
oregon	HRSW	65.75	5.35	-12.30
oregon	HRWW	65.75	5.35	-12.30
oregon	barley	131.50	10.70	-24.60
oregon	oats	131.50	10.70	-24.60
oregon	silage	17.60	-2.50	-27.50
oregon	hay	24.66	88.00	0.47
oregon	SUGARBEET	0.00	88.00	0.47
oregon	POTATOES	8.95	-2.25	3.10
oregon	PASTURE	56.29	0.00	0.00
pennsylvan	corn	5.30	-3.80	-38.50
pennsylvan	soybeans	32.18	0.00	0.00
pennsylvan	SOFT	8.20	1.90	-16.30
pennsylvan	sorghum	33.32	0.00	0.00
pennsylvan	barley	8.20	0.00	0.00
pennsylvan	oats	8.20	0.00	0.00
pennsylvan	silage	5.30	-3.80	-38.50
pennsylvan	hay	3.75	27.00	-55.04
pennsylvan	POTATOES	22.10	-1.40	-9.60
pennsylvan	tomatofrsh	32.07	32.53	-15.87
pennsylvan	tomatoproc	32.07	32.53	-15.87
pennsylvan	PASTURE	20.54	0.00	0.00
rhodeislan	hay	3.75	27.00	-55.04
rhodeislan	POTATOES	22.10	-1.40	-9.60
rhodeislan	PASTURE	20.54	0.00	0.00
southcarol	cotton	31.79	48.30	36.19
southcarol	corn	3.60	2.10	-52.20
southcarol	soybeans	20.67	13.90	3.00
southcarol	SOFT	9.40	6.50	-5.80

southcarol	sorghum	36.25	23.10	-0.95
southcarol	barley	9.40	0.00	0.00
southcarol	oats	9.40	0.00	0.00
southcarol	silage	3.60	2.10	-52.20
southcarol	hay	-25.92	-15.05	-2.58
southcarol	tomatofrsh	23.22	14.18	-5.06
southcarol	PASTURE	28.10	0.00	0.00
southdakot	corn	17.60	-2.50	-27.50
southdakot	soybeans	79.07	26.61	-0.89
southdakot	HRSW	23.40	1.30	-22.00
southdakot	HRWW	23.40	1.30	-22.00
southdakot	DURW	23.40	1.30	-22.00
southdakot	sorghum	97.45	39.03	-2.88
southdakot	barley	93.60	5.20	-88.00
southdakot	oats	93.60	5.20	-88.00
southdakot	silage	17.60	-2.50	-27.50
southdakot	hay	6.71	26.41	-28.60
southdakot	POTATOES	20.70	2.10	-6.90
southdakot	PASTURE	22.97	0.00	0.00
tennessee	cotton	27.93	48.30	36.19
tennessee	corn	3.60	2.10	-52.20
tennessee	soybeans	60.56	17.25	2.42
tennessee	SOFT	8.20	0.00	0.00
tennessee	sorghum	48.51	0.00	0.00
tennessee	oats	8.20	0.00	0.00
tennessee	silage	3.60	0.00	0.00
tennessee	hay	-1.76	18.20	-26.39
tennessee	POTATOES	22.10	0.00	0.00
tennessee	tomatofrsh	39.63	19.69	-39.50
tennessee	PASTURE	13.45	0.00	0.00
TXHIPLAINS	cotton	28.95	36.25	36.19
TXHIPLAINS	corn	11.60	-3.60	-20.30
TXHIPLAINS	soybeans	49.89	18.62	7.89
TXHIPLAINS	HRWW	19.00	5.70	-10.70
TXHIPLAINS	sorghum	24.06	18.42	8.92
TXHIPLAINS	barley	76.00	22.80	-42.80
TXHIPLAINS	oats	76.00	22.80	-42.80
TXHIPLAINS	silage	11.60	-3.60	-20.30
TXHIPLAINS	hay	0.99	17.55	-14.01
TXHIPLAINS	SUGARBEET	0.99	17.55	-14.01
TXHIPLAINS	POTATOES	-8.50	-1.00	7.70



TXHIPLAINS	PASTURE	19.40	0.00	0.00
TXROLINGPL	cotton	48.50	50.68	36.19
TXROLINGPL	corn	11.60	-3.60	-20.30
TXROLINGPL	HRWW	19.00	5.70	-10.70
TXROLINGPL	sorghum	24.06	18.42	8.92
TXROLINGPL	barley	76.00	0.00	0.00
TXROLINGPL	oats	76.00	22.80	-42.80
TXROLINGPL	silage	11.60	-3.60	-20.30
TXROLINGPL	hay	0.99	17.55	-14.01
TXROLINGPL	POTATOES	-8.50	0.00	0.00
TXROLINGPL	PASTURE	19.40	0.00	0.00
TXCNTBLACK	cotton	31.21	41.94	36.19
TXCNTBLACK	corn	11.60	-3.60	-20.30
TXCNTBLACK	soybeans	49.89	0.00	0.00
TXCNTBLACK	HRWW	19.00	5.70	-10.70
TXCNTBLACK	sorghum	24.06	18.42	8.92
TXCNTBLACK	rice	0.00	7.02	14.66
TXCNTBLACK	barley	19.00	0.00	0.00
TXCNTBLACK	oats	19.00	5.70	-10.70
TXCNTBLACK	silage	11.60	-3.60	-20.30
TXCNTBLACK	hay	-27.77	-9.63	20.30
TXCNTBLACK	PASTURE	11.50	0.00	0.00
TXEAST	cotton	29.54	30.56	36.19
TXEAST	corn	3.60	2.10	-52.20
TXEAST	soybeans	37.24	19.97	22.35
TXEAST	HRWW	19.00	5.70	-10.70
TXEAST	sorghum	24.06	18.42	8.92
TXEAST	rice	0.00	7.02	14.66
TXEAST	oats	19.00	5.70	-10.70
TXEAST	silage	3.60	0.00	0.00
TXEAST	hay	-27.77	-9.63	20.30
TXEAST	tomatofrsh	13.98	4.65	-7.55
TXEAST	PASTURE	11.50	0.00	0.00
TXEDPLAT	cotton	19.07	44.22	36.19
TXEDPLAT	corn	23.60	-6.50	-39.40
TXEDPLAT	soybeans	37.24	0.00	0.00
TXEDPLAT	HRWW	19.00	5.70	-10.70
TXEDPLAT	sorghum	24.06	18.42	8.92
TXEDPLAT	barley	19.00	0.00	0.00
TXEDPLAT	oats	19.00	5.70	-10.70
TXEDPLAT	silage	23.60	-6.50	-39.40

TXEDPLAT	hay	-21.33	-15.75	-16.50
TXEDPLAT	tomatofrsh	0.00	4.65	-7.55
TXEDPLAT	PASTURE	16.60	0.00	0.00
TXCOASTBE	cotton	7.67	15.73	36.19
TXCOASTBE	corn	3.60	2.10	-52.20
TXCOASTBE	soybeans	37.24	19.97	22.35
TXCOASTBE	HRWW	19.00	0.00	0.00
TXCOASTBE	sorghum	24.06	18.42	8.92
TXCOASTBE	rice	0.00	7.02	14.66
TXCOASTBE	oats	19.00	5.70	-10.70
TXCOASTBE	hay	-21.33	-15.75	-16.50
TXCOASTBE	tomatofrsh	13.98	0.00	0.00
TXCOASTBE	PASTURE	16.60	0.00	0.00
TXSOUTH	cotton	-0.61	16.73	36.19
TXSOUTH	corn	23.60	-6.50	-39.40
TXSOUTH	soybeans	0.00	19.97	22.35
TXSOUTH	HRWW	19.00	5.70	-10.70
TXSOUTH	sorghum	24.06	18.42	8.92
TXSOUTH	oats	19.00	5.70	-10.70
TXSOUTH	silage	23.60	-6.50	-39.40
TXSOUTH	hay	-21.33	-15.75	-16.50
TXSOUTH	POTATOES	0.00	-1.00	7.70
TXSOUTH	tomatofrsh	13.98	4.65	-7.55
TXSOUTH	orangefrsh	0.00	46.90	-7.30
TXSOUTH	orangeproc	0.00	46.90	-7.30
TXSOUTH	grpfrtfrsh	0.00	46.90	-7.30
TXSOUTH	grpfrtproc	0.00	46.90	-7.30
TXSOUTH	PASTURE	16.60	0.00	0.00
TXTRANSPEC	cotton	26.40	66.03	36.19
TXTRANSPEC	corn	11.60	0.00	0.00
TXTRANSPEC	HRWW	19.00	5.70	-10.70
TXTRANSPEC	sorghum	0.00	17.26	-21.71
TXTRANSPEC	barley	0.00	5.70	-10.70
TXTRANSPEC	oats	0.00	5.70	-10.70
TXTRANSPEC	hay	2.87	12.18	-18.99
TXTRANSPEC	PASTURE	7.56	0.00	0.00
utah	corn	0.00	-2.50	-27.50
utah	HRSW	60.20	12.10	-13.05
utah	HRWW	60.20	12.10	-13.05
utah	barley	120.40	24.20	-26.10
utah	oats	120.40	24.20	-26.10

utah	silage	17.60	-2.50	-27.50
utah	hay	2.80	9.14	2.24
utah	SUGARBEET	2.80	0.00	0.00
utah	POTATOES	0.00	-4.20	5.40
utah	PASTURE	8.82	0.00	0.00
vermont	hay	3.75	27.00	-55.04
vermont	PASTURE	20.54	0.00	0.00
virginia	cotton	45.64	48.30	36.19
virginia	corn	5.30	-3.80	-38.50
virginia	soybeans	32.18	19.93	18.43
virginia	SOFT	8.20	1.90	-16.30
virginia	sorghum	33.32	0.00	0.00
virginia	barley	8.20	1.90	-16.30
virginia	oats	8.20	0.00	0.00
virginia	silage	5.30	-3.80	-38.50
virginia	hay	-5.21	19.13	-64.61
virginia	POTATOES	22.10	-1.40	-9.60
virginia	tomatofrsh	39.63	19.69	-39.50
virginia	tomatoproc	39.63	19.69	-39.50
virginia	PASTURE	18.52	0.00	0.00
washington	corn	17.60	-2.50	-27.50
washington	HRSW	65.75	5.35	-12.30
washington	HRWW	65.75	5.35	-12.30
washington	barley	263.00	21.40	-49.20
washington	oats	263.00	21.40	-49.20
washington	silage	17.60	-2.50	-27.50
washington	hay	30.41	65.77	2.70
washington	SUGARBEET	0.00	65.77	2.70
washington	POTATOES	2.70	2.10	3.30
washington	PASTURE	55.20	0.00	0.00
westvirgin	corn	3.60	0.00	0.00
westvirgin	SOFT	8.20	0.00	0.00
westvirgin	barley	8.20	0.00	0.00
westvirgin	oats	8.20	0.00	0.00
westvirgin	silage	3.60	0.00	0.00
westvirgin	hay	-1.76	18.20	-26.39
westvirgin	PASTURE	13.45	0.00	0.00
wisconsin	corn	-1.30	-3.70	-42.20
wisconsin	soybeans	48.32	24.19	-17.00
wisconsin	silage	-1.30	-3.70	-42.20
wisconsin	hay	7.38	26.11	-64.47

wisconsin	POTATOES	19.50	0.20	-8.80
wisconsin	PASTURE	24.40	0.00	0.00
wyoming	corn	17.60	-2.50	-27.50
wyoming	HRSW	23.40	1.30	-22.00
wyoming	HRWW	23.40	1.30	-22.00
wyoming	barley	46.80	2.60	-44.00
wyoming	oats	46.80	2.60	-44.00
wyoming	silage	17.60	-2.50	-27.50
wyoming	hay	6.70	25.97	-39.88
wyoming	SUGARBEET	0.00	25.97	-39.88
wyoming	POTATOES	0.00	2.10	-6.90
wyoming	PASTURE	30.13	0.00	0.00

Table D2.4 Full data set for Hadley Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland	Irrigated	Irrigated
		Yield	Yield	Wateruse
alabama	cotton	79.34	131.93	59.81
alabama	corn	-0.60	-1.90	-57.50
alabama	soybeans	66.31	27.18	7.95
alabama	SOFT	18.40	0.00	0.00
alabama	sorghum	42.92	0.00	0.00
alabama	oats	18.40	0.00	0.00
alabama	silage	-0.60	0.00	0.00
alabama	hay	-13.46	0.32	-16.10
alabama	POTATOES	21.90	-0.30	-12.50
alabama	tomatofrsh	20.49	10.06	5.03
alabama	PASTURE	59.75	0.00	0.00
arizona	cotton	0.00	182.43	59.81
arizona	corn	34.40	-2.90	-60.90
arizona	HRWW	476.80	3.20	-50.20
arizona	DURW	476.80	3.20	-50.20
arizona	sorghum	0.00	46.07	-25.73
arizona	barley	0.00	12.80	-200.80
arizona	silage	34.40	-2.90	-60.90
arizona	hay	26.91	48.53	4.32
arizona	SUGARBEET	26.91	0.00	0.00
arizona	POTATOES	0.00	-7.80	8.40
arizona	orangefrsh	0.00	111.60	3.90
arizona	orangeproc	0.00	111.60	3.90
arizona	grpfrtfrsh	0.00	111.60	3.90
arizona	grpfrtproc	0.00	111.60	3.90
arizona	PASTURE	26.29	0.00	0.00
arkansas	cotton	104.43	131.93	59.81
arkansas	corn	21.90	-3.90	-53.40
arkansas	soybeans	66.31	27.18	7.95
arkansas	SOFT	18.40	11.80	-47.10
arkansas	sorghum	42.92	20.77	-27.27
arkansas	rice	0.00	17.50	7.07
arkansas	oats	18.40	11.80	-47.10
arkansas	silage	21.90	-3.90	-53.40
arkansas	hay	-7.52	-3.34	-15.88
arkansas	tomatofrsh	20.49	10.06	5.03
arkansas	PASTURE	53.35	0.00	0.00

CALIFORNIN	cotton	53.71	94.95	59.81
CALIFORNIN	corn	34.40	-2.90	-60.90
CALIFORNIN	HRWW	6.10	2.30	-32.90
CALIFORNIN	sorghum	129.06	46.07	-25.73
CALIFORNIN	rice	0.00	16.10	6.87
CALIFORNIN	barley	24.40	9.20	-131.60
CALIFORNIN	oats	24.40	9.20	-131.60
CALIFORNIN	silage	34.40	-2.90	-60.90
CALIFORNIN	hay	60.25	43.70	-4.34
CALIFORNIN	SUGARBEET	0.00	43.70	-4.34
CALIFORNIN	POTATOES	0.00	-12.25	12.65
CALIFORNIN	tomatofrsh	0.00	15.60	-0.26
CALIFORNIN	tomatoproc	0.00	15.60	-0.26
CALIFORNIN	orangefrsh	0.00	79.90	-27.20
CALIFORNIN	orangeproc	0.00	79.90	-27.20
CALIFORNIN	grpfrtfrsh	0.00	79.90	-27.20
CALIFORNIN	grpfrtproc	0.00	79.90	-27.20
CALIFORNIN	PASTURE	82.96	0.00	0.00
CALIFORNIS	cotton	0.00	94.95	59.81
CALIFORNIS	corn	34.40	-2.90	-60.90
CALIFORNIS	DURW	6.10	2.30	-32.90
CALIFORNIS	sorghum	129.06	0.00	0.00
CALIFORNIS	rice	5.89	0.00	0.00
CALIFORNIS	barley	6.10	2.30	-32.90
CALIFORNIS	oats	6.10	2.30	-32.90
CALIFORNIS	silage	34.40	-2.90	-60.90
CALIFORNIS	hay	79.86	145.48	10.06
CALIFORNIS	SUGARBEET	0.00	145.48	10.06
CALIFORNIS	POTATOES	7.60	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	15.60	-0.26
CALIFORNIS	tomatoproc	0.00	15.60	-0.26
CALIFORNIS	orangefrsh	0.00	57.60	-0.60
CALIFORNIS	orangeproc	0.00	57.60	-0.60
CALIFORNIS	grpfrtfrsh	0.00	57.60	-0.60
CALIFORNIS	grpfrtproc	0.00	57.60	-0.60
CALIFORNIS	PASTURE	131.54	0.00	0.00
colorado	corn	31.20	-4.40	-47.30
colorado	HRSW	44.30	24.50	2.70
colorado	HRWW	44.30	24.50	2.70
colorado	sorghum	129.06	46.07	-25.73
colorado	barley	88.60	49.00	5.40

colorado	oats	88.60	49.00	5.40
colorado	silage	31.20	-4.40	-47.30
colorado	hay	16.16	29.24	1.11
colorado	SUGARBEET	0.00	29.24	1.11
colorado	POTATOES	0.00	-7.80	8.40
colorado	PASTURE	24.60	0.00	0.00
conn	hay	11.74	0.00	0.00
conn	POTATOES	21.90	0.00	0.00
conn	PASTURE	28.97	0.00	0.00
delaware	corn	6.20	-3.20	-70.80
delaware	soybeans	45.34	28.83	14.29
delaware	SOFT	23.60	8.50	-48.00
delaware	barley	23.60	8.50	-48.00
delaware	silage	6.20	0.00	0.00
delaware	hay	11.74	0.00	0.00
delaware	POTATOES	21.90	-0.30	-12.50
delaware	tomatoproc	46.30	46.20	-26.98
delaware	PASTURE	28.97	0.00	0.00
florida	cotton	77.90	131.93	59.81
florida	corn	-0.60	-1.90	-57.50
florida	soybeans	32.85	35.22	22.37
florida	SOFT	18.40	11.80	-47.10
florida	oats	18.40	0.00	0.00
florida	silage	-0.60	-1.90	-57.50
florida	hay	-20.91	-14.61	26.21
florida	SUGARCANE	14.73	14.73	6.90
florida	tomatofrsh	-7.68	1.38	42.86
florida	orangefrsh	0.00	44.97	29.43
florida	orangeproc	0.00	44.97	29.43
florida	grpfrtfrsh	0.00	44.97	29.43
florida	grpfrtproc	0.00	44.97	29.43
florida	PASTURE	19.96	0.00	0.00
georgia	cotton	82.82	131.93	59.81
georgia	corn	-0.60	-1.90	-57.50
georgia	soybeans	32.85	35.22	22.37
georgia	SOFT	18.40	11.80	-47.10
georgia	sorghum	27.43	17.90	-13.58
georgia	oats	18.40	11.80	-47.10
georgia	silage	-0.60	-1.90	-57.50
georgia	hay	-24.38	-1.12	-6.21
georgia	tomatofrsh	20.49	10.06	5.03

georgia	PASTURE	49.29	0.00	0.00
idaho	corn	34.40	-2.90	-60.90
idaho	HRSW	175.10	18.75	-26.50
idaho	HRWW	175.10	18.75	-26.50
idaho	barley	700.40	75.00	-106.00
idaho	oats	700.40	75.00	-106.00
idaho	silage	0.00	-2.90	-60.90
idaho	hay	45.29	72.47	7.68
idaho	SUGARBEET	0.00	72.47	7.68
idaho	POTATOES	-18.30	-18.60	22.50
idaho	PASTURE	83.20	0.00	0.00
ILLINOISN	corn	37.90	1.10	-59.60
ILLINOISN	soybeans	105.60	37.11	-35.25
ILLINOISN	SOFT	18.40	11.80	-47.10
ILLINOISN	sorghum	73.30	0.00	0.00
ILLINOISN	oats	18.40	11.80	-47.10
ILLINOISN	silage	37.90	1.10	-59.60
ILLINOISN	hay	16.34	30.43	-68.76
ILLINOISN	POTATOES	14.30	0.00	0.00
ILLINOISN	PASTURE	35.15	0.00	0.00
ILLINOISS	corn	37.90	1.10	-59.60
ILLINOISS	soybeans	105.60	37.11	-35.25
ILLINOISS	SOFT	18.40	11.80	-47.10
ILLINOISS	sorghum	73.30	25.08	-50.24
ILLINOISS	oats	18.40	0.00	0.00
ILLINOISS	silage	37.90	0.00	0.00
ILLINOISS	hay	16.34	30.43	-68.76
ILLINOISS	PASTURE	35.15	0.00	0.00
INDIANAN	corn	11.40	-3.20	-67.60
INDIANAN	soybeans	107.40	36.58	-43.61
INDIANAN	SOFT	23.60	8.50	-48.00
INDIANAN	sorghum	73.30	0.00	0.00
INDIANAN	oats	23.60	0.00	0.00
INDIANAN	silage	11.40	-3.20	-67.60
INDIANAN	hay	12.74	28.88	-54.30
INDIANAN	POTATOES	14.30	-8.60	-12.30
INDIANAN	tomatofrsh	28.04	18.32	-65.42
INDIANAN	tomatoproc	28.04	18.32	-65.42
INDIANAN	PASTURE	28.49	0.00	0.00
INDIANAS	corn	11.40	-3.20	-67.60
INDIANAS	soybeans	107.40	36.58	-43.61



INDIANAS	SOFT	23.60	8.50	-48.00
INDIANAS	sorghum	73.30	0.00	0.00
INDIANAS	oats	23.60	0.00	0.00
INDIANAS	silage	11.40	0.00	0.00
INDIANAS	hay	12.74	28.88	-54.30
INDIANAS	tomatofrsh	28.04	18.32	-65.42
INDIANAS	tomatoproc	28.04	18.32	-65.42
INDIANAS	PASTURE	28.49	0.00	0.00
IOWAW	corn	27.60	0.60	-63.40
IOWAW	soybeans	50.67	37.70	-37.09
IOWAW	SOFT	47.30	0.00	0.00
IOWAW	sorghum	183.22	0.00	0.00
IOWAW	oats	47.30	0.00	0.00
IOWAW	silage	27.60	0.00	0.00
IOWAW	hay	16.84	27.96	-64.82
IOWAW	PASTURE	40.05	0.00	0.00
IOWACENT	corn	27.60	0.60	-63.40
IOWACENT	soybeans	50.67	37.70	-37.09
IOWACENT	SOFT	47.30	0.00	0.00
IOWACENT	sorghum	183.22	0.00	0.00
IOWACENT	oats	47.30	7.10	-28.90
IOWACENT	silage	27.60	0.00	0.00
IOWACENT	hay	16.84	27.96	-64.82
IOWACENT	PASTURE	40.05	0.00	0.00
IOWANE	corn	27.60	0.60	-63.40
IOWANE	soybeans	50.67	37.70	-37.09
IOWANE	SOFT	24.30	0.00	0.00
IOWANE	sorghum	73.30	0.00	0.00
IOWANE	oats	24.30	0.00	0.00
IOWANE	silage	27.60	0.00	0.00
IOWANE	hay	16.84	27.96	-64.82
IOWANE	POTATOES	26.20	1.50	-13.80
IOWANE	PASTURE	40.05	0.00	0.00
IOWAS	corn	27.60	0.60	-63.40
IOWAS	soybeans	50.67	37.70	-37.09
IOWAS	SOFT	24.30	0.00	0.00
IOWAS	sorghum	73.30	0.00	0.00
IOWAS	oats	24.30	0.00	0.00
IOWAS	silage	27.60	0.00	0.00
IOWAS	hay	16.84	27.96	-64.82
IOWAS	PASTURE	40.05	0.00	0.00

kansas	corn	21.90	-3.90	-53.40
kansas	soybeans	107.77	28.97	-9.32
kansas	HRWW	57.43	17.37	-35.00
kansas	sorghum	61.05	15.69	-31.86
kansas	barley	229.73	69.47	-140.00
kansas	oats	229.73	69.47	-140.00
kansas	silage	21.90	-3.90	-53.40
kansas	hay	13.58	8.99	-34.71
kansas	SUGARBEET	13.58	0.00	0.00
kansas	PASTURE	29.22	0.00	0.00
kentucky	corn	11.40	-3.20	-67.60
kentucky	soybeans	138.49	37.16	-17.39
kentucky	SOFT	23.60	0.00	0.00
kentucky	sorghum	76.04	0.00	0.00
kentucky	barley	23.60	0.00	0.00
kentucky	oats	23.60	0.00	0.00
kentucky	silage	11.40	0.00	0.00
kentucky	hay	10.96	21.23	-55.10
kentucky	PASTURE	27.07	0.00	0.00
louisiana	cotton	66.67	131.93	59.81
louisiana	corn	-0.60	-1.90	-57.50
louisiana	soybeans	66.31	27.18	7.95
louisiana	SOFT	18.40	11.80	-47.10
louisiana	sorghum	42.92	20.77	-27.27
louisiana	rice	0.00	17.50	7.07
louisiana	silage	-0.60	0.00	0.00
louisiana	hay	-7.52	-3.34	-15.88
louisiana	SUGARCANE	17.50	17.50	7.07
louisiana	tomatofrsh	20.49	10.06	5.03
louisiana	PASTURE	53.35	0.00	0.00
maine	hay	2.94	36.18	-36.44
maine	POTATOES	16.00	3.70	-2.70
maine	PASTURE	20.89	0.00	0.00
maryland	corn	6.20	-3.20	-70.80
maryland	soybeans	45.34	28.83	14.29
maryland	SOFT	23.60	8.50	-48.00
maryland	barley	23.60	8.50	-48.00
maryland	oats	23.60	0.00	0.00
maryland	silage	6.20	-3.20	-70.80
maryland	hay	-0.44	18.25	-55.97
maryland	POTATOES	21.90	-0.30	-12.50

maryland	tomatofrsh	24.40	17.65	5.04
maryland	tomatoproc	24.40	17.65	5.04
maryland	PASTURE	19.86	0.00	0.00
mass	hay	2.94	36.18	-36.44
mass	POTATOES	16.00	0.00	0.00
mass	tomatofrsh	46.30	46.20	-26.98
mass	PASTURE	20.89	0.00	0.00
michigan	corn	112.70	78.95	-58.80
michigan	soybeans	165.30	54.10	-22.05
michigan	SOFT	22.30	11.50	-20.00
michigan	barley	22.30	0.00	0.00
michigan	oats	22.30	11.50	-20.00
michigan	silage	112.70	78.95	-58.80
michigan	hay	14.30	33.63	-47.19
michigan	SUGARBEET	14.30	33.63	-47.19
michigan	POTATOES	40.00	-1.50	-12.40
michigan	tomatofrsh	70.69	57.64	-22.30
michigan	tomatoproc	70.69	57.64	-22.30
michigan	PASTURE	35.26	0.00	0.00
minnesota	corn	112.70	78.95	-58.80
minnesota	soybeans	123.87	85.01	-17.32
minnesota	HRSW	22.30	11.50	-20.00
minnesota	HRWW	22.30	11.50	-20.00
minnesota	DURW	22.30	11.50	-20.00
minnesota	barley	89.20	46.00	-80.00
minnesota	oats	89.20	46.00	-80.00
minnesota	silage	112.70	78.95	-58.80
minnesota	hay	2.30	40.04	-58.87
minnesota	SUGARBEET	2.30	40.04	-58.87
minnesota	POTATOES	26.20	1.50	-13.80
minnesota	PASTURE	24.81	0.00	0.00
mississippi	cotton	111.29	131.93	59.81
mississippi	corn	-0.60	-1.90	-57.50
mississippi	soybeans	66.31	27.18	7.95
mississippi	SOFT	18.40	11.80	-47.10
mississippi	sorghum	42.92	20.77	-27.27
mississippi	rice	0.00	22.72	6.42
mississippi	silage	-0.60	-1.90	-57.50
mississippi	hay	-13.46	0.32	-16.10
mississippi	PASTURE	59.75	0.00	0.00
missouri	cotton	99.33	77.93	59.81

missouri	corn	21.90	-3.90	-53.40
missouri	soybeans	107.77	28.97	-9.32
missouri	SOFT	18.40	11.80	-47.10
missouri	sorghum	51.95	14.31	-43.91
missouri	rice	0.00	17.50	7.07
missouri	oats	73.60	0.00	0.00
missouri	silage	21.90	-3.90	-53.40
missouri	hay	20.47	18.42	-55.59
missouri	PASTURE	42.86	0.00	0.00
montana	corn	0.00	-2.90	-60.90
montana	HRSW	27.30	5.50	-10.70
montana	HRWW	27.30	5.50	-10.70
montana	DURW	27.30	5.50	-10.70
montana	barley	109.20	22.00	-42.80
montana	oats	109.20	22.00	-42.80
montana	silage	34.40	-2.90	-60.90
montana	hay	17.84	20.15	-14.06
montana	SUGARBEET	0.00	20.15	-14.06
montana	POTATOES	-18.30	-18.60	22.50
montana	PASTURE	21.05	0.00	0.00
nebraska	corn	31.20	-4.40	-47.30
nebraska	soybeans	147.74	46.33	-7.14
nebraska	HRWW	44.30	24.50	2.70
nebraska	sorghum	129.06	46.07	-25.73
nebraska	barley	177.20	98.00	10.80
nebraska	oats	177.20	98.00	10.80
nebraska	silage	31.20	-4.40	-47.30
nebraska	hay	36.60	17.25	-33.54
nebraska	SUGARBEET	0.00	17.25	-33.54
nebraska	POTATOES	-37.80	-27.60	8.40
nebraska	PASTURE	9.63	0.00	0.00
nevada	HRSW	0.00	18.75	-26.50
nevada	HRWW	0.00	18.75	-26.50
nevada	barley	0.00	37.50	-53.00
nevada	hay	0.00	28.55	0.24
nevada	POTATOES	0.00	-18.60	22.50
nevada	PASTURE	84.04	0.00	0.00
newhampshi	hay	11.74	0.00	0.00
newhampshi	PASTURE	28.97	0.00	0.00
newjersey	corn	6.20	-3.20	-70.80
newjersey	soybeans	45.34	28.83	14.29

newjersey	SOFT	23.60	8.50	-48.00
newjersey	barley	23.60	0.00	0.00
newjersey	oats	23.60	0.00	0.00
newjersey	silage	6.20	0.00	0.00
newjersey	hay	11.74	32.32	-60.45
newjersey	POTATOES	21.90	-0.30	-12.50
newjersey	tomatofrsh	46.30	46.20	-26.98
newjersey	tomatoproc	46.30	46.20	-26.98
newjersey	PASTURE	28.97	0.00	0.00
newmexico	cotton	84.16	53.31	59.81
newmexico	corn	31.20	-4.40	-47.30
newmexico	HRWW	476.80	3.20	-50.20
newmexico	sorghum	129.06	46.07	-25.73
newmexico	barley	476.80	3.20	-50.20
newmexico	silage	31.20	-4.40	-47.30
newmexico	hay	16.16	29.24	1.11
newmexico	SUGARBEET	16.16	0.00	0.00
newmexico	POTATOES	0.00	-7.80	8.40
newmexico	PASTURE	24.60	0.00	0.00
newyork	corn	6.20	-3.20	-70.80
newyork	soybeans	45.34	0.00	0.00
newyork	SOFT	23.60	0.00	0.00
newyork	oats	23.60	8.50	-48.00
newyork	silage	6.20	-3.20	-70.80
newyork	hay	11.74	32.32	-60.45
newyork	POTATOES	21.90	-0.30	-12.50
newyork	tomatofrsh	46.30	46.20	-26.98
newyork	tomatoproc	46.30	46.20	-26.98
newyork	PASTURE	28.97	0.00	0.00
northcarol	cotton	68.97	87.56	59.81
northcarol	corn	-0.60	-1.90	-57.50
northcarol	soybeans	45.34	28.83	14.29
northcarol	SOFT	18.40	11.80	-47.10
northcarol	sorghum	37.39	0.00	0.00
northcarol	barley	18.40	0.00	0.00
northcarol	oats	18.40	11.80	-47.10
northcarol	silage	-0.60	-1.90	-57.50
northcarol	hay	-0.44	18.25	-55.97
northcarol	POTATOES	21.90	-0.30	-12.50
northcarol	tomatofrsh	24.40	17.65	5.04
northcarol	PASTURE	19.86	0.00	0.00

northdakot	corn	52.70	4.20	-56.80
northdakot	soybeans	147.74	46.33	-7.14
northdakot	HRSW	24.30	10.70	-10.10
northdakot	HRWW	24.30	10.70	-10.10
northdakot	DURW	24.30	10.70	-10.10
northdakot	barley	97.20	42.80	-40.40
northdakot	oats	97.20	42.80	-40.40
northdakot	silage	52.70	4.20	-56.80
northdakot	hay	13.21	33.84	-25.14
northdakot	SUGARBEET	13.21	33.84	-25.14
northdakot	POTATOES	10.90	-0.80	-3.80
northdakot	PASTURE	32.17	0.00	0.00
OHIONW	corn	6.20	-3.20	-70.80
OHIONW	soybeans	107.40	36.58	-43.61
OHIONW	SOFT	23.60	8.50	-48.00
OHIONW	oats	94.40	0.00	0.00
OHIONW	silage	6.20	0.00	0.00
OHIONW	hay	2.46	21.50	-34.88
OHIONW	SUGARBEET	2.46	21.50	-34.88
OHIONW	POTATOES	14.30	-8.60	-12.30
OHIONW	tomatofrsh	23.16	13.99	-52.87
OHIONW	tomatoproc	23.16	13.99	-52.87
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	6.20	-3.20	-70.80
OHIOS	soybeans	107.40	36.58	-43.61
OHIOS	SOFT	23.60	8.50	-48.00
OHIOS	oats	94.40	0.00	0.00
OHIOS	silage	6.20	0.00	0.00
OHIOS	hay	2.46	21.50	-34.88
OHIOS	SUGARBEET	2.46	0.00	0.00
OHIOS	tomatofrsh	23.16	13.99	-52.87
OHIOS	tomatoproc	23.16	13.99	-52.87
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	6.20	0.00	0.00
OHIONE	soybeans	107.40	36.58	-43.61
OHIONE	SOFT	23.60	0.00	0.00
OHIONE	oats	94.40	34.00	-192.00
OHIONE	silage	6.20	0.00	0.00
OHIONE	hay	2.46	21.50	-34.88
OHIONE	SUGARBEET	2.46	0.00	0.00
OHIONE	tomatofrsh	23.16	13.99	-52.87

OHIONE	tomatoproc	23.16	13.99	-52.87
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	159.33	123.56	59.81
oklahoma	corn	21.90	-3.90	-53.40
oklahoma	soybeans	107.77	28.97	-9.32
oklahoma	HRWW	28.00	13.60	-35.30
oklahoma	sorghum	107.14	14.93	-34.65
oklahoma	barley	112.00	0.00	0.00
oklahoma	oats	112.00	54.40	-141.20
oklahoma	silage	21.90	-3.90	-53.40
oklahoma	hay	11.49	17.34	-38.16
oklahoma	PASTURE	33.27	0.00	0.00
oregon	corn	34.40	-2.90	-60.90
oregon	HRSW	131.10	14.05	-22.90
oregon	HRWW	131.10	14.05	-22.90
oregon	barley	262.20	28.10	-45.80
oregon	oats	262.20	28.10	-45.80
oregon	silage	34.40	-2.90	-60.90
oregon	hay	40.08	85.61	13.00
oregon	SUGARBEET	0.00	85.61	13.00
oregon	POTATOES	7.60	-12.25	12.65
oregon	PASTURE	74.00	0.00	0.00
pennsylvan	corn	6.20	-3.20	-70.80
pennsylvan	soybeans	45.34	0.00	0.00
pennsylvan	SOFT	23.60	8.50	-48.00
pennsylvan	sorghum	37.39	0.00	0.00
pennsylvan	barley	23.60	0.00	0.00
pennsylvan	oats	23.60	0.00	0.00
pennsylvan	silage	6.20	-3.20	-70.80
pennsylvan	hay	11.74	32.32	-60.45
pennsylvan	POTATOES	21.90	-0.30	-12.50
pennsylvan	tomatofrsh	46.30	46.20	-26.98
pennsylvan	tomatoproc	46.30	46.20	-26.98
pennsylvan	PASTURE	28.97	0.00	0.00
rhodeislan	hay	11.74	32.32	-60.45
rhodeislan	POTATOES	21.90	-0.30	-12.50
rhodeislan	PASTURE	28.97	0.00	0.00
southcarol	cotton	80.96	87.56	59.81
southcarol	corn	-0.60	-1.90	-57.50
southcarol	soybeans	43.71	18.38	-5.99
southcarol	SOFT	18.40	11.80	-47.10

southcarol	sorghum	53.45	20.45	-20.00
southcarol	barley	18.40	0.00	0.00
southcarol	oats	18.40	0.00	0.00
southcarol	silage	-0.60	-1.90	-57.50
southcarol	hay	-12.63	-9.04	-23.92
southcarol	tomatofrsh	19.37	12.72	6.96
southcarol	PASTURE	58.75	0.00	0.00
southdakot	corn	34.40	-2.90	-60.90
southdakot	soybeans	147.74	46.33	-7.14
southdakot	HRSW	47.30	7.10	-28.90
southdakot	HRWW	47.30	7.10	-28.90
southdakot	DURW	47.30	7.10	-28.90
southdakot	sorghum	183.22	45.21	-31.62
southdakot	barley	189.20	28.40	-115.60
southdakot	oats	189.20	28.40	-115.60
southdakot	silage	34.40	-2.90	-60.90
southdakot	hay	20.57	23.88	-40.82
southdakot	POTATOES	10.90	-0.80	-3.80
southdakot	PASTURE	35.48	0.00	0.00
tennessee	cotton	71.15	87.56	59.81
tennessee	corn	-0.60	-1.90	-57.50
tennessee	soybeans	104.53	22.71	-11.42
tennessee	SOFT	23.60	0.00	0.00
tennessee	sorghum	76.04	0.00	0.00
tennessee	oats	23.60	0.00	0.00
tennessee	silage	-0.60	0.00	0.00
tennessee	hay	2.19	17.81	-45.13
tennessee	POTATOES	21.90	0.00	0.00
tennessee	tomatofrsh	24.40	17.65	5.04
tennessee	PASTURE	17.39	0.00	0.00
TXHIPLAINS	cotton	73.73	65.71	59.81
TXHIPLAINS	corn	21.90	-3.90	-53.40
TXHIPLAINS	soybeans	107.77	28.97	-9.32
TXHIPLAINS	HRWW	34.90	19.30	-14.80
TXHIPLAINS	sorghum	117.62	13.39	-19.88
TXHIPLAINS	barley	139.60	77.20	-59.20
TXHIPLAINS	oats	139.60	77.20	-59.20
TXHIPLAINS	silage	21.90	-3.90	-53.40
TXHIPLAINS	hay	21.06	8.53	-28.32
TXHIPLAINS	SUGARBEET	21.06	8.53	-28.32
TXHIPLAINS	POTATOES	-5.60	-7.80	8.40



TXHIPLAINS	PASTURE	39.02	0.00	0.00
TXROLINGPL	cotton	123.55	91.88	59.81
TXROLINGPL	corn	21.90	-3.90	-53.40
TXROLINGPL	HRWW	34.90	19.30	-14.80
TXROLINGPL	sorghum	117.62	13.39	-19.88
TXROLINGPL	barley	139.60	0.00	0.00
TXROLINGPL	oats	139.60	77.20	-59.20
TXROLINGPL	silage	21.90	-3.90	-53.40
TXROLINGPL	hay	21.06	8.53	-28.32
TXROLINGPL	POTATOES	-5.60	0.00	0.00
TXROLINGPL	PASTURE	39.02	0.00	0.00
TXCNTBLACK	cotton	79.50	76.04	59.81
TXCNTBLACK	corn	21.90	-3.90	-53.40
TXCNTBLACK	soybeans	107.77	0.00	0.00
TXCNTBLACK	HRWW	34.90	19.30	-14.80
TXCNTBLACK	sorghum	117.62	13.39	-19.88
TXCNTBLACK	rice	0.00	17.69	13.36
TXCNTBLACK	barley	34.90	0.00	0.00
TXCNTBLACK	oats	34.90	19.30	-14.80
TXCNTBLACK	silage	21.90	-3.90	-53.40
TXCNTBLACK	hay	-18.91	-8.24	-4.06
TXCNTBLACK	PASTURE	34.57	0.00	0.00
TXEAST	cotton	75.24	55.40	59.81
TXEAST	corn	-0.60	-1.90	-57.50
TXEAST	soybeans	66.31	27.18	7.95
TXEAST	HRWW	34.90	19.30	-14.80
TXEAST	sorghum	117.62	13.39	-19.88
TXEAST	rice	0.00	17.69	13.36
TXEAST	oats	34.90	19.30	-14.80
TXEAST	silage	-0.60	0.00	0.00
TXEAST	hay	-18.91	-8.24	-4.06
TXEAST	tomatofrsh	20.49	10.06	5.03
TXEAST	PASTURE	34.57	0.00	0.00
TXEDPLAT	cotton	48.56	80.17	59.81
TXEDPLAT	corn	31.20	-4.40	-47.30
TXEDPLAT	soybeans	66.31	0.00	0.00
TXEDPLAT	HRWW	34.90	19.30	-14.80
TXEDPLAT	sorghum	117.62	13.39	-19.88
TXEDPLAT	barley	34.90	0.00	0.00
TXEDPLAT	oats	34.90	19.30	-14.80
TXEDPLAT	silage	31.20	-4.40	-47.30

TXEDPLAT	hay	-5.19	-16.33	0.17
TXEDPLAT	tomatofrsh	0.00	10.06	5.03
TXEDPLAT	PASTURE	47.29	0.00	0.00
TXCOASTBE	cotton	19.54	28.53	59.81
TXCOASTBE	corn	-0.60	-1.90	-57.50
TXCOASTBE	soybeans	66.31	27.18	7.95
TXCOASTBE	HRWW	34.90	0.00	0.00
TXCOASTBE	sorghum	117.62	13.39	-19.88
TXCOASTBE	rice	0.00	17.69	13.36
TXCOASTBE	oats	34.90	19.30	-14.80
TXCOASTBE	hay	-5.19	-16.33	0.17
TXCOASTBE	tomatofrsh	20.49	0.00	0.00
TXCOASTBE	PASTURE	47.29	0.00	0.00
TXSOUTH	cotton	-1.56	30.32	59.81
TXSOUTH	corn	31.20	-4.40	-47.30
TXSOUTH	soybeans	0.00	27.18	7.95
TXSOUTH	HRWW	34.90	19.30	-14.80
TXSOUTH	sorghum	117.62	13.39	-19.88
TXSOUTH	oats	34.90	19.30	-14.80
TXSOUTH	silage	31.20	-4.40	-47.30
TXSOUTH	hay	-5.19	-16.33	0.17
TXSOUTH	POTATOES	0.00	-7.80	8.40
TXSOUTH	tomatofrsh	20.49	10.06	5.03
TXSOUTH	orangefrsh	0.00	103.60	13.80
TXSOUTH	orangeproc	0.00	103.60	13.80
TXSOUTH	grpfrtfrsh	0.00	103.60	13.80
TXSOUTH	grpfrtproc	0.00	103.60	13.80
TXSOUTH	PASTURE	47.29	0.00	0.00
TXTRANSPEC	cotton	67.26	119.70	59.81
TXTRANSPEC	corn	21.90	0.00	0.00
TXTRANSPEC	HRWW	34.90	19.30	-14.80
TXTRANSPEC	sorghum	0.00	13.52	-7.36
TXTRANSPEC	barley	0.00	19.30	-14.80
TXTRANSPEC	oats	0.00	19.30	-14.80
TXTRANSPEC	hay	14.95	-16.53	-17.99
TXTRANSPEC	PASTURE	14.32	0.00	0.00
utah	corn	0.00	-2.90	-60.90
utah	HRSW	175.10	18.75	-26.50
utah	HRWW	175.10	18.75	-26.50
utah	barley	350.20	37.50	-53.00
utah	oats	350.20	37.50	-53.00

utah	silage	34.40	-2.90	-60.90
utah	hay	75.93	28.55	0.24
utah	SUGARBEET	75.93	0.00	0.00
utah	POTATOES	0.00	-18.60	22.50
utah	PASTURE	84.04	0.00	0.00
vermont	hay	11.74	32.32	-60.45
vermont	PASTURE	28.97	0.00	0.00
virginia	cotton	116.25	87.56	59.81
virginia	corn	6.20	-3.20	-70.80
virginia	soybeans	45.34	28.83	14.29
virginia	SOFT	23.60	8.50	-48.00
virginia	sorghum	37.39	0.00	0.00
virginia	barley	23.60	8.50	-48.00
virginia	oats	23.60	0.00	0.00
virginia	silage	6.20	-3.20	-70.80
virginia	hay	-0.44	18.25	-55.97
virginia	POTATOES	21.90	-0.30	-12.50
virginia	tomatofrsh	24.40	17.65	5.04
virginia	tomatoproc	24.40	17.65	5.04
virginia	PASTURE	19.86	0.00	0.00
washington	corn	34.40	-2.90	-60.90
washington	HRSW	131.10	14.05	-22.90
washington	HRWW	131.10	14.05	-22.90
washington	barley	524.40	56.20	-91.60
washington	oats	524.40	56.20	-91.60
washington	silage	34.40	-2.90	-60.90
washington	hay	40.67	85.77	13.97
washington	SUGARBEET	0.00	85.77	13.97
washington	POTATOES	-13.50	-3.40	18.70
washington	PASTURE	81.73	0.00	0.00
westvirgin	corn	-0.60	0.00	0.00
westvirgin	SOFT	23.60	0.00	0.00
westvirgin	barley	23.60	0.00	0.00
westvirgin	oats	23.60	0.00	0.00
westvirgin	silage	-0.60	0.00	0.00
westvirgin	hay	2.19	17.81	-45.13
westvirgin	PASTURE	17.39	0.00	0.00
wisconsin	corn	10.10	9.70	-70.50
wisconsin	soybeans	91.22	44.69	-32.00
wisconsin	silage	10.10	9.70	-70.50
wisconsin	hay	17.86	34.11	-70.05

wisconsin	POTATOES	26.20	1.50	-13.80
wisconsin	PASTURE	36.79	0.00	0.00
wyoming	corn	34.40	-2.90	-60.90
wyoming	HRSW	47.30	7.10	-28.90
wyoming	HRWW	47.30	7.10	-28.90
wyoming	barley	94.60	14.20	-57.80
wyoming	oats	94.60	14.20	-57.80
wyoming	silage	34.40	-2.90	-60.90
wyoming	hay	23.81	28.54	-53.50
wyoming	SUGARBEET	0.00	28.54	-53.50
wyoming	POTATOES	0.00	-0.80	-3.80
wyoming	PASTURE	46.36	0.00	0.00

Table D2.5 Full data set for CSIRO Scenario run for 2060 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	64.79	99.93	48.00
alabama	corn	4.49	-11.21	-15.98
alabama	soybeans	-20.31	27.35	43.93
alabama	SOFT	-20.46	0.00	0.00
alabama	sorghum	-23.40	0.00	0.00
alabama	oats	-81.84	0.00	0.00
alabama	silage	4.49	0.00	0.00
alabama	hay	-33.40	-11.23	44.44
alabama	POTATOES	12.05	-4.93	-5.30
alabama	tomatofrsh	10.36	-4.07	-8.49
alabama	PASTURE	14.81	0.00	0.00
arizona	cotton	0.00	135.64	48.00
arizona	corn	47.00	-22.02	23.01
arizona	HRWW	-83.81	0.65	1.13
arizona	DURW	-83.81	0.65	1.13
arizona	sorghum	0.00	-4.85	-4.62
arizona	barley	0.00	1.30	2.26
arizona	silage	47.00	-22.02	23.01
arizona	hay	59.32	46.57	7.98
arizona	SUGARBEET	59.32	0.00	0.00
arizona	POTATOES	0.00	-22.05	-5.25
arizona	orangefrsh	0.00	90.75	3.52
arizona	orangeproc	0.00	90.75	3.52
arizona	grpfrtfrsh	0.00	90.75	3.52
arizona	grpfrtproc	0.00	90.75	3.52
arizona	PASTURE	20.34	0.00	0.00
arkansas	cotton	69.81	99.93	48.00
arkansas	corn	7.36	-13.90	-11.90
arkansas	soybeans	-46.50	19.11	53.67
arkansas	SOFT	-15.94	-18.00	-36.84
arkansas	sorghum	-41.55	-12.29	28.73
arkansas	rice	0.00	-10.22	21.26
arkansas	oats	-63.76	-72.00	-147.36
arkansas	silage	7.36	-13.90	-11.90
arkansas	hay	-19.96	-3.92	23.75
arkansas	tomatofrsh	10.36	-4.07	-8.49
arkansas	PASTURE	4.84	0.00	0.00

CALIFORNIN	cotton	47.21	66.17	48.00
CALIFORNIN	corn	-3.86	-33.25	0.70
CALIFORNIN	HRWW	131.12	19.63	-37.65
CALIFORNIN	sorghum	-53.92	-4.85	-4.62
CALIFORNIN	rice	0.00	-16.75	1.73
CALIFORNIN	barley	131.12	19.63	-37.65
CALIFORNIN	oats	131.12	19.63	-37.65
CALIFORNIN	silage	-3.86	-33.25	0.70
CALIFORNIN	hay	88.44	44.98	4.07
CALIFORNIN	SUGARBEET	0.00	44.98	4.07
CALIFORNIN	POTATOES	0.00	-7.14	6.76
CALIFORNIN	tomatofrsh	0.00	20.59	-1.61
CALIFORNIN	tomatoproc	0.00	20.59	-1.61
CALIFORNIN	orangefrsh	0.00	64.33	-36.55
CALIFORNIN	orangeproc	0.00	64.33	-36.55
CALIFORNIN	grpfrtfrsh	0.00	64.33	-36.55
CALIFORNIN	grpfrtproc	0.00	64.33	-36.55
CALIFORNIN	PASTURE	76.13	0.00	0.00
CALIFORNIS	cotton	0.00	66.17	48.00
CALIFORNIS	corn	-3.86	-33.25	0.70
CALIFORNIS	DURW	374.94	0.39	-36.79
CALIFORNIS	sorghum	-53.92	0.00	0.00
CALIFORNIS	rice	-16.75	0.00	0.00
CALIFORNIS	barley	374.94	0.39	-36.79
CALIFORNIS	oats	374.94	0.39	-36.79
CALIFORNIS	silage	-3.86	-33.25	0.70
CALIFORNIS	hay	98.22	135.39	16.39
CALIFORNIS	SUGARBEET	0.00	135.39	16.39
CALIFORNIS	POTATOES	2.19	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	20.59	-1.61
CALIFORNIS	tomatoproc	0.00	20.59	-1.61
CALIFORNIS	orangefrsh	0.00	42.63	-4.65
CALIFORNIS	orangeproc	0.00	42.63	-4.65
CALIFORNIS	grpfrtfrsh	0.00	42.63	-4.65
CALIFORNIS	grpfrtproc	0.00	42.63	-4.65
CALIFORNIS	PASTURE	113.37	0.00	0.00
colorado	corn	47.00	687.18	17.29
colorado	HRSW	-5.67	-3.00	8.63
colorado	HRWW	-5.67	-3.00	8.63
colorado	sorghum	266.25	266.15	-6.21
colorado	barley	-22.68	-12.00	34.52

colorado	oats	-22.68	-12.00	34.52
colorado	silage	47.00	687.18	17.29
colorado	hay	18.04	49.30	43.66
colorado	SUGARBEET	0.00	49.30	43.66
colorado	POTATOES	0.00	-22.05	-5.25
colorado	PASTURE	7.62	0.00	0.00
conn	hay	2.32	0.00	0.00
conn	POTATOES	12.05	0.00	0.00
conn	PASTURE	16.47	0.00	0.00
delaware	corn	-11.69	-15.14	-4.88
delaware	soybeans	2.81	42.08	32.28
delaware	SOFT	5.96	-5.84	-49.00
delaware	barley	23.84	-23.36	-196.00
delaware	silage	-11.69	0.00	0.00
delaware	hay	2.32	0.00	0.00
delaware	POTATOES	12.05	-4.93	-5.30
delaware	tomatoproc	34.46	37.70	9.92
delaware	PASTURE	16.47	0.00	0.00
florida	cotton	57.05	99.93	48.00
florida	corn	-1.35	-9.41	-7.66
florida	soybeans	2.43	33.04	45.68
florida	SOFT	-17.49	-19.87	5.56
florida	oats	-17.49	0.00	0.00
florida	silage	-1.35	-9.41	-7.66
florida	hay	-29.12	-22.96	58.84
florida	tomatofrsh	-10.96	-7.28	17.86
florida	orangefrsh	0.00	51.31	138.56
florida	orangeproc	0.00	51.31	138.56
florida	grpfrtfrsh	0.00	51.31	138.56
florida	grpfrtproc	0.00	51.31	138.56
florida	PASTURE	2.71	0.00	0.00
georgia	cotton	70.66	99.93	48.00
georgia	corn	-2.88	-10.70	-12.82
georgia	soybeans	-16.44	30.02	44.55
georgia	SOFT	-17.49	-19.87	5.56
georgia	sorghum	-20.21	-5.71	18.36
georgia	oats	-69.96	-79.48	22.24
georgia	silage	-2.88	-10.70	-12.82
georgia	hay	-39.60	-13.42	45.65
georgia	tomatofrsh	10.36	-4.07	-8.49
georgia	PASTURE	7.32	0.00	0.00

idaho	corn	-3.86	-9.20	0.80
idaho	HRSW	76.10	7.80	-22.24
idaho	HRWW	76.10	7.80	-22.24
idaho	barley	304.40	31.20	-88.96
idaho	oats	304.40	31.20	-88.96
idaho	silage	0.00	-9.20	0.80
idaho	hay	54.90	91.40	29.35
idaho	SUGARBEET	0.00	91.40	29.35
idaho	POTATOES	-10.55	-11.63	12.48
idaho	PASTURE	77.32	0.00	0.00
ILLINOISN	corn	-4.33	-16.97	-18.94
ILLINOISN	soybeans	27.51	31.67	20.28
ILLINOISN	SOFT	1.72	1.43	-50.85
ILLINOISN	sorghum	41.53	0.00	0.00
ILLINOISN	oats	6.88	5.72	-203.40
ILLINOISN	silage	-4.33	-16.97	-18.94
ILLINOISN	hay	32.91	44.78	-22.04
ILLINOISN	POTATOES	-10.15	0.00	0.00
ILLINOISN	PASTURE	21.37	0.00	0.00
ILLINOISS	corn	8.75	-18.84	-17.11
ILLINOISS	soybeans	3.18	23.74	19.50
ILLINOISS	SOFT	-15.50	-15.50	-66.67
ILLINOISS	sorghum	28.87	13.15	-10.56
ILLINOISS	oats	-62.00	0.00	0.00
ILLINOISS	silage	8.75	0.00	0.00
ILLINOISS	hay	32.91	44.78	-22.04
ILLINOISS	PASTURE	21.37	0.00	0.00
INDIANAN	corn	-10.51	-18.21	-19.01
INDIANAN	soybeans	19.56	31.56	16.99
INDIANAN	SOFT	-2.95	-2.95	-71.87
INDIANAN	sorghum	41.53	0.00	0.00
INDIANAN	oats	-11.80	0.00	0.00
INDIANAN	silage	-10.51	-18.21	-19.01
INDIANAN	hay	22.09	33.32	-3.28
INDIANAN	POTATOES	-10.15	-14.93	-2.43
INDIANAN	tomatofrsh	9.75	4.15	-48.83
INDIANAN	tomatoproc	9.75	4.15	-48.83
INDIANAN	PASTURE	13.59	0.00	0.00
INDIANAS	corn	-16.35	-17.76	-12.82
INDIANAS	soybeans	2.08	30.02	66.94
INDIANAS	SOFT	-13.13	-13.13	-90.91



INDIANAS	sorghum	28.87	0.00	0.00
INDIANAS	oats	-52.52	0.00	0.00
INDIANAS	silage	-16.35	0.00	0.00
INDIANAS	hay	22.09	33.32	-3.28
INDIANAS	tomatofrsh	9.75	4.15	-48.83
INDIANAS	tomatoproc	9.75	4.15	-48.83
INDIANAS	PASTURE	13.59	0.00	0.00
IOWAW	corn	-1.56	-22.95	-28.66
IOWAW	soybeans	66.06	55.70	5.10
IOWAW	SOFT	12.14	0.00	0.00
IOWAW	sorghum	33.47	0.00	0.00
IOWAW	oats	48.56	0.00	0.00
IOWAW	silage	-1.56	0.00	0.00
IOWAW	hay	16.35	30.95	-39.58
IOWAW	PASTURE	22.61	0.00	0.00
IOWACENT	corn	-14.94	-19.68	-32.03
IOWACENT	soybeans	42.76	47.08	7.63
IOWACENT	SOFT	11.76	0.00	0.00
IOWACENT	sorghum	29.93	0.00	0.00
IOWACENT	oats	47.04	44.32	-121.96
IOWACENT	silage	-14.94	0.00	0.00
IOWACENT	hay	16.35	30.95	-39.58
IOWACENT	PASTURE	22.61	0.00	0.00
IOWANE	corn	-13.39	-19.71	-25.60
IOWANE	soybeans	51.78	50.76	9.84
IOWANE	SOFT	-1.02	0.00	0.00
IOWANE	sorghum	24.35	0.00	0.00
IOWANE	oats	-4.08	0.00	0.00
IOWANE	silage	-13.39	0.00	0.00
IOWANE	hay	16.35	30.95	-39.58
IOWANE	POTATOES	15.00	-7.55	-11.45
IOWANE	PASTURE	22.61	0.00	0.00
IOWAS	corn	-4.83	-17.15	-16.67
IOWAS	soybeans	3.79	48.38	42.94
IOWAS	SOFT	-1.22	0.00	0.00
IOWAS	sorghum	42.40	0.00	0.00
IOWAS	oats	-4.88	0.00	0.00
IOWAS	silage	-4.83	0.00	0.00
IOWAS	hay	16.35	30.95	-39.58
IOWAS	PASTURE	22.61	0.00	0.00
kansas	corn	55.12	-14.33	-2.74

kansas	soybeans	14.20	29.27	28.07
kansas	HRWW	52.24	-3.47	-20.13
kansas	sorghum	45.48	25.87	9.73
kansas	barley	208.96	-13.88	-80.52
kansas	oats	208.96	-13.88	-80.52
kansas	silage	55.12	-14.33	-2.74
kansas	hay	3.07	18.68	10.47
kansas	SUGARBEET	3.07	0.00	0.00
kansas	PASTURE	6.11	0.00	0.00
kentucky	corn	-14.00	-14.01	-2.15
kentucky	soybeans	26.90	40.14	53.92
kentucky	SOFT	-15.38	0.00	0.00
kentucky	sorghum	-16.37	0.00	0.00
kentucky	barley	-61.52	0.00	0.00
kentucky	oats	-61.52	0.00	0.00
kentucky	silage	-14.00	0.00	0.00
kentucky	hay	13.29	22.38	5.11
kentucky	PASTURE	9.98	0.00	0.00
louisiana	cotton	45.63	99.93	48.00
louisiana	corn	1.05	-9.96	-16.67
louisiana	soybeans	-8.28	20.95	50.26
louisiana	SOFT	-23.42	-23.16	79.69
louisiana	sorghum	-21.95	-11.61	22.83
louisiana	rice	0.00	-16.49	11.79
louisiana	silage	1.05	0.00	0.00
louisiana	hay	-30.67	-14.77	12.88
louisiana	SUGARCANE	-16.49	-16.49	11.79
louisiana	tomatofrsh	10.36	-4.07	-8.49
louisiana	PASTURE	4.84	0.00	0.00
maine	hay	-4.34	28.83	7.47
maine	POTATOES	9.80	3.88	3.08
maine	PASTURE	13.57	0.00	0.00
maryland	corn	-11.69	-15.14	-4.88
maryland	soybeans	2.81	42.08	32.28
maryland	SOFT	5.96	-5.84	-49.00
maryland	barley	23.84	-23.36	-196.00
maryland	oats	23.84	0.00	0.00
maryland	silage	-11.69	-15.14	-4.88
maryland	hay	-9.71	6.31	-42.75
maryland	POTATOES	12.05	-4.93	-5.30
maryland	tomatofrsh	20.47	5.63	-25.63

maryland	tomatoproc	20.47	5.63	-25.63
maryland	PASTURE	8.77	0.00	0.00
mass	hay	-4.34	28.83	7.47
mass	POTATOES	9.80	0.00	0.00
mass	tomatofrsh	34.46	37.70	9.92
mass	PASTURE	13.57	0.00	0.00
michigan	corn	-4.93	-17.98	-31.17
michigan	soybeans	64.05	51.60	-1.46
michigan	SOFT	-9.27	-18.95	-60.38
michigan	barley	-37.08	0.00	0.00
michigan	oats	-37.08	-75.80	-241.52
michigan	silage	-4.93	-17.98	-31.17
michigan	hay	27.14	48.02	3.66
michigan	SUGARBEET	27.14	48.02	3.66
michigan	POTATOES	20.33	-8.45	-7.55
michigan	tomatofrsh	53.09	43.83	0.54
michigan	tomatoproc	53.09	43.83	0.54
michigan	PASTURE	26.06	0.00	0.00
minnesota	corn	-2.29	-15.10	-38.61
minnesota	soybeans	87.11	71.15	-9.60
minnesota	HRSW	11.39	15.08	-9.86
minnesota	HRWW	11.39	15.08	-9.86
minnesota	DURW	11.39	15.08	-9.86
minnesota	barley	45.56	60.32	-39.44
minnesota	oats	45.56	60.32	-39.44
minnesota	silage	-2.29	-15.10	-38.61
minnesota	hay	7.33	49.45	26.66
minnesota	SUGARBEET	7.33	49.45	26.66
minnesota	POTATOES	15.00	-7.55	-11.45
minnesota	PASTURE	14.65	0.00	0.00
mississippi	cotton	77.53	99.93	48.00
mississippi	corn	1.61	-12.39	-18.27
mississippi	soybeans	-10.53	27.03	38.83
mississippi	SOFT	-20.92	-20.97	7.46
mississippi	sorghum	-22.80	-15.26	10.53
mississippi	rice	0.00	-10.94	9.13
mississippi	silage	1.61	-12.39	-18.27
mississippi	hay	-33.40	-11.23	44.44
mississippi	PASTURE	14.81	0.00	0.00
missouri	cotton	63.86	53.10	48.00
missouri	corn	20.75	-16.37	-17.98

missouri	soybeans	7.92	35.22	35.34
missouri	SOFT	-11.24	-14.81	-50.00
missouri	sorghum	42.17	21.17	-10.04
missouri	rice	0.00	-5.65	22.01
missouri	oats	-44.96	0.00	0.00
missouri	silage	20.75	-16.37	-17.98
missouri	hay	26.92	25.11	-17.76
missouri	PASTURE	28.84	0.00	0.00
montana	corn	0.00	-5.83	-35.06
montana	HRSW	55.70	7.31	-44.41
montana	HRWW	55.70	7.31	-44.41
montana	DURW	55.70	7.31	-44.41
montana	barley	222.80	29.24	-177.64
montana	oats	222.80	29.24	-177.64
montana	silage	47.00	-5.83	-35.06
montana	hay	14.39	36.31	19.96
montana	SUGARBEET	0.00	36.31	19.96
montana	POTATOES	-10.55	-11.63	12.48
montana	PASTURE	7.45	0.00	0.00
nebraska	corn	47.00	-14.04	-20.09
nebraska	soybeans	20.45	37.41	31.34
nebraska	HRWW	18.31	-1.46	-50.98
nebraska	sorghum	68.11	39.98	-12.66
nebraska	barley	73.24	-5.84	-203.92
nebraska	oats	73.24	-5.84	-203.92
nebraska	silage	47.00	-14.04	-20.09
nebraska	hay	15.90	28.21	19.79
nebraska	SUGARBEET	0.00	28.21	19.79
nebraska	POTATOES	-31.18	-23.33	6.98
nebraska	PASTURE	7.56	0.00	0.00
nevada	HRSW	0.00	14.13	-51.91
nevada	HRWW	0.00	14.13	-51.91
nevada	barley	0.00	28.26	-103.82
nevada	hay	0.00	22.14	1.64
nevada	POTATOES	0.00	-11.63	12.48
nevada	PASTURE	65.15	0.00	0.00
newhampshi	hay	2.32	0.00	0.00
newhampshi	PASTURE	16.47	0.00	0.00
newjersey	corn	-22.65	-25.31	-14.71
newjersey	soybeans	48.19	42.58	9.09
newjersey	SOFT	6.58	3.13	-38.95

newjersey	barley	26.32	0.00	0.00
newjersey	oats	26.32	0.00	0.00
newjersey	silage	-22.65	0.00	0.00
newjersey	hay	2.32	22.26	-15.07
newjersey	POTATOES	12.05	-4.93	-5.30
newjersey	tomatofrsh	34.46	37.70	9.92
newjersey	tomatoproc	34.46	37.70	9.92
newjersey	PASTURE	16.47	0.00	0.00
newmexico	cotton	50.80	36.40	48.00
newmexico	corn	47.00	-11.53	13.26
newmexico	HRWW	-83.81	0.65	1.13
newmexico	sorghum	-53.92	-4.85	-4.62
newmexico	barley	-335.24	2.60	4.52
newmexico	silage	47.00	-11.53	13.26
newmexico	hay	27.77	31.37	21.79
newmexico	SUGARBEET	27.77	0.00	0.00
newmexico	POTATOES	0.00	-22.05	-5.25
newmexico	PASTURE	7.62	0.00	0.00
newyork	corn	-0.29	-8.65	-44.14
newyork	soybeans	54.16	0.00	0.00
newyork	SOFT	-12.19	0.00	0.00
newyork	oats	-48.76	-63.80	-282.92
newyork	silage	-0.29	-8.65	-44.14
newyork	hay	2.32	22.26	-15.07
newyork	POTATOES	12.05	-4.93	-5.30
newyork	tomatofrsh	34.46	37.70	9.92
newyork	tomatoproc	34.46	37.70	9.92
newyork	PASTURE	16.47	0.00	0.00
northcarol	cotton	57.61	55.58	48.00
northcarol	corn	1.09	-7.23	-1.55
northcarol	soybeans	-19.84	42.51	63.64
northcarol	SOFT	-17.17	-19.34	-35.45
northcarol	sorghum	-11.70	0.00	0.00
northcarol	barley	-68.68	0.00	0.00
northcarol	oats	-68.68	-77.36	-141.80
northcarol	silage	1.09	-7.23	-1.55
northcarol	hay	-9.71	6.31	-42.75
northcarol	POTATOES	12.05	-4.93	-5.30
northcarol	tomatofrsh	20.47	5.63	-25.63
northcarol	PASTURE	8.77	0.00	0.00
northdakot	corn	110.52	-4.08	-29.57

northdakot	soybeans	188.71	69.74	-10.38
northdakot	HRSW	18.19	13.25	-13.14
northdakot	HRWW	18.19	13.25	-13.14
northdakot	DURW	18.19	13.25	-13.14
northdakot	barley	72.76	53.00	-52.56
northdakot	oats	72.76	53.00	-52.56
northdakot	silage	110.52	-4.08	-29.57
northdakot	hay	-1.51	44.32	32.16
northdakot	SUGARBEET	-1.51	44.32	32.16
northdakot	POTATOES	-5.23	-7.30	4.23
northdakot	PASTURE	18.82	0.00	0.00
OHIONW	corn	-10.15	-17.71	-14.81
OHIONW	soybeans	22.25	33.37	19.87
OHIONW	SOFT	-2.31	-2.52	-64.86
OHIONW	oats	-9.24	0.00	0.00
OHIONW	silage	-10.15	0.00	0.00
OHIONW	hay	19.44	33.79	8.74
OHIONW	SUGARBEET	19.44	33.79	8.74
OHIONW	POTATOES	-10.15	-14.93	-2.43
OHIONW	tomatofrsh	10.53	4.19	-43.39
OHIONW	tomatoproc	10.53	4.19	-43.39
OHIONW	PASTURE	10.87	0.00	0.00
OHIOS	corn	-10.63	-14.03	-16.67
OHIOS	soybeans	60.47	65.10	24.56
OHIOS	SOFT	-13.01	-13.01	-74.51
OHIOS	oats	-52.04	0.00	0.00
OHIOS	silage	-10.63	0.00	0.00
OHIOS	hay	19.44	33.79	8.74
OHIOS	SUGARBEET	19.44	0.00	0.00
OHIOS	tomatofrsh	10.53	4.19	-43.39
OHIOS	tomatoproc	10.53	4.19	-43.39
OHIOS	PASTURE	10.87	0.00	0.00
OHIONE	corn	-5.83	0.00	0.00
OHIONE	soybeans	39.72	56.24	25.88
OHIONE	SOFT	-10.54	0.00	0.00
OHIONE	oats	-42.16	-42.16	-281.24
OHIONE	silage	-5.83	0.00	0.00
OHIONE	hay	19.44	33.79	8.74
OHIONE	SUGARBEET	19.44	0.00	0.00
OHIONE	tomatofrsh	10.53	4.19	-43.39
OHIONE	tomatoproc	10.53	4.19	-43.39

OHIONE	PASTURE	10.87	0.00	0.00
oklahoma	cotton	97.20	96.28	48.00
oklahoma	corn	24.90	-17.65	1.79
oklahoma	soybeans	-43.33	6.90	69.35
oklahoma	HRWW	-1.00	-8.88	-9.44
oklahoma	sorghum	-24.81	-7.72	29.82
oklahoma	barley	-4.00	0.00	0.00
oklahoma	oats	-4.00	-35.52	-37.76
oklahoma	silage	24.90	-17.65	1.79
oklahoma	hay	0.11	11.41	15.76
oklahoma	PASTURE	4.69	0.00	0.00
oregon	corn	-3.86	-1.10	-17.26
oregon	HRSW	131.12	19.63	-37.65
oregon	HRWW	131.12	19.63	-37.65
oregon	barley	524.48	78.52	-150.60
oregon	oats	524.48	78.52	-150.60
oregon	silage	-3.86	-1.10	-17.26
oregon	hay	43.23	90.60	34.74
oregon	SUGARBEET	0.00	90.60	34.74
oregon	POTATOES	2.19	-7.14	6.76
oregon	PASTURE	57.17	0.00	0.00
pennsylvan	corn	2.28	1.56	-50.75
pennsylvan	soybeans	54.16	0.00	0.00
pennsylvan	SOFT	-6.03	-6.03	-88.89
pennsylvan	barley	-24.12	0.00	0.00
pennsylvan	oats	-24.12	0.00	0.00
pennsylvan	silage	2.28	1.56	-50.75
pennsylvan	hay	23.57	41.97	13.39
pennsylvan	POTATOES	12.05	-4.93	-5.30
pennsylvan	tomatofrsh	34.46	37.70	9.92
pennsylvan	tomatoproc	34.46	37.70	9.92
pennsylvan	PASTURE	16.47	0.00	0.00
rhodeislan	hay	2.32	22.26	-15.07
rhodeislan	POTATOES	12.05	-4.93	-5.30
rhodeislan	PASTURE	16.47	0.00	0.00
southcarol	cotton	72.75	55.58	48.00
southcarol	corn	-3.62	-9.72	-9.39
southcarol	soybeans	-18.50	29.36	48.98
southcarol	SOFT	-15.61	-18.32	-19.42
southcarol	sorghum	-22.72	-5.80	24.86
southcarol	barley	-62.44	0.00	0.00

southcarol	oats	-62.44	0.00	0.00
southcarol	silage	-3.62	-9.72	-9.39
southcarol	hay	-34.52	-19.04	19.36
southcarol	tomatofrsh	3.85	-3.30	5.06
southcarol	PASTURE	8.06	0.00	0.00
southdakot	corn	18.31	-15.02	-23.15
southdakot	soybeans	78.68	51.86	2.56
southdakot	HRSW	23.98	18.69	-18.29
southdakot	HRWW	23.98	18.69	-18.29
southdakot	DURW	23.98	18.69	-18.29
southdakot	sorghum	69.57	45.45	-11.30
southdakot	barley	95.92	74.76	-73.16
southdakot	oats	95.92	74.76	-73.16
southdakot	silage	18.31	-15.02	-23.15
southdakot	hay	14.82	34.90	12.82
southdakot	POTATOES	-5.23	-7.30	4.23
southdakot	PASTURE	20.60	0.00	0.00
tennessee	cotton	51.57	55.58	48.00
tennessee	corn	-1.87	-12.73	-18.44
tennessee	soybeans	-11.83	35.10	47.31
tennessee	SOFT	-17.98	0.00	0.00
tennessee	sorghum	-2.31	0.00	0.00
tennessee	oats	-71.92	0.00	0.00
tennessee	silage	-1.87	0.00	0.00
tennessee	hay	-11.39	4.47	37.05
tennessee	POTATOES	12.05	0.00	0.00
tennessee	tomatofrsh	20.47	5.63	-25.63
tennessee	PASTURE	-0.10	0.00	0.00
TXHIPLAINS	cotton	49.66	43.84	48.00
TXHIPLAINS	corn	4.36	-20.34	-8.63
TXHIPLAINS	soybeans	-1.91	28.02	25.06
TXHIPLAINS	HRWW	32.45	-8.88	-9.44
TXHIPLAINS	sorghum	13.32	18.34	-17.82
TXHIPLAINS	barley	129.80	-35.52	-37.76
TXHIPLAINS	oats	129.80	-35.52	-37.76
TXHIPLAINS	silage	4.36	-20.34	-8.63
TXHIPLAINS	hay	172.27	13.10	-15.30
TXHIPLAINS	SUGARBEET	172.27	13.10	-15.30
TXHIPLAINS	POTATOES	-6.13	-22.05	-5.25
TXHIPLAINS	PASTURE	13.95	0.00	0.00
TXROLINGPL	cotton	53.22	70.14	48.00



TXROLINGPL	corn	4.36	-14.83	-1.81
TXROLINGPL	HRWW	2.91	-14.36	17.14
TXROLINGPL	sorghum	46.05	9.66	-13.58
TXROLINGPL	barley	11.64	0.00	0.00
TXROLINGPL	oats	11.64	-57.44	68.56
TXROLINGPL	silage	4.36	-14.83	-1.81
TXROLINGPL	hay	172.27	13.10	-15.30
TXROLINGPL	POTATOES	-6.13	0.00	0.00
TXROLINGPL	PASTURE	13.95	0.00	0.00
TXCNTBLACK	cotton	32.21	58.64	48.00
TXCNTBLACK	corn	36.18	-10.81	-6.22
TXCNTBLACK	soybeans	-81.38	0.00	0.00
TXCNTBLACK	HRWW	-14.77	-21.37	40.20
TXCNTBLACK	sorghum	17.80	7.55	-8.61
TXCNTBLACK	rice	0.00	-16.41	20.72
TXCNTBLACK	barley	-59.08	0.00	0.00
TXCNTBLACK	oats	-59.08	-85.48	160.80
TXCNTBLACK	silage	36.18	-10.81	-6.22
TXCNTBLACK	hay	146.82	1.35	10.09
TXCNTBLACK	PASTURE	17.77	0.00	0.00
TXEAST	cotton	43.54	39.84	48.00
TXEAST	corn	7.50	-7.57	-3.97
TXEAST	soybeans	-10.64	8.18	41.09
TXEAST	HRWW	-14.77	-21.37	40.20
TXEAST	sorghum	1.23	2.74	-12.81
TXEAST	rice	0.00	-17.82	15.94
TXEAST	oats	-14.77	-21.37	40.20
TXEAST	silage	7.50	0.00	0.00
TXEAST	hay	146.82	1.35	10.09
TXEAST	tomatofrsh	10.36	-4.07	-8.49
TXEAST	PASTURE	17.77	0.00	0.00
TXEDPLAT	cotton	27.78	62.11	48.00
TXEDPLAT	corn	-18.01	-18.59	3.87
TXEDPLAT	soybeans	-12.14	0.00	0.00
TXEDPLAT	HRWW	-20.78	-18.43	48.01
TXEDPLAT	sorghum	5.43	1.64	-6.65
TXEDPLAT	barley	-83.12	0.00	0.00
TXEDPLAT	oats	-83.12	-73.72	192.04
TXEDPLAT	silage	-18.01	-18.59	3.87
TXEDPLAT	hay	153.82	-2.80	-5.63
TXEDPLAT	tomatofrsh	0.00	-4.07	-8.49

TXEDPLAT	PASTURE	17.03	0.00	0.00
TXCOASTBE	cotton	7.75	25.91	48.00
TXCOASTBE	corn	-18.01	-14.19	3.75
TXCOASTBE	soybeans	-36.95	6.19	52.51
TXCOASTBE	HRWW	-14.77	0.00	0.00
TXCOASTBE	sorghum	-2.11	-3.26	-1.55
TXCOASTBE	rice	0.00	-8.89	12.02
TXCOASTBE	oats	-14.77	-21.37	40.20
TXCOASTBE	hay	153.82	-2.80	-5.63
TXCOASTBE	tomatofrsh	10.36	0.00	0.00
TXCOASTBE	PASTURE	17.03	0.00	0.00
TXSOUTH	cotton	-1.68	22.77	48.00
TXSOUTH	corn	-18.01	-19.47	24.03
TXSOUTH	soybeans	0.00	-12.50	33.14
TXSOUTH	HRWW	-14.77	-21.37	40.20
TXSOUTH	sorghum	-57.17	-4.30	6.92
TXSOUTH	oats	-14.77	-21.37	40.20
TXSOUTH	silage	-18.01	-19.47	24.03
TXSOUTH	hay	153.82	-2.80	-5.63
TXSOUTH	POTATOES	0.00	-22.05	-5.25
TXSOUTH	tomatofrsh	10.36	-4.07	-8.49
TXSOUTH	orangefrsh	0.00	59.18	1.50
TXSOUTH	orangeproc	0.00	59.18	1.50
TXSOUTH	grpfrtfrsh	0.00	59.18	1.50
TXSOUTH	grpfrtproc	0.00	59.18	1.50
TXSOUTH	PASTURE	17.03	0.00	0.00
TXTRANSPEC	cotton	37.82	91.73	48.00
TXTRANSPEC	corn	4.36	0.00	0.00
TXTRANSPEC	HRWW	-52.63	-17.85	13.88
TXTRANSPEC	sorghum	0.00	6.95	-7.44
TXTRANSPEC	barley	0.00	-71.40	55.52
TXTRANSPEC	oats	0.00	-71.40	55.52
TXTRANSPEC	hay	177.62	9.51	-14.45
TXTRANSPEC	PASTURE	5.37	0.00	0.00
utah	corn	0.00	42.38	16.38
utah	HRSW	374.94	0.39	-36.79
utah	HRWW	374.94	0.39	-36.79
utah	barley	1499.76	1.56	-147.16
utah	oats	1499.76	1.56	-147.16
utah	silage	47.00	42.38	16.38
utah	hay	82.14	34.22	16.55

utah	SUGARBEET	82.14	0.00	0.00
utah	POTATOES	0.00	-11.63	12.48
utah	PASTURE	65.15	0.00	0.00
vermont	hay	2.32	22.26	-15.07
vermont	PASTURE	16.47	0.00	0.00
virginia	cotton	76.64	55.58	48.00
virginia	corn	-16.59	-5.15	16.09
virginia	soybeans	-31.32	52.38	60.57
virginia	SOFT	19.76	-10.72	-37.41
virginia	sorghum	-11.70	0.00	0.00
virginia	barley	79.04	-42.88	-149.64
virginia	oats	79.04	0.00	0.00
virginia	silage	-16.59	-5.15	16.09
virginia	hay	-9.71	6.31	-42.75
virginia	POTATOES	12.05	-4.93	-5.30
virginia	tomatofrsh	20.47	5.63	-25.63
virginia	tomatoproc	20.47	5.63	-25.63
virginia	PASTURE	8.77	0.00	0.00
washington	corn	-3.86	215.21	-6.34
washington	HRSW	54.65	17.64	-47.45
washington	HRWW	54.65	17.64	-47.45
washington	barley	218.60	70.56	-189.80
washington	oats	218.60	70.56	-189.80
washington	silage	-3.86	215.21	-6.34
washington	hay	42.43	86.42	45.28
washington	SUGARBEET	0.00	86.42	45.28
washington	POTATOES	-4.40	0.53	7.63
washington	PASTURE	54.36	0.00	0.00
westvirgin	corn	-8.68	0.00	0.00
westvirgin	SOFT	-7.53	0.00	0.00
westvirgin	barley	-30.12	0.00	0.00
westvirgin	oats	-30.12	0.00	0.00
westvirgin	silage	-8.68	0.00	0.00
westvirgin	hay	2.32	18.42	48.82
westvirgin	PASTURE	-0.10	0.00	0.00
wisconsin	corn	-8.42	-11.40	-25.00
wisconsin	soybeans	67.77	78.74	16.67
wisconsin	HRSW	9.90	8.75	-35.80
wisconsin	HRWW	9.90	8.75	-35.80
wisconsin	barley	39.60	0.00	0.00
wisconsin	oats	39.60	35.00	-143.20

wisconsin	silage	-8.42	-11.40	-25.00
wisconsin	hay	34.47	49.83	5.93
wisconsin	POTATOES	15.00	-7.55	-11.45
wisconsin	PASTURE	28.10	0.00	0.00
wyoming	corn	47.00	3.30	-13.27
wyoming	HRSW	116.87	14.13	-51.91
wyoming	HRWW	116.87	14.13	-51.91
wyoming	barley	467.48	56.52	-207.64
wyoming	oats	467.48	56.52	-207.64
wyoming	silage	47.00	3.30	-13.27
wyoming	hay	18.67	39.57	4.02
wyoming	SUGARBEET	0.00	39.57	4.02
wyoming	POTATOES	0.00	-7.30	4.23
wyoming	PASTURE	31.68	0.00	0.00

Table D2.6 Full data set for REGCM Scenario run for 2060 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland	Irrigated	Irrigated
		Yield	Yield	Wateruse
alabama	cotton	45.70	104.77	48.00
alabama	corn	9.30	-9.07	-13.24
alabama	soybeans	-66.08	17.95	94.86
alabama	SOFT	-20.87	0.00	0.00
alabama	sorghum	-54.08	0.00	0.00
alabama	oats	-83.48	0.00	0.00
alabama	silage	9.30	0.00	0.00
alabama	hay	-33.40	-11.23	44.44
alabama	POTATOES	12.05	-4.93	-5.30
alabama	tomatofrsh	10.36	-4.07	-8.49
alabama	PASTURE	14.81	0.00	0.00
arizona	cotton	0.00	147.42	48.00
arizona	corn	66.74	-1.19	29.94
arizona	HRWW	25.71	-7.96	-7.55
arizona	DURW	25.71	-7.96	-7.55
arizona	sorghum	0.00	-2.43	-0.69
arizona	barley	0.00	-15.92	-15.10
arizona	silage	66.74	-1.19	29.94
arizona	hay	59.32	46.57	7.98
arizona	SUGARBEET	59.32	0.00	0.00
arizona	POTATOES	0.00	-22.05	-5.25
arizona	orangefrsh	0.00	90.75	3.52
arizona	orangeproc	0.00	90.75	3.52
arizona	grpfrtfrsh	0.00	90.75	3.52
arizona	grpfrtproc	0.00	90.75	3.52
arizona	PASTURE	20.34	0.00	0.00
arkansas	cotton	75.62	104.77	48.00
arkansas	corn	12.24	-6.26	-4.76
arkansas	soybeans	-38.68	11.62	54.83
arkansas	SOFT	-11.55	-14.27	-52.63
arkansas	sorghum	-32.49	-16.18	30.22
arkansas	rice	0.00	-12.90	39.08
arkansas	oats	-46.20	-57.08	-210.52
arkansas	silage	12.24	-6.26	-4.76
arkansas	hay	-19.96	-3.92	23.75
arkansas	tomatofrsh	10.36	-4.07	-8.49
arkansas	PASTURE	4.84	0.00	0.00

CALIFORNIN	cotton	27.59	81.15	48.00
CALIFORNIN	corn	2.52	-12.86	8.31
CALIFORNIN	HRWW	115.78	21.44	-34.82
CALIFORNIN	sorghum	22.55	-2.43	-0.69
CALIFORNIN	rice	0.00	-14.34	9.09
CALIFORNIN	barley	115.78	21.44	-34.82
CALIFORNIN	oats	115.78	21.44	-34.82
CALIFORNIN	silage	2.52	-12.86	8.31
CALIFORNIN	hay	88.44	44.98	4.07
CALIFORNIN	SUGARBEET	0.00	44.98	4.07
CALIFORNIN	POTATOES	0.00	-7.14	6.76
CALIFORNIN	tomatofrsh	0.00	20.59	-1.61
CALIFORNIN	tomatoproc	0.00	20.59	-1.61
CALIFORNIN	orangefrsh	0.00	64.33	-36.55
CALIFORNIN	orangeproc	0.00	64.33	-36.55
CALIFORNIN	grpfrtfrsh	0.00	64.33	-36.55
CALIFORNIN	grpfrtproc	0.00	64.33	-36.55
CALIFORNIN	PASTURE	76.13	0.00	0.00
CALIFORNIS	cotton	0.00	81.15	48.00
CALIFORNIS	corn	2.52	-12.86	8.31
CALIFORNIS	DURW	211.17	-3.23	-16.69
CALIFORNIS	sorghum	22.55	0.00	0.00
CALIFORNIS	rice	-14.34	0.00	0.00
CALIFORNIS	barley	211.17	-3.23	-16.69
CALIFORNIS	oats	211.17	-3.23	-16.69
CALIFORNIS	silage	2.52	-12.86	8.31
CALIFORNIS	hay	98.22	135.39	16.39
CALIFORNIS	SUGARBEET	0.00	135.39	16.39
CALIFORNIS	POTATOES	2.19	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	20.59	-1.61
CALIFORNIS	tomatoproc	0.00	20.59	-1.61
CALIFORNIS	orangefrsh	0.00	42.63	-4.65
CALIFORNIS	orangeproc	0.00	42.63	-4.65
CALIFORNIS	grpfrtfrsh	0.00	42.63	-4.65
CALIFORNIS	grpfrtproc	0.00	42.63	-4.65
CALIFORNIS	PASTURE	113.37	0.00	0.00
colorado	corn	42.20	656.18	10.85
colorado	HRSW	52.23	-3.33	1.89
colorado	HRWW	52.23	-3.33	1.89
colorado	sorghum	356.25	403.08	-1.13
colorado	barley	208.92	-13.32	7.56

colorado	oats	208.92	-13.32	7.56
colorado	silage	42.20	656.18	10.85
colorado	hay	18.04	49.30	43.66
colorado	SUGARBEET	0.00	49.30	43.66
colorado	POTATOES	0.00	-22.05	-5.25
colorado	PASTURE	7.62	0.00	0.00
conn	hay	2.32	0.00	0.00
conn	POTATOES	12.05	0.00	0.00
conn	PASTURE	16.47	0.00	0.00
delaware	corn	-36.38	-18.96	57.72
delaware	soybeans	-41.87	36.20	96.85
delaware	SOFT	2.59	-8.83	-46.00
delaware	barley	10.36	-35.32	-184.00
delaware	silage	-36.38	0.00	0.00
delaware	hay	2.32	0.00	0.00
delaware	POTATOES	12.05	-4.93	-5.30
delaware	tomatoproc	34.46	37.70	9.92
delaware	PASTURE	16.47	0.00	0.00
florida	cotton	51.43	104.77	48.00
florida	corn	10.06	-7.07	-10.64
florida	soybeans	-33.15	26.23	79.63
florida	SOFT	-17.72	-20.67	2.08
florida	oats	-17.72	0.00	0.00
florida	silage	10.06	-7.07	-10.64
florida	hay	-29.12	-22.96	58.84
florida	tomatofrsh	-10.96	-7.28	17.86
florida	orangefrsh	0.00	51.31	138.56
florida	orangeproc	0.00	51.31	138.56
florida	grpfrtfrsh	0.00	51.31	138.56
florida	grpfrtproc	0.00	51.31	138.56
florida	PASTURE	2.71	0.00	0.00
georgia	cotton	44.68	104.77	48.00
georgia	corn	-0.98	-9.17	-2.56
georgia	soybeans	-68.06	19.02	109.00
georgia	SOFT	-17.72	-20.67	2.08
georgia	sorghum	-53.26	-9.04	78.74
georgia	oats	-70.88	-82.68	8.32
georgia	silage	-0.98	-9.17	-2.56
georgia	hay	-39.60	-13.42	45.65
georgia	tomatofrsh	10.36	-4.07	-8.49
georgia	PASTURE	7.32	0.00	0.00

idaho	corn	2.52	-14.45	-12.52
idaho	HRSW	79.84	-2.29	-23.67
idaho	HRWW	79.84	-2.29	-23.67
idaho	barley	319.36	-9.16	-94.68
idaho	oats	319.36	-9.16	-94.68
idaho	silage	0.00	-14.45	-12.52
idaho	hay	54.90	91.40	29.35
idaho	SUGARBEET	0.00	91.40	29.35
idaho	POTATOES	-10.55	-11.63	12.48
idaho	PASTURE	77.32	0.00	0.00
ILLINOISN	corn	-14.66	-21.67	-6.82
ILLINOISN	soybeans	-9.02	27.47	37.76
ILLINOISN	SOFT	-3.66	-3.93	-40.68
ILLINOISN	sorghum	38.03	0.00	0.00
ILLINOISN	oats	-14.64	-15.72	-162.72
ILLINOISN	silage	-14.66	-21.67	-6.82
ILLINOISN	hay	32.91	44.78	-22.04
ILLINOISN	POTATOES	-10.15	0.00	0.00
ILLINOISN	PASTURE	21.37	0.00	0.00
ILLINOISS	corn	-20.56	-22.67	14.97
ILLINOISS	soybeans	-68.27	13.52	75.50
ILLINOISS	SOFT	-15.42	-15.42	-51.52
ILLINOISS	sorghum	10.08	13.87	32.30
ILLINOISS	oats	-61.68	0.00	0.00
ILLINOISS	silage	-20.56	0.00	0.00
ILLINOISS	hay	32.91	44.78	-22.04
ILLINOISS	PASTURE	21.37	0.00	0.00
INDIANAN	corn	-25.08	-24.23	-4.93
INDIANAN	soybeans	-30.57	24.67	58.82
INDIANAN	SOFT	-2.06	-2.06	-56.25
INDIANAN	sorghum	38.03	0.00	0.00
INDIANAN	oats	-8.24	0.00	0.00
INDIANAN	silage	-25.08	-24.23	-4.93
INDIANAN	hay	22.09	33.32	-3.28
INDIANAN	POTATOES	-10.15	-14.93	-2.43
INDIANAN	tomatofrsh	9.75	4.15	-48.83
INDIANAN	tomatoproc	9.75	4.15	-48.83
INDIANAN	PASTURE	13.59	0.00	0.00
INDIANAS	corn	-22.58	-21.97	15.38
INDIANAS	soybeans	-23.61	18.79	81.82
INDIANAS	SOFT	-14.65	-14.65	-84.85



INDIANAS	sorghum	10.08	0.00	0.00
INDIANAS	oats	-58.60	0.00	0.00
INDIANAS	silage	-22.58	0.00	0.00
INDIANAS	hay	22.09	33.32	-3.28
INDIANAS	tomatofrsh	9.75	4.15	-48.83
INDIANAS	tomatoproc	9.75	4.15	-48.83
INDIANAS	PASTURE	13.59	0.00	0.00
IOWAW	corn	2.13	-18.87	-21.34
IOWAW	soybeans	64.95	60.33	14.65
IOWAW	SOFT	1.01	0.00	0.00
IOWAW	sorghum	43.00	0.00	0.00
IOWAW	oats	4.04	0.00	0.00
IOWAW	silage	2.13	0.00	0.00
IOWAW	hay	16.35	30.95	-39.58
IOWAW	PASTURE	22.61	0.00	0.00
IOWACENT	corn	-14.92	-19.67	-21.09
IOWACENT	soybeans	39.45	48.08	20.34
IOWACENT	SOFT	-3.80	0.00	0.00
IOWACENT	sorghum	26.93	0.00	0.00
IOWACENT	oats	-15.20	-17.56	-160.96
IOWACENT	silage	-14.92	0.00	0.00
IOWACENT	hay	16.35	30.95	-39.58
IOWACENT	PASTURE	22.61	0.00	0.00
IOWANE	corn	-11.26	-22.51	-29.60
IOWANE	soybeans	53.94	50.69	11.48
IOWANE	SOFT	-9.94	0.00	0.00
IOWANE	sorghum	37.45	0.00	0.00
IOWANE	oats	-39.76	0.00	0.00
IOWANE	silage	-11.26	0.00	0.00
IOWANE	hay	16.35	30.95	-39.58
IOWANE	POTATOES	15.00	-7.55	-11.45
IOWANE	PASTURE	22.61	0.00	0.00
IOWAS	corn	-9.60	-18.01	-11.31
IOWAS	soybeans	-21.73	45.23	54.71
IOWAS	SOFT	0.22	0.00	0.00
IOWAS	sorghum	34.05	0.00	0.00
IOWAS	oats	0.88	0.00	0.00
IOWAS	silage	-9.60	0.00	0.00
IOWAS	hay	16.35	30.95	-39.58
IOWAS	PASTURE	22.61	0.00	0.00
kansas	corn	168.69	-17.15	-18.84

kansas	soybeans	180.44	24.29	7.36
kansas	HRWW	121.29	0.50	-46.54
kansas	sorghum	125.86	41.27	-9.12
kansas	barley	485.16	2.00	-186.16
kansas	oats	485.16	2.00	-186.16
kansas	silage	168.69	-17.15	-18.84
kansas	hay	3.07	18.68	10.47
kansas	SUGARBEET	3.07	0.00	0.00
kansas	PASTURE	6.11	0.00	0.00
kentucky	corn	-18.04	-16.61	49.46
kentucky	soybeans	5.62	34.27	91.18
kentucky	SOFT	-15.36	0.00	0.00
kentucky	sorghum	-26.43	0.00	0.00
kentucky	barley	-61.44	0.00	0.00
kentucky	oats	-61.44	0.00	0.00
kentucky	silage	-18.04	0.00	0.00
kentucky	hay	13.29	22.38	5.11
kentucky	PASTURE	9.98	0.00	0.00
louisiana	cotton	47.21	104.77	48.00
louisiana	corn	6.65	-8.70	-22.55
louisiana	soybeans	-30.45	15.66	67.88
louisiana	SOFT	-21.30	-21.25	21.87
louisiana	sorghum	-28.52	-11.53	39.67
louisiana	rice	0.00	-13.76	6.11
louisiana	silage	6.65	0.00	0.00
louisiana	hay	-30.67	-14.77	12.88
louisiana	SUGARCANE	-13.76	-13.76	6.11
louisiana	tomatofrsh	10.36	-4.07	-8.49
louisiana	PASTURE	4.84	0.00	0.00
maine	hay	-4.34	28.83	7.47
maine	POTATOES	9.80	3.88	3.08
maine	PASTURE	13.57	0.00	0.00
maryland	corn	-36.38	-18.96	57.72
maryland	soybeans	-41.87	36.20	96.85
maryland	SOFT	2.59	-8.83	-46.00
maryland	barley	10.36	-35.32	-184.00
maryland	oats	10.36	0.00	0.00
maryland	silage	-36.38	-18.96	57.72
maryland	hay	-9.71	6.31	-42.75
maryland	POTATOES	12.05	-4.93	-5.30
maryland	tomatofrsh	20.47	5.63	-25.63

maryland	tomatoproc	20.47	5.63	-25.63
maryland	PASTURE	8.77	0.00	0.00
mass	hay	-4.34	28.83	7.47
mass	POTATOES	9.80	0.00	0.00
mass	tomatofrsh	34.46	37.70	9.92
mass	PASTURE	13.57	0.00	0.00
michigan	corn	-30.11	-15.36	17.53
michigan	soybeans	-27.42	57.69	63.50
michigan	SOFT	3.14	-3.81	-18.87
michigan	barley	12.56	0.00	0.00
michigan	oats	12.56	-15.24	-75.48
michigan	silage	-30.11	-15.36	17.53
michigan	hay	27.14	48.02	3.66
michigan	SUGARBEET	27.14	48.02	3.66
michigan	POTATOES	20.33	-8.45	-7.55
michigan	tomatofrsh	53.09	43.83	0.54
michigan	tomatoproc	53.09	43.83	0.54
michigan	PASTURE	26.06	0.00	0.00
minnesota	corn	1.69	-13.16	-44.30
minnesota	soybeans	89.43	73.63	-9.60
minnesota	HRSW	8.62	10.51	-19.72
minnesota	HRWW	8.62	10.51	-19.72
minnesota	DURW	8.62	10.51	-19.72
minnesota	barley	34.48	42.04	-78.88
minnesota	oats	34.48	42.04	-78.88
minnesota	silage	1.69	-13.16	-44.30
minnesota	hay	7.33	49.45	26.66
minnesota	SUGARBEET	7.33	49.45	26.66
minnesota	POTATOES	15.00	-7.55	-11.45
minnesota	PASTURE	14.65	0.00	0.00
mississippi	cotton	77.45	104.77	48.00
mississippi	corn	4.42	-11.36	-16.83
mississippi	soybeans	-56.49	16.24	83.01
mississippi	SOFT	-21.72	-22.04	-22.39
mississippi	sorghum	-46.78	-16.39	53.59
mississippi	rice	0.00	-8.77	29.33
mississippi	silage	4.42	-11.36	-16.83
mississippi	hay	-33.40	-11.23	44.44
mississippi	PASTURE	14.81	0.00	0.00
missouri	cotton	74.46	67.82	48.00
missouri	corn	2.24	-22.46	-9.21

missouri	soybeans	-18.84	27.20	44.83
missouri	SOFT	-15.72	-19.38	-57.14
missouri	sorghum	28.48	24.66	10.92
missouri	rice	0.00	-12.96	45.52
missouri	oats	-62.88	0.00	0.00
missouri	silage	2.24	-22.46	-9.21
missouri	hay	26.92	25.11	-17.76
missouri	PASTURE	28.84	0.00	0.00
montana	corn	0.00	-2.61	-23.37
montana	HRSW	5.44	-2.64	-23.87
montana	HRWW	5.44	-2.64	-23.87
montana	DURW	5.44	-2.64	-23.87
montana	barley	21.76	-10.56	-95.48
montana	oats	21.76	-10.56	-95.48
montana	silage	66.74	-2.61	-23.37
montana	hay	14.39	36.31	19.96
montana	SUGARBEET	0.00	36.31	19.96
montana	POTATOES	-10.55	-11.63	12.48
montana	PASTURE	7.45	0.00	0.00
nebraska	corn	42.20	-16.51	-31.70
nebraska	soybeans	41.90	33.97	17.51
nebraska	HRWW	5.45	-2.50	-26.80
nebraska	sorghum	59.38	21.51	-26.64
nebraska	barley	21.80	-10.00	-107.20
nebraska	oats	21.80	-10.00	-107.20
nebraska	silage	42.20	-16.51	-31.70
nebraska	hay	15.90	28.21	19.79
nebraska	SUGARBEET	0.00	28.21	19.79
nebraska	POTATOES	-31.18	-23.33	6.98
nebraska	PASTURE	7.56	0.00	0.00
nevada	HRSW	0.00	9.15	-37.54
nevada	HRWW	0.00	9.15	-37.54
nevada	barley	0.00	18.30	-75.08
nevada	hay	0.00	22.14	1.64
nevada	POTATOES	0.00	-11.63	12.48
nevada	PASTURE	65.15	0.00	0.00
newhampshi	hay	2.32	0.00	0.00
newhampshi	PASTURE	16.47	0.00	0.00
newjersey	corn	-38.26	-11.71	62.75
newjersey	soybeans	-40.34	54.55	118.18
newjersey	SOFT	4.64	-1.66	-50.53

newjersey	barley	18.56	0.00	0.00
newjersey	oats	18.56	0.00	0.00
newjersey	silage	-38.26	0.00	0.00
newjersey	hay	2.32	22.26	-15.07
newjersey	POTATOES	12.05	-4.93	-5.30
newjersey	tomatofrsh	34.46	37.70	9.92
newjersey	tomatoproc	34.46	37.70	9.92
newjersey	PASTURE	16.47	0.00	0.00
newmexico	cotton	66.40	46.31	48.00
newmexico	corn	42.20	-21.76	10.93
newmexico	HRWW	25.71	-7.96	-7.55
newmexico	sorghum	22.55	-2.43	-0.69
newmexico	barley	102.84	-31.84	-30.20
newmexico	silage	42.20	-21.76	10.93
newmexico	hay	27.77	31.37	21.79
newmexico	SUGARBEET	27.77	0.00	0.00
newmexico	POTATOES	0.00	-22.05	-5.25
newmexico	PASTURE	7.62	0.00	0.00
newyork	corn	-2.32	-10.99	-31.53
newyork	soybeans	28.26	0.00	0.00
newyork	SOFT	-16.21	0.00	0.00
newyork	oats	-64.84	-79.24	-360.96
newyork	silage	-2.32	-10.99	-31.53
newyork	hay	2.32	22.26	-15.07
newyork	POTATOES	12.05	-4.93	-5.30
newyork	tomatofrsh	34.46	37.70	9.92
newyork	tomatoproc	34.46	37.70	9.92
newyork	PASTURE	16.47	0.00	0.00
northcarol	cotton	38.44	80.28	48.00
northcarol	corn	-18.30	-4.28	41.75
northcarol	soybeans	-61.72	32.07	130.68
northcarol	SOFT	-17.73	-19.74	-28.18
northcarol	sorghum	-42.58	0.00	0.00
northcarol	barley	-70.92	0.00	0.00
northcarol	oats	-70.92	-78.96	-112.72
northcarol	silage	-18.30	-4.28	41.75
northcarol	hay	-9.71	6.31	-42.75
northcarol	POTATOES	12.05	-4.93	-5.30
northcarol	tomatofrsh	20.47	5.63	-25.63
northcarol	PASTURE	8.77	0.00	0.00
northdakot	corn	156.75	-3.83	-43.48

northdakot	soybeans	340.32	74.57	-26.42
northdakot	HRSW	35.98	11.09	-31.43
northdakot	HRWW	35.98	11.09	-31.43
northdakot	DURW	35.98	11.09	-31.43
northdakot	barley	143.92	44.36	-125.72
northdakot	oats	143.92	44.36	-125.72
northdakot	silage	156.75	-3.83	-43.48
northdakot	hay	-1.51	44.32	32.16
northdakot	SUGARBEET	-1.51	44.32	32.16
northdakot	POTATOES	-5.23	-7.30	4.23
northdakot	PASTURE	18.82	0.00	0.00
OHIONW	corn	-21.28	-23.02	7.41
OHIONW	soybeans	-17.69	29.48	56.29
OHIONW	SOFT	-1.11	-1.33	-64.86
OHIONW	oats	-4.44	0.00	0.00
OHIONW	silage	-21.28	0.00	0.00
OHIONW	hay	19.44	33.79	8.74
OHIONW	SUGARBEET	19.44	33.79	8.74
OHIONW	POTATOES	-10.15	-14.93	-2.43
OHIONW	tomatofrsh	10.53	4.19	-43.39
OHIONW	tomatoproc	10.53	4.19	-43.39
OHIONW	PASTURE	10.87	0.00	0.00
OHIOS	corn	-30.71	-19.72	53.51
OHIOS	soybeans	32.36	61.17	83.33
OHIOS	SOFT	-11.62	-11.62	-66.67
OHIOS	oats	-46.48	0.00	0.00
OHIOS	silage	-30.71	0.00	0.00
OHIOS	hay	19.44	33.79	8.74
OHIOS	SUGARBEET	19.44	0.00	0.00
OHIOS	tomatofrsh	10.53	4.19	-43.39
OHIOS	tomatoproc	10.53	4.19	-43.39
OHIOS	PASTURE	10.87	0.00	0.00
OHIONE	corn	-17.93	0.00	0.00
OHIONE	soybeans	11.71	56.17	94.12
OHIONE	SOFT	-11.35	0.00	0.00
OHIONE	oats	-45.40	-45.40	-268.76
OHIONE	silage	-17.93	0.00	0.00
OHIONE	hay	19.44	33.79	8.74
OHIONE	SUGARBEET	19.44	0.00	0.00
OHIONE	tomatofrsh	10.53	4.19	-43.39
OHIONE	tomatoproc	10.53	4.19	-43.39

OHIONE	PASTURE	10.87	0.00	0.00
oklahoma	cotton	124.68	95.44	48.00
oklahoma	corn	43.80	-9.41	-4.66
oklahoma	soybeans	44.72	11.55	27.98
oklahoma	HRWW	35.04	-1.06	-36.05
oklahoma	sorghum	-15.48	-11.01	5.26
oklahoma	barley	140.16	0.00	0.00
oklahoma	oats	140.16	-4.24	-144.20
oklahoma	silage	43.80	-9.41	-4.66
oklahoma	hay	0.11	11.41	15.76
oklahoma	PASTURE	4.69	0.00	0.00
oregon	corn	2.52	-4.43	-15.64
oregon	HRSW	115.78	21.44	-34.82
oregon	HRWW	115.78	21.44	-34.82
oregon	barley	463.12	85.76	-139.28
oregon	oats	463.12	85.76	-139.28
oregon	silage	2.52	-4.43	-15.64
oregon	hay	43.23	90.60	34.74
oregon	SUGARBEET	0.00	90.60	34.74
oregon	POTATOES	2.19	-7.14	6.76
oregon	PASTURE	57.17	0.00	0.00
pennsylvan	corn	-7.37	-7.19	-7.46
pennsylvan	soybeans	28.26	0.00	0.00
pennsylvan	SOFT	-13.17	-13.17	-25.93
pennsylvan	barley	-52.68	0.00	0.00
pennsylvan	oats	-52.68	0.00	0.00
pennsylvan	silage	-7.37	-7.19	-7.46
pennsylvan	hay	23.57	41.97	13.39
pennsylvan	POTATOES	12.05	-4.93	-5.30
pennsylvan	tomatofrsh	34.46	37.70	9.92
pennsylvan	tomatoproc	34.46	37.70	9.92
pennsylvan	PASTURE	16.47	0.00	0.00
rhodeislan	hay	2.32	22.26	-15.07
rhodeislan	POTATOES	12.05	-4.93	-5.30
rhodeislan	PASTURE	16.47	0.00	0.00
southcarol	cotton	40.00	80.28	48.00
southcarol	corn	-14.23	-6.88	16.43
southcarol	soybeans	-73.49	17.89	134.18
southcarol	SOFT	-17.41	-20.55	-21.58
southcarol	sorghum	-56.92	-9.18	108.29
southcarol	barley	-69.64	0.00	0.00

southcarol	oats	-69.64	0.00	0.00
southcarol	silage	-14.23	-6.88	16.43
southcarol	hay	-34.52	-19.04	19.36
southcarol	tomatofrsh	3.85	-3.30	5.06
southcarol	PASTURE	8.06	0.00	0.00
southdakot	corn	18.88	-13.88	-15.28
southdakot	soybeans	60.97	54.69	15.38
southdakot	HRSW	20.86	7.58	-31.10
southdakot	HRWW	20.86	7.58	-31.10
southdakot	DURW	20.86	7.58	-31.10
southdakot	sorghum	66.11	45.74	0.00
southdakot	barley	83.44	30.32	-124.40
southdakot	oats	83.44	30.32	-124.40
southdakot	silage	18.88	-13.88	-15.28
southdakot	hay	14.82	34.90	12.82
southdakot	POTATOES	-5.23	-7.30	4.23
southdakot	PASTURE	20.60	0.00	0.00
tennessee	cotton	47.51	80.28	48.00
tennessee	corn	-12.00	-10.26	10.06
tennessee	soybeans	-49.74	28.48	87.43
tennessee	SOFT	-15.38	0.00	0.00
tennessee	sorghum	-27.71	0.00	0.00
tennessee	oats	-61.52	0.00	0.00
tennessee	silage	-12.00	0.00	0.00
tennessee	hay	-11.39	4.47	37.05
tennessee	POTATOES	12.05	0.00	0.00
tennessee	tomatofrsh	20.47	5.63	-25.63
tennessee	PASTURE	-0.10	0.00	0.00
TXHIPLAINS	cotton	53.02	58.12	48.00
TXHIPLAINS	corn	-1.22	-17.23	2.79
TXHIPLAINS	soybeans	217.94	25.90	21.59
TXHIPLAINS	HRWW	61.83	-9.06	-12.81
TXHIPLAINS	sorghum	15.27	22.02	-7.18
TXHIPLAINS	barley	247.32	-36.24	-51.24
TXHIPLAINS	oats	247.32	-36.24	-51.24
TXHIPLAINS	silage	-1.22	-17.23	2.79
TXHIPLAINS	hay	172.27	13.10	-15.30
TXHIPLAINS	SUGARBEET	172.27	13.10	-15.30
TXHIPLAINS	POTATOES	-6.13	-22.05	-5.25
TXHIPLAINS	PASTURE	13.95	0.00	0.00
TXROLINGPL	cotton	118.83	72.42	48.00



TXROLINGPL	corn	-1.22	-7.37	-25.34
TXROLINGPL	HRWW	77.61	-11.14	-32.38
TXROLINGPL	sorghum	180.23	40.25	-28.46
TXROLINGPL	barley	310.44	0.00	0.00
TXROLINGPL	oats	310.44	-44.56	-129.52
TXROLINGPL	silage	-1.22	-7.37	-25.34
TXROLINGPL	hay	172.27	13.10	-15.30
TXROLINGPL	POTATOES	-6.13	0.00	0.00
TXROLINGPL	PASTURE	13.95	0.00	0.00
TXCNTBLACK	cotton	78.50	59.34	48.00
TXCNTBLACK	corn	102.45	-6.19	-17.30
TXCNTBLACK	soybeans	13.79	0.00	0.00
TXCNTBLACK	HRWW	8.39	-15.13	-23.12
TXCNTBLACK	sorghum	95.93	40.17	-11.94
TXCNTBLACK	rice	0.00	-16.90	14.70
TXCNTBLACK	barley	33.56	0.00	0.00
TXCNTBLACK	oats	33.56	-60.52	-92.48
TXCNTBLACK	silage	102.45	-6.19	-17.30
TXCNTBLACK	hay	146.82	1.35	10.09
TXCNTBLACK	PASTURE	17.77	0.00	0.00
TXEAST	cotton	61.24	46.12	48.00
TXEAST	corn	16.17	-5.98	-6.75
TXEAST	soybeans	9.66	6.96	37.45
TXEAST	HRWW	8.39	-15.13	-23.12
TXEAST	sorghum	-6.78	-3.52	-16.75
TXEAST	rice	0.00	-14.90	14.78
TXEAST	oats	8.39	-15.13	-23.12
TXEAST	silage	16.17	0.00	0.00
TXEAST	hay	146.82	1.35	10.09
TXEAST	tomatofrsh	10.36	-4.07	-8.49
TXEAST	PASTURE	17.77	0.00	0.00
TXEDPLAT	cotton	39.85	62.28	48.00
TXEDPLAT	corn	26.97	-24.87	-7.51
TXEDPLAT	soybeans	-22.33	0.00	0.00
TXEDPLAT	HRWW	-35.69	-6.97	51.32
TXEDPLAT	sorghum	25.56	-0.50	-16.62
TXEDPLAT	barley	-142.76	0.00	0.00
TXEDPLAT	oats	-142.76	-27.88	205.28
TXEDPLAT	silage	26.97	-24.87	-7.51
TXEDPLAT	hay	153.82	-2.80	-5.63
TXEDPLAT	tomatofrsh	0.00	-4.07	-8.49

TXEDPLAT	PASTURE	17.03	0.00	0.00
TXCOASTBE	cotton	19.46	18.35	48.00
TXCOASTBE	corn	26.97	-8.62	-11.99
TXCOASTBE	soybeans	-2.77	9.46	32.82
TXCOASTBE	HRWW	8.39	0.00	0.00
TXCOASTBE	sorghum	30.00	9.90	-16.28
TXCOASTBE	rice	0.00	-5.32	15.45
TXCOASTBE	oats	8.39	-15.13	-23.12
TXCOASTBE	hay	153.82	-2.80	-5.63
TXCOASTBE	tomatofrsh	10.36	0.00	0.00
TXCOASTBE	PASTURE	17.03	0.00	0.00
TXSOUTH	cotton	-0.49	24.28	48.00
TXSOUTH	corn	26.97	-17.15	23.79
TXSOUTH	soybeans	0.00	-9.49	37.48
TXSOUTH	HRWW	8.39	-15.13	-23.12
TXSOUTH	sorghum	-53.54	-2.67	6.41
TXSOUTH	oats	8.39	-15.13	-23.12
TXSOUTH	silage	26.97	-17.15	23.79
TXSOUTH	hay	153.82	-2.80	-5.63
TXSOUTH	POTATOES	0.00	-22.05	-5.25
TXSOUTH	tomatofrsh	10.36	-4.07	-8.49
TXSOUTH	orangefrsh	0.00	59.18	1.50
TXSOUTH	orangeproc	0.00	59.18	1.50
TXSOUTH	grpfrtfrsh	0.00	59.18	1.50
TXSOUTH	grpfrtproc	0.00	59.18	1.50
TXSOUTH	PASTURE	17.03	0.00	0.00
TXTRANSPEC	cotton	55.84	94.00	48.00
TXTRANSPEC	corn	-1.22	0.00	0.00
TXTRANSPEC	HRWW	-2.63	-13.98	13.88
TXTRANSPEC	sorghum	0.00	4.22	-4.13
TXTRANSPEC	barley	0.00	-55.92	55.52
TXTRANSPEC	oats	0.00	-55.92	55.52
TXTRANSPEC	hay	177.62	9.51	-14.45
TXTRANSPEC	PASTURE	5.37	0.00	0.00
utah	corn	0.00	43.94	14.97
utah	HRSW	211.17	-3.23	-16.69
utah	HRWW	211.17	-3.23	-16.69
utah	barley	844.68	-12.92	-66.76
utah	oats	844.68	-12.92	-66.76
utah	silage	66.74	43.94	14.97
utah	hay	82.14	34.22	16.55

utah	SUGARBEET	82.14	0.00	0.00
utah	POTATOES	0.00	-11.63	12.48
utah	PASTURE	65.15	0.00	0.00
vermont	hay	2.32	22.26	-15.07
vermont	PASTURE	16.47	0.00	0.00
virginia	cotton	85.25	80.28	48.00
virginia	corn	-41.85	-15.64	45.40
virginia	soybeans	-46.83	42.02	82.29
virginia	SOFT	15.82	-17.41	-43.54
virginia	sorghum	-42.58	0.00	0.00
virginia	barley	63.28	-69.64	-174.16
virginia	oats	63.28	0.00	0.00
virginia	silage	-41.85	-15.64	45.40
virginia	hay	-9.71	6.31	-42.75
virginia	POTATOES	12.05	-4.93	-5.30
virginia	tomatofrsh	20.47	5.63	-25.63
virginia	tomatoproc	20.47	5.63	-25.63
virginia	PASTURE	8.77	0.00	0.00
washington	corn	2.52	216.37	-14.18
washington	HRSW	60.22	22.96	-42.35
washington	HRWW	60.22	22.96	-42.35
washington	barley	240.88	91.84	-169.40
washington	oats	240.88	91.84	-169.40
washington	silage	2.52	216.37	-14.18
washington	hay	42.43	86.42	45.28
washington	SUGARBEET	0.00	86.42	45.28
washington	POTATOES	-4.40	0.53	7.63
washington	PASTURE	54.36	0.00	0.00
westvirgin	corn	-31.14	0.00	0.00
westvirgin	SOFT	-9.10	0.00	0.00
westvirgin	barley	-36.40	0.00	0.00
westvirgin	oats	-36.40	0.00	0.00
westvirgin	silage	-31.14	0.00	0.00
westvirgin	hay	2.32	18.42	48.82
westvirgin	PASTURE	-0.10	0.00	0.00
wisconsin	corn	-13.09	-17.57	-48.00
wisconsin	soybeans	72.85	76.68	9.09
wisconsin	HRSW	-2.89	-3.91	-29.63
wisconsin	HRWW	-2.89	-3.91	-29.63
wisconsin	barley	-11.56	0.00	0.00
wisconsin	oats	-11.56	-15.64	-118.52

wisconsin	silage	-13.09	-17.57	-48.00
wisconsin	hay	34.47	49.83	5.93
wisconsin	POTATOES	15.00	-7.55	-11.45
wisconsin	PASTURE	28.10	0.00	0.00
wyoming	corn	66.74	-0.41	-15.93
wyoming	HRSW	56.13	9.15	-37.54
wyoming	HRWW	56.13	9.15	-37.54
wyoming	barley	224.52	36.60	-150.16
wyoming	oats	224.52	36.60	-150.16
wyoming	silage	66.74	-0.41	-15.93
wyoming	hay	18.67	39.57	4.02
wyoming	SUGARBEET	0.00	39.57	4.02
wyoming	POTATOES	0.00	-7.30	4.23
wyoming	PASTURE	31.68	0.00	0.00

Table D2.7 Full data set for Hadley PNNL Scenario run for 2030 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	31.15	72.77	36.19
alabama	corn	23.81	29.69	146.41
alabama	soybeans	5.88	19.97	22.35
alabama	SOFT	70.00	0.00	0.00
alabama	sorghum	28.24	0.00	0.00
alabama	oats	280.00	0.00	0.00
alabama	silage	23.81	0.00	0.00
alabama	hay	13.27	14.15	24.35
alabama	POTATOES	22.10	-1.40	-9.60
alabama	tomatofrsh	13.98	4.65	-7.55
alabama	PASTURE	32.93	0.00	0.00
arizona	cotton	0.00	100.63	36.19
arizona	corn	-15.38	16.39	5.94
arizona	HRWW	66.67	-2.90	-22.60
arizona	DURW	66.67	-2.90	-22.60
arizona	sorghum	0.00	28.10	-4.89
arizona	barley	0.00	-11.60	-90.40
arizona	silage	-15.38	16.39	5.94
arizona	hay	42.11	29.13	11.74
arizona	SUGARBEET	42.11	0.00	0.00
arizona	POTATOES	0.00	-1.00	7.70
arizona	orangefrsh	0.00	69.90	3.30
arizona	orangeproc	0.00	69.90	3.30
arizona	grpfrtfrsh	0.00	69.90	3.30
arizona	grpfrtproc	0.00	69.90	3.30
arizona	PASTURE	3.81	0.00	0.00
arkansas	cotton	41.00	72.77	36.19
arkansas	corn	5.00	15.00	83.38
arkansas	soybeans	-5.26	19.97	22.35
arkansas	SOFT	62.50	6.50	-5.80
arkansas	sorghum	28.24	23.89	-2.60
arkansas	rice	0.00	8.34	1.29
arkansas	oats	250.00	6.50	-5.80
arkansas	silage	5.00	15.00	83.38
arkansas	hay	13.27	14.15	24.35
arkansas	tomatofrsh	13.98	4.65	-7.55
arkansas	PASTURE	16.97	0.00	0.00

CALIFORNIN	cotton	21.09	52.37	36.19
CALIFORNIN	corn	-8.70	-7.69	5.55
CALIFORNIN	HRWW	32.00	5.50	-20.60
CALIFORNIN	sorghum	45.81	28.10	-4.89
CALIFORNIN	rice	0.00	16.26	15.86
CALIFORNIN	barley	128.00	22.00	-82.40
CALIFORNIN	oats	128.00	22.00	-82.40
CALIFORNIN	silage	-8.70	-7.69	5.55
CALIFORNIN	hay	40.91	19.23	11.53
CALIFORNIN	SUGARBEET	0.00	19.23	11.53
CALIFORNIN	POTATOES	0.00	-2.25	3.10
CALIFORNIN	tomatofrsh	0.00	8.97	1.18
CALIFORNIN	tomatoproc	0.00	8.97	1.18
CALIFORNIN	orangefrsh	0.00	45.70	-20.20
CALIFORNIN	orangeproc	0.00	45.70	-20.20
CALIFORNIN	grpfrtfrsh	0.00	45.70	-20.20
CALIFORNIN	grpfrtproc	0.00	45.70	-20.20
CALIFORNIN	PASTURE	52.93	0.00	0.00
CALIFORNIS	cotton	0.00	52.37	36.19
CALIFORNIS	corn	-75.00	-7.69	5.55
CALIFORNIS	DURW	32.00	5.50	-20.60
CALIFORNIS	sorghum	45.81	0.00	0.00
CALIFORNIS	rice	7.90	0.00	0.00
CALIFORNIS	barley	128.00	5.50	-20.60
CALIFORNIS	oats	128.00	5.50	-20.60
CALIFORNIS	silage	-75.00	-7.69	5.55
CALIFORNIS	hay	40.91	19.23	11.53
CALIFORNIS	SUGARBEET	0.00	19.23	11.53
CALIFORNIS	POTATOES	8.95	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	8.97	1.18
CALIFORNIS	tomatoproc	0.00	8.97	1.18
CALIFORNIS	orangefrsh	0.00	36.20	-1.80
CALIFORNIS	orangeproc	0.00	36.20	-1.80
CALIFORNIS	grpfrtfrsh	0.00	36.20	-1.80
CALIFORNIS	grpfrtproc	0.00	36.20	-1.80
CALIFORNIS	PASTURE	70.88	0.00	0.00
colorado	corn	-31.25	54.05	71.16
colorado	HRSW	27.78	15.60	6.10
colorado	HRWW	27.78	15.60	6.10
colorado	sorghum	45.81	28.10	-4.89
colorado	barley	111.11	31.20	12.20

colorado	oats	111.11	31.20	12.20
colorado	silage	-31.25	54.05	71.16
colorado	hay	30.30	59.74	67.92
colorado	SUGARBEET	0.00	59.74	67.92
colorado	POTATOES	0.00	-1.00	7.70
colorado	PASTURE	12.76	0.00	0.00
conn	silage	25.58	0.00	0.00
conn	hay	41.25	0.00	0.00
conn	POTATOES	22.10	0.00	0.00
conn	PASTURE	20.54	0.00	0.00
delaware	corn	16.00	16.00	76.38
delaware	soybeans	31.25	19.93	18.43
delaware	SOFT	62.50	1.90	-16.30
delaware	barley	250.00	1.90	-16.30
delaware	silage	16.00	0.00	0.00
delaware	hay	41.25	0.00	0.00
delaware	POTATOES	22.10	-1.40	-9.60
delaware	tomatoproc	32.07	32.53	-15.87
delaware	PASTURE	20.54	0.00	0.00
florida	cotton	30.58	72.77	36.19
florida	corn	-3.57	1.75	313.64
florida	soybeans	6.67	22.98	32.24
florida	SOFT	12.12	6.50	-5.80
florida	oats	48.48	0.00	0.00
florida	silage	-3.57	1.75	313.64
florida	hay	13.27	14.15	24.35
florida	SUGARCANE	6.19	6.19	-11.72
florida	tomatofrsh	-1.88	2.75	21.90
florida	orangefrsh	0.00	25.37	14.67
florida	orangeproc	0.00	25.37	14.67
florida	grpfrtfrsh	0.00	25.37	14.67
florida	grpfrtproc	0.00	25.37	14.67
florida	PASTURE	10.90	0.00	0.00
georgia	cotton	32.52	72.77	36.19
georgia	corn	1.92	5.77	214.71
georgia	soybeans	5.88	22.98	32.24
georgia	SOFT	40.00	6.50	-5.80
georgia	sorghum	25.03	22.66	9.88
georgia	oats	160.00	6.50	-5.80
georgia	silage	1.92	5.77	214.71
georgia	hay	13.27	14.15	24.35

georgia	tomatofrsh	13.98	4.65	-7.55
georgia	PASTURE	27.28	0.00	0.00
idaho	corn	-55.56	15.00	3.97
idaho	HRSW	-18.52	12.10	-13.05
idaho	HRWW	-18.52	12.10	-13.05
idaho	barley	-74.07	48.40	-52.20
idaho	oats	-74.07	48.40	-52.20
idaho	silage	0.00	15.00	3.97
idaho	hay	24.53	36.00	18.68
idaho	SUGARBEET	0.00	36.00	18.68
idaho	POTATOES	-4.50	-4.20	5.40
idaho	PASTURE	58.99	0.00	0.00
ILLINOISN	corn	17.54	16.95	42.39
ILLINOISN	soybeans	10.53	17.83	-9.43
ILLINOISN	SOFT	68.00	6.50	-5.80
ILLINOISN	sorghum	41.83	0.00	0.00
ILLINOISN	oats	272.00	6.50	-5.80
ILLINOISN	silage	17.54	16.95	42.39
ILLINOISN	hay	47.76	50.70	44.94
ILLINOISN	POTATOES	7.40	0.00	0.00
ILLINOISN	PASTURE	20.44	0.00	0.00
ILLINOISS	corn	17.54	16.95	42.39
ILLINOISS	soybeans	10.53	17.83	-9.43
ILLINOISS	SOFT	68.00	6.50	-5.80
ILLINOISS	sorghum	41.83	22.63	-13.74
ILLINOISS	oats	272.00	0.00	0.00
ILLINOISS	silage	17.54	0.00	0.00
ILLINOISS	hay	47.76	50.70	44.94
ILLINOISS	PASTURE	20.44	0.00	0.00
INDIANAN	corn	7.69	7.58	43.76
INDIANAN	soybeans	4.55	22.55	-11.45
INDIANAN	SOFT	61.54	1.90	-16.30
INDIANAN	sorghum	41.83	0.00	0.00
INDIANAN	oats	246.15	0.00	0.00
INDIANAN	silage	7.69	7.58	43.76
INDIANAN	hay	36.11	37.33	27.20
INDIANAN	POTATOES	7.40	-5.50	-5.80
INDIANAN	tomatofrsh	12.70	7.40	-36.45
INDIANAN	tomatoproc	12.70	7.40	-36.45
INDIANAN	PASTURE	17.13	0.00	0.00
INDIANAS	corn	7.69	7.58	43.76



INDIANAS	soybeans	4.55	22.55	-11.45
INDIANAS	SOFT	61.54	1.90	-16.30
INDIANAS	sorghum	41.83	0.00	0.00
INDIANAS	oats	246.15	0.00	0.00
INDIANAS	silage	7.69	0.00	0.00
INDIANAS	hay	36.11	37.33	27.20
INDIANAS	tomatofrsh	12.70	7.40	-36.45
INDIANAS	tomatoproc	12.70	7.40	-36.45
INDIANAS	PASTURE	17.13	0.00	0.00
IOWAW	corn	16.67	18.33	57.76
IOWAW	soybeans	5.26	22.74	-1.32
IOWAW	SOFT	51.72	0.00	0.00
IOWAW	sorghum	97.45	0.00	0.00
IOWAW	oats	206.90	0.00	0.00
IOWAW	silage	16.67	0.00	0.00
IOWAW	hay	25.33	30.77	66.19
IOWAW	PASTURE	22.48	0.00	0.00
IOWACENT	corn	16.67	18.33	57.76
IOWACENT	soybeans	5.26	22.74	-1.32
IOWACENT	SOFT	51.72	0.00	0.00
IOWACENT	sorghum	97.45	0.00	0.00
IOWACENT	oats	206.90	1.30	-22.00
IOWACENT	silage	16.67	0.00	0.00
IOWACENT	hay	25.33	30.77	66.19
IOWACENT	PASTURE	22.48	0.00	0.00
IOWANE	corn	16.67	18.33	57.76
IOWANE	soybeans	5.26	22.74	-1.32
IOWANE	SOFT	51.72	0.00	0.00
IOWANE	sorghum	41.83	0.00	0.00
IOWANE	oats	206.90	0.00	0.00
IOWANE	silage	16.67	0.00	0.00
IOWANE	hay	25.33	30.77	66.19
IOWANE	POTATOES	19.50	0.20	-8.80
IOWANE	PASTURE	22.48	0.00	0.00
IOWAS	corn	16.67	18.33	57.76
IOWAS	soybeans	5.26	22.74	-1.32
IOWAS	SOFT	51.72	0.00	0.00
IOWAS	sorghum	41.83	0.00	0.00
IOWAS	oats	206.90	0.00	0.00
IOWAS	silage	16.67	0.00	0.00
IOWAS	hay	25.33	30.77	66.19

IOWAS	PASTURE	22.48	0.00	0.00
kansas	corn	-17.31	14.52	38.28
kansas	soybeans	-17.65	18.62	7.89
kansas	HRWW	17.65	8.67	-7.20
kansas	sorghum	25.41	21.07	2.78
kansas	barley	70.59	34.67	-28.80
kansas	oats	70.59	34.67	-28.80
kansas	silage	-17.31	14.52	38.28
kansas	hay	9.68	38.64	51.18
kansas	SUGARBEET	9.68	0.00	0.00
kansas	PASTURE	19.77	0.00	0.00
kentucky	corn	4.35	9.72	50.11
kentucky	soybeans	4.55	27.19	10.67
kentucky	SOFT	62.50	0.00	0.00
kentucky	sorghum	48.51	0.00	0.00
kentucky	barley	250.00	0.00	0.00
kentucky	oats	250.00	0.00	0.00
kentucky	silage	4.35	0.00	0.00
kentucky	hay	26.88	28.42	40.90
kentucky	PASTURE	16.89	0.00	0.00
louisiana	cotton	26.17	72.77	36.19
louisiana	corn	19.05	26.23	171.58
louisiana	soybeans	11.76	19.97	22.35
louisiana	SOFT	41.46	6.50	-5.80
louisiana	sorghum	28.24	23.89	-2.60
louisiana	rice	0.00	8.34	1.29
louisiana	silage	19.05	0.00	0.00
louisiana	hay	13.27	14.15	24.35
louisiana	SUGARCANE	8.34	8.34	1.29
louisiana	tomatofrsh	13.98	4.65	-7.55
louisiana	PASTURE	16.97	0.00	0.00
maine	oats	214.29	0.00	0.00
maine	silage	35.14	0.00	0.00
maine	hay	41.25	43.53	58.66
maine	POTATOES	6.60	3.30	6.20
maine	PASTURE	14.11	0.00	0.00
maryland	corn	15.00	15.00	47.73
maryland	soybeans	23.08	19.93	18.43
maryland	SOFT	57.14	1.90	-16.30
maryland	barley	228.57	1.90	-16.30
maryland	oats	228.57	0.00	0.00

maryland	silage	15.00	15.00	47.73
maryland	hay	41.25	43.53	58.66
maryland	POTATOES	22.10	-1.40	-9.60
maryland	tomatofrsh	39.63	19.69	-39.50
maryland	tomatoproc	39.63	19.69	-39.50
maryland	PASTURE	18.52	0.00	0.00
mass	silage	24.39	0.00	0.00
mass	hay	41.25	43.53	58.66
mass	POTATOES	6.60	0.00	0.00
mass	tomatofrsh	32.07	32.53	-15.87
mass	PASTURE	14.11	0.00	0.00
michigan	corn	36.36	42.22	68.91
michigan	soybeans	38.46	29.84	-10.65
michigan	SOFT	56.67	4.90	-17.40
michigan	barley	226.67	0.00	0.00
michigan	oats	226.67	4.90	-17.40
michigan	silage	36.36	42.22	68.91
michigan	hay	41.94	49.23	59.36
michigan	SUGARBEET	41.94	49.23	59.36
michigan	POTATOES	33.10	-0.80	-10.60
michigan	tomatofrsh	41.26	30.15	-10.79
michigan	tomatoproc	41.26	30.15	-10.79
michigan	PASTURE	23.64	0.00	0.00
minnesota	corn	14.00	23.53	55.71
minnesota	soybeans	20.00	43.49	-14.18
minnesota	HRSW	40.00	4.90	-17.40
minnesota	HRWW	40.00	4.90	-17.40
minnesota	DURW	40.00	4.90	-17.40
minnesota	barley	160.00	19.60	-69.60
minnesota	oats	160.00	19.60	-69.60
minnesota	silage	14.00	23.53	55.71
minnesota	hay	19.23	42.86	88.44
minnesota	SUGARBEET	19.23	42.86	88.44
minnesota	POTATOES	19.50	0.20	-8.80
minnesota	PASTURE	16.19	0.00	0.00
mississippi	cotton	43.69	72.77	36.19
mississippi	corn	5.00	16.95	116.65
mississippi	soybeans	5.88	19.97	22.35
mississippi	SOFT	61.76	6.50	-5.80
mississippi	sorghum	28.24	23.89	-2.60
mississippi	rice	0.00	10.53	8.72

mississippi	silage	5.00	16.95	116.65
mississippi	hay	13.27	14.15	24.35
mississippi	PASTURE	32.93	0.00	0.00
missouri	cotton	38.99	42.99	36.19
missouri	corn	6.35	12.50	29.69
missouri	soybeans	-5.00	18.62	7.89
missouri	SOFT	58.06	6.50	-5.80
missouri	sorghum	23.93	18.71	-6.09
missouri	rice	0.00	8.34	1.29
missouri	oats	232.26	0.00	0.00
missouri	silage	6.35	12.50	29.69
missouri	hay	28.41	30.93	26.60
missouri	PASTURE	31.78	0.00	0.00
montana	corn	0.00	36.59	17.00
montana	HRSW	26.92	5.80	-9.50
montana	HRWW	26.92	5.80	-9.50
montana	DURW	26.92	5.80	-9.50
montana	barley	107.69	23.20	-38.00
montana	oats	107.69	23.20	-38.00
montana	silage	-5.26	36.59	17.00
montana	hay	26.67	46.99	31.51
montana	SUGARBEET	0.00	46.99	31.51
montana	POTATOES	-4.50	-4.20	5.40
montana	PASTURE	19.90	0.00	0.00
nebraska	corn	-2.08	30.36	40.11
nebraska	soybeans	6.25	26.61	-0.89
nebraska	HRWW	42.86	15.60	6.10
nebraska	sorghum	45.81	28.10	-4.89
nebraska	barley	171.43	62.40	24.40
nebraska	oats	171.43	62.40	24.40
nebraska	silage	-2.08	30.36	40.11
nebraska	hay	20.00	47.37	49.31
nebraska	SUGARBEET	0.00	47.37	49.31
nebraska	POTATOES	-6.70	-6.30	2.20
nebraska	PASTURE	19.00	0.00	0.00
nevada	HRSW	0.00	12.10	-13.05
nevada	HRWW	0.00	12.10	-13.05
nevada	barley	0.00	24.20	-26.10
nevada	hay	0.00	8.49	-0.94
nevada	POTATOES	0.00	-4.20	5.40
nevada	PASTURE	8.82	0.00	0.00

newhampshi	silage	30.95	0.00	0.00
newhampshi	hay	41.25	0.00	0.00
newhampshi	PASTURE	20.54	0.00	0.00
newjersey	corn	23.53	25.00	64.13
newjersey	soybeans	37.50	19.93	18.43
newjersey	SOFT	72.73	1.90	-16.30
newjersey	barley	290.91	0.00	0.00
newjersey	oats	290.91	0.00	0.00
newjersey	silage	23.53	0.00	0.00
newjersey	hay	41.25	43.53	58.66
newjersey	POTATOES	22.10	-1.40	-9.60
newjersey	tomatofrsh	32.07	32.53	-15.87
newjersey	tomatoproc	32.07	32.53	-15.87
newjersey	PASTURE	20.54	0.00	0.00
newmexico	cotton	33.04	29.40	36.19
newmexico	corn	-15.38	57.78	78.88
newmexico	HRWW	50.00	-2.90	-22.60
newmexico	sorghum	45.81	28.10	-4.89
newmexico	barley	200.00	-2.90	-22.60
newmexico	silage	-15.38	57.78	78.88
newmexico	hay	33.33	47.76	64.71
newmexico	SUGARBEET	33.33	0.00	0.00
newmexico	POTATOES	0.00	-1.00	7.70
newmexico	PASTURE	12.76	0.00	0.00
newyork	corn	27.27	29.55	78.61
newyork	soybeans	30.77	0.00	0.00
newyork	SOFT	64.29	0.00	0.00
newyork	oats	257.14	1.90	-16.30
newyork	silage	27.27	29.55	78.61
newyork	hay	41.25	43.53	58.66
newyork	POTATOES	22.10	-1.40	-9.60
newyork	tomatofrsh	32.07	32.53	-15.87
newyork	tomatoproc	32.07	32.53	-15.87
newyork	PASTURE	20.54	0.00	0.00
northcarol	cotton	27.08	48.30	36.19
northcarol	corn	10.00	11.76	108.65
northcarol	soybeans	14.29	19.93	18.43
northcarol	SOFT	43.75	6.50	-5.80
northcarol	sorghum	33.32	0.00	0.00
northcarol	barley	175.00	0.00	0.00
northcarol	oats	175.00	6.50	-5.80

northcarol	silage	10.00	11.76	108.65
northcarol	hay	13.27	14.15	24.35
northcarol	POTATOES	22.10	-1.40	-9.60
northcarol	tomatofrsh	39.63	19.69	-39.50
northcarol	PASTURE	18.52	0.00	0.00
northdakot	corn	-19.51	24.07	48.69
northdakot	soybeans	-7.69	26.61	-0.89
northdakot	HRSW	6.67	9.30	-7.70
northdakot	HRWW	6.67	9.30	-7.70
northdakot	DURW	6.67	9.30	-7.70
northdakot	barley	26.67	37.20	-30.80
northdakot	oats	26.67	37.20	-30.80
northdakot	silage	-19.51	24.07	48.69
northdakot	hay	-9.26	40.26	61.13
northdakot	SUGARBEET	-9.26	40.26	61.13
northdakot	POTATOES	20.70	2.10	-6.90
northdakot	PASTURE	21.99	0.00	0.00
OHIONW	corn	15.00	19.67	54.24
OHIONW	soybeans	15.00	22.55	-11.45
OHIONW	SOFT	62.07	1.90	-16.30
OHIONW	oats	248.28	0.00	0.00
OHIONW	silage	15.00	0.00	0.00
OHIONW	hay	37.50	39.76	55.09
OHIONW	SUGARBEET	37.50	39.76	55.09
OHIONW	POTATOES	7.40	-5.50	-5.80
OHIONW	tomatofrsh	13.64	7.50	-39.08
OHIONW	tomatoproc	13.64	7.50	-39.08
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	15.00	19.67	54.24
OHIOS	soybeans	15.00	22.55	-11.45
OHIOS	SOFT	62.07	1.90	-16.30
OHIOS	oats	248.28	0.00	0.00
OHIOS	silage	15.00	0.00	0.00
OHIOS	hay	37.50	39.76	55.09
OHIOS	SUGARBEET	37.50	0.00	0.00
OHIOS	tomatofrsh	13.64	7.50	-39.08
OHIOS	tomatoproc	13.64	7.50	-39.08
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	15.00	0.00	0.00
OHIONE	soybeans	15.00	22.55	-11.45
OHIONE	SOFT	62.07	0.00	0.00

OHIONE	oats	248.28	7.60	-65.20
OHIONE	silage	15.00	0.00	0.00
OHIONE	hay	37.50	39.76	55.09
OHIONE	SUGARBEET	37.50	0.00	0.00
OHIONE	tomatofrsh	13.64	7.50	-39.08
OHIONE	tomatoproc	13.64	7.50	-39.08
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	62.55	68.16	36.19
oklahoma	corn	1.75	7.35	21.20
oklahoma	soybeans	-11.76	18.62	7.89
oklahoma	HRWW	34.21	4.20	0.70
oklahoma	sorghum	47.05	18.59	-1.82
oklahoma	barley	136.84	0.00	0.00
oklahoma	oats	136.84	16.80	2.80
oklahoma	silage	1.75	7.35	21.20
oklahoma	hay	13.79	19.42	31.61
oklahoma	PASTURE	19.00	0.00	0.00
oregon	corn	-8.70	15.52	13.61
oregon	HRSW	20.00	5.35	-12.30
oregon	HRWW	20.00	5.35	-12.30
oregon	barley	80.00	10.70	-24.60
oregon	oats	80.00	10.70	-24.60
oregon	silage	-8.70	15.52	13.61
oregon	hay	20.75	35.71	29.15
oregon	SUGARBEET	0.00	35.71	29.15
oregon	POTATOES	8.95	-2.25	3.10
oregon	PASTURE	56.29	0.00	0.00
pennsylvan	corn	34.69	36.73	58.25
pennsylvan	soybeans	42.86	0.00	0.00
pennsylvan	SOFT	48.28	1.90	-16.30
pennsylvan	sorghum	33.32	0.00	0.00
pennsylvan	barley	193.10	0.00	0.00
pennsylvan	oats	193.10	0.00	0.00
pennsylvan	silage	34.69	36.73	58.25
pennsylvan	hay	41.25	43.53	58.66
pennsylvan	POTATOES	22.10	-1.40	-9.60
pennsylvan	tomatofrsh	32.07	32.53	-15.87
pennsylvan	tomatoproc	32.07	32.53	-15.87
pennsylvan	PASTURE	20.54	0.00	0.00
rhodeislan	silage	28.57	0.00	0.00
rhodeislan	hay	41.25	43.53	58.66

rhodeislan	POTATOES	22.10	-1.40	-9.60
rhodeislan	PASTURE	20.54	0.00	0.00
southcarol	cotton	31.79	48.30	36.19
southcarol	corn	5.56	9.26	267.95
southcarol	soybeans	7.14	13.90	3.00
southcarol	SOFT	37.93	6.50	-5.80
southcarol	sorghum	36.25	23.10	-0.95
southcarol	barley	151.72	0.00	0.00
southcarol	oats	151.72	0.00	0.00
southcarol	silage	5.56	9.26	267.95
southcarol	hay	13.27	14.15	24.35
southcarol	tomatofrsh	23.22	14.18	-5.06
southcarol	PASTURE	28.10	0.00	0.00
southdakot	corn	-2.56	27.78	34.36
southdakot	soybeans	-7.69	26.61	-0.89
southdakot	HRSW	29.03	1.30	-22.00
southdakot	HRWW	29.03	1.30	-22.00
southdakot	DURW	29.03	1.30	-22.00
southdakot	sorghum	97.45	39.03	-2.88
southdakot	barley	116.13	5.20	-88.00
southdakot	oats	116.13	5.20	-88.00
southdakot	silage	-2.56	27.78	34.36
southdakot	hay	14.58	43.94	50.40
southdakot	POTATOES	20.70	2.10	-6.90
southdakot	PASTURE	22.97	0.00	0.00
tennessee	cotton	27.93	48.30	36.19
tennessee	corn	7.35	15.71	77.69
tennessee	soybeans	5.00	17.25	2.42
tennessee	SOFT	70.97	0.00	0.00
tennessee	sorghum	48.51	0.00	0.00
tennessee	oats	283.87	0.00	0.00
tennessee	silage	7.35	0.00	0.00
tennessee	hay	26.88	28.42	40.90
tennessee	POTATOES	22.10	0.00	0.00
tennessee	tomatofrsh	39.63	19.69	-39.50
tennessee	PASTURE	13.45	0.00	0.00
TXHIPLAINS	cotton	28.95	36.25	36.19
TXHIPLAINS	corn	1.85	10.00	21.96
TXHIPLAINS	soybeans	-12.50	18.62	7.89
TXHIPLAINS	HRWW	24.32	5.70	-10.70
TXHIPLAINS	sorghum	24.06	18.42	8.92



TXHIPLAINS	barley	97.30	22.80	-42.80
TXHIPLAINS	oats	97.30	22.80	-42.80
TXHIPLAINS	silage	1.85	10.00	21.96
TXHIPLAINS	hay	313.33	28.75	-19.31
TXHIPLAINS	SUGARBEET	313.33	28.75	-19.31
TXHIPLAINS	POTATOES	-8.50	-1.00	7.70
TXHIPLAINS	PASTURE	19.40	0.00	0.00
TXROLINGPL	cotton	48.50	50.68	36.19
TXROLINGPL	corn	1.85	10.00	21.96
TXROLINGPL	HRWW	24.32	5.70	-10.70
TXROLINGPL	sorghum	24.06	18.42	8.92
TXROLINGPL	barley	97.30	0.00	0.00
TXROLINGPL	oats	97.30	22.80	-42.80
TXROLINGPL	silage	1.85	10.00	21.96
TXROLINGPL	hay	313.33	28.75	-19.31
TXROLINGPL	POTATOES	-8.50	0.00	0.00
TXROLINGPL	PASTURE	19.40	0.00	0.00
TXCNTBLACK	cotton	31.21	41.94	36.19
TXCNTBLACK	corn	1.85	10.00	21.96
TXCNTBLACK	soybeans	-12.50	0.00	0.00
TXCNTBLACK	HRWW	24.32	5.70	-10.70
TXCNTBLACK	sorghum	24.06	18.42	8.92
TXCNTBLACK	rice	0.00	7.02	14.66
TXCNTBLACK	barley	97.30	0.00	0.00
TXCNTBLACK	oats	97.30	5.70	-10.70
TXCNTBLACK	silage	1.85	10.00	21.96
TXCNTBLACK	hay	313.33	28.75	-19.31
TXCNTBLACK	PASTURE	11.50	0.00	0.00
TXEAST	cotton	29.54	30.56	36.19
TXEAST	corn	1.85	10.00	21.96
TXEAST	soybeans	-12.50	19.97	22.35
TXEAST	HRWW	24.32	5.70	-10.70
TXEAST	sorghum	24.06	18.42	8.92
TXEAST	rice	0.00	7.02	14.66
TXEAST	oats	97.30	5.70	-10.70
TXEAST	silage	1.85	0.00	0.00
TXEAST	hay	313.33	28.75	-19.31
TXEAST	tomatofrsh	13.98	4.65	-7.55
TXEAST	PASTURE	11.50	0.00	0.00
TXEDPLAT	cotton	19.07	44.22	36.19
TXEDPLAT	corn	1.85	10.00	21.96

TXEDPLAT	soybeans	-12.50	0.00	0.00
TXEDPLAT	HRWW	24.32	5.70	-10.70
TXEDPLAT	sorghum	24.06	18.42	8.92
TXEDPLAT	barley	97.30	0.00	0.00
TXEDPLAT	oats	97.30	5.70	-10.70
TXEDPLAT	silage	1.85	10.00	21.96
TXEDPLAT	hay	313.33	28.75	-19.31
TXEDPLAT	tomatofrsh	0.00	4.65	-7.55
TXEDPLAT	PASTURE	16.60	0.00	0.00
TXCOASTBE	cotton	7.67	15.73	36.19
TXCOASTBE	corn	1.85	10.00	21.96
TXCOASTBE	soybeans	-12.50	19.97	22.35
TXCOASTBE	HRWW	24.32	0.00	0.00
TXCOASTBE	sorghum	24.06	18.42	8.92
TXCOASTBE	rice	0.00	7.02	14.66
TXCOASTBE	oats	97.30	5.70	-10.70
TXCOASTBE	hay	313.33	28.75	-19.31
TXCOASTBE	tomatofrsh	13.98	0.00	0.00
TXCOASTBE	PASTURE	16.60	0.00	0.00
TXSOUTH	cotton	-0.61	16.73	36.19
TXSOUTH	corn	1.85	10.00	21.96
TXSOUTH	soybeans	0.00	19.97	22.35
TXSOUTH	HRWW	24.32	5.70	-10.70
TXSOUTH	sorghum	24.06	18.42	8.92
TXSOUTH	oats	97.30	5.70	-10.70
TXSOUTH	silage	1.85	10.00	21.96
TXSOUTH	hay	313.33	28.75	-19.31
TXSOUTH	POTATOES	0.00	-1.00	7.70
TXSOUTH	tomatofrsh	13.98	4.65	-7.55
TXSOUTH	orangefrsh	0.00	46.90	-7.30
TXSOUTH	orangeproc	0.00	46.90	-7.30
TXSOUTH	grpfrtfrsh	0.00	46.90	-7.30
TXSOUTH	grpfrtproc	0.00	46.90	-7.30
TXSOUTH	PASTURE	16.60	0.00	0.00
TXTRANSPEC	cotton	26.40	66.03	36.19
TXTRANSPEC	corn	1.85	0.00	0.00
TXTRANSPEC	HRWW	24.32	5.70	-10.70
TXTRANSPEC	sorghum	0.00	17.26	-21.71
TXTRANSPEC	barley	0.00	5.70	-10.70
TXTRANSPEC	oats	0.00	5.70	-10.70
TXTRANSPEC	hay	313.33	28.75	-19.31

TXTRANSPEC	PASTURE	7.56	0.00	0.00
utah	corn	0.00	30.77	23.22
utah	HRSW	33.33	12.10	-13.05
utah	HRWW	33.33	12.10	-13.05
utah	barley	133.33	24.20	-26.10
utah	oats	133.33	24.20	-26.10
utah	silage	-75.00	30.77	23.22
utah	hay	20.83	38.83	30.10
utah	SUGARBEET	20.83	0.00	0.00
utah	POTATOES	0.00	-4.20	5.40
utah	PASTURE	8.82	0.00	0.00
vermont	silage	36.36	0.00	0.00
vermont	hay	41.25	43.53	58.66
vermont	PASTURE	20.54	0.00	0.00
virginia	cotton	45.64	48.30	36.19
virginia	corn	16.13	15.63	40.87
virginia	soybeans	15.79	19.93	18.43
virginia	SOFT	44.83	1.90	-16.30
virginia	sorghum	33.32	0.00	0.00
virginia	barley	179.31	1.90	-16.30
virginia	oats	179.31	0.00	0.00
virginia	silage	16.13	15.63	40.87
virginia	hay	41.25	43.53	58.66
virginia	POTATOES	22.10	-1.40	-9.60
virginia	tomatofrsh	39.63	19.69	-39.50
virginia	tomatoproc	39.63	19.69	-39.50
virginia	PASTURE	18.52	0.00	0.00
washington	corn	-11.76	40.48	27.85
washington	HRSW	17.65	5.35	-12.30
washington	HRWW	17.65	5.35	-12.30
washington	barley	70.59	21.40	-49.20
washington	oats	70.59	21.40	-49.20
washington	silage	-11.76	40.48	27.85
washington	hay	24.59	52.94	44.65
washington	SUGARBEET	0.00	52.94	44.65
washington	POTATOES	2.70	2.10	3.30
washington	PASTURE	55.20	0.00	0.00
westvirgin	corn	12.70	0.00	0.00
westvirgin	SOFT	45.95	0.00	0.00
westvirgin	barley	183.78	0.00	0.00
westvirgin	oats	183.78	0.00	0.00

westvirgin	silage	12.70	0.00	0.00
westvirgin	hay	26.88	28.42	40.90
westvirgin	PASTURE	13.45	0.00	0.00
wisconsin	corn	28.26	34.78	128.85
wisconsin	soybeans	30.77	24.19	-17.00
wisconsin	HRSW	60.00	0.00	0.00
wisconsin	HRWW	60.00	0.00	0.00
wisconsin	barley	240.00	0.00	0.00
wisconsin	oats	240.00	0.00	0.00
wisconsin	silage	28.26	34.78	128.85
wisconsin	hay	46.27	54.41	109.50
wisconsin	POTATOES	19.50	0.20	-8.80
wisconsin	PASTURE	24.40	0.00	0.00
wyoming	corn	-35.71	42.22	31.38
wyoming	HRSW	10.00	1.30	-22.00
wyoming	HRWW	10.00	1.30	-22.00
wyoming	barley	40.00	2.60	-44.00
wyoming	oats	40.00	2.60	-44.00
wyoming	silage	-35.71	42.22	31.38
wyoming	hay	13.33	45.83	49.76
wyoming	SUGARBEET	0.00	45.83	49.76
wyoming	POTATOES	0.00	2.10	-6.90
wyoming	PASTURE	30.13	0.00	0.00



Table D2.8 Full data set for Hadley PNNL Scenario run for 2090 with Adaptation  
 Data converted to percentage change from Base Conditions

Place	Crop	Dryland Yield	Irrigated Yield	Irrigated Wateruse
alabama	cotton	79.34	131.93	59.81
alabama	corn	22.22	25.00	56.74
alabama	soybeans	11.76	27.18	7.95
alabama	SOFT	70.00	0.00	0.00
alabama	sorghum	42.92	0.00	0.00
alabama	oats	280.00	0.00	0.00
alabama	silage	22.22	0.00	0.00
alabama	hay	29.59	29.25	19.14
alabama	POTATOES	21.90	-0.30	-12.50
alabama	tomatofrsh	20.49	10.06	5.03
alabama	PASTURE	59.75	0.00	0.00
arizona	cotton	0.00	182.43	59.81
arizona	corn	50.00	8.20	-0.84
arizona	HRWW	173.33	3.20	-50.20
arizona	DURW	173.33	3.20	-50.20
arizona	sorghum	0.00	46.07	-25.73
arizona	barley	0.00	12.80	-200.80
arizona	silage	50.00	8.20	-0.84
arizona	hay	115.79	23.62	9.79
arizona	SUGARBEET	115.79	0.00	0.00
arizona	POTATOES	0.00	-7.80	8.40
arizona	orangefrsh	0.00	111.60	3.90
arizona	orangeproc	0.00	111.60	3.90
arizona	grpfrtfrsh	0.00	111.60	3.90
arizona	grpfrtproc	0.00	111.60	3.90
arizona	PASTURE	26.29	0.00	0.00
arkansas	cotton	104.43	131.93	59.81
arkansas	corn	1.59	-1.67	17.44
arkansas	soybeans	-15.79	27.18	7.95
arkansas	SOFT	65.62	11.80	-47.10
arkansas	sorghum	42.92	20.77	-27.27
arkansas	rice	0.00	17.50	7.07
arkansas	oats	262.50	11.80	-47.10
arkansas	silage	1.59	-1.67	17.44
arkansas	hay	29.59	29.25	19.14
arkansas	tomatofrsh	20.49	10.06	5.03
arkansas	PASTURE	53.35	0.00	0.00

CALIFORNIN	cotton	53.71	94.95	59.81
CALIFORNIN	corn	166.67	5.77	11.05
CALIFORNIN	HRWW	40.00	2.30	-32.90
CALIFORNIN	sorghum	129.06	46.07	-25.73
CALIFORNIN	rice	0.00	16.10	6.87
CALIFORNIN	barley	160.00	9.20	-131.60
CALIFORNIN	oats	160.00	9.20	-131.60
CALIFORNIN	silage	166.67	5.77	11.05
CALIFORNIN	hay	86.36	17.31	9.40
CALIFORNIN	SUGARBEET	0.00	17.31	9.40
CALIFORNIN	POTATOES	0.00	-12.25	12.65
CALIFORNIN	tomatofrsh	0.00	15.60	-0.26
CALIFORNIN	tomatoproc	0.00	15.60	-0.26
CALIFORNIN	orangefrsh	0.00	79.90	-27.20
CALIFORNIN	orangeproc	0.00	79.90	-27.20
CALIFORNIN	grpfrtfrsh	0.00	79.90	-27.20
CALIFORNIN	grpfrtproc	0.00	79.90	-27.20
CALIFORNIN	PASTURE	82.96	0.00	0.00
CALIFORNIS	cotton	0.00	94.95	59.81
CALIFORNIS	corn	166.67	5.77	11.05
CALIFORNIS	DURW	40.00	2.30	-32.90
CALIFORNIS	sorghum	129.06	0.00	0.00
CALIFORNIS	rice	5.89	0.00	0.00
CALIFORNIS	barley	160.00	2.30	-32.90
CALIFORNIS	oats	160.00	2.30	-32.90
CALIFORNIS	silage	166.67	5.77	11.05
CALIFORNIS	hay	86.36	17.31	9.40
CALIFORNIS	SUGARBEET	0.00	17.31	9.40
CALIFORNIS	POTATOES	7.60	0.00	0.00
CALIFORNIS	tomatofrsh	0.00	15.60	-0.26
CALIFORNIS	tomatoproc	0.00	15.60	-0.26
CALIFORNIS	orangefrsh	0.00	57.60	-0.60
CALIFORNIS	orangeproc	0.00	57.60	-0.60
CALIFORNIS	grpfrtfrsh	0.00	57.60	-0.60
CALIFORNIS	grpfrtproc	0.00	57.60	-0.60
CALIFORNIS	PASTURE	131.54	0.00	0.00
colorado	corn	6.25	72.97	78.25
colorado	HRSW	55.56	24.50	2.70
colorado	HRWW	55.56	24.50	2.70
colorado	sorghum	129.06	46.07	-25.73
colorado	barley	222.22	49.00	5.40

colorado	oats	222.22	49.00	5.40
colorado	silage	6.25	72.97	78.25
colorado	hay	36.36	59.74	84.26
colorado	SUGARBEET	0.00	59.74	84.26
colorado	POTATOES	0.00	-7.80	8.40
colorado	PASTURE	24.60	0.00	0.00
conn	silage	23.26	0.00	0.00
conn	hay	43.75	0.00	0.00
conn	POTATOES	21.90	0.00	0.00
conn	PASTURE	28.97	0.00	0.00
delaware	corn	12.00	14.00	84.66
delaware	soybeans	12.50	28.83	14.29
delaware	SOFT	95.83	8.50	-48.00
delaware	barley	383.33	8.50	-48.00
delaware	silage	12.00	0.00	0.00
delaware	hay	43.75	0.00	0.00
delaware	POTATOES	21.90	-0.30	-12.50
delaware	tomatoproc	46.30	46.20	-26.98
delaware	PASTURE	28.97	0.00	0.00
florida	cotton	77.90	131.93	59.81
florida	corn	-21.43	-15.79	346.36
florida	soybeans	-6.67	35.22	22.37
florida	SOFT	48.57	11.80	-47.10
florida	oats	48.57	0.00	0.00
florida	silage	-21.43	-15.79	346.36
florida	hay	29.59	29.25	19.14
florida	SUGARCANE	14.73	14.73	6.90
florida	tomatofrsh	-7.68	1.38	42.86
florida	orangefrsh	0.00	44.97	29.43
florida	orangeproc	0.00	44.97	29.43
florida	grpfrtfrsh	0.00	44.97	29.43
florida	grpfrtproc	0.00	44.97	29.43
florida	PASTURE	19.96	0.00	0.00
georgia	cotton	82.82	131.93	59.81
georgia	corn	1.92	3.85	99.02
georgia	soybeans	7.14	35.22	22.37
georgia	SOFT	48.57	11.80	-47.10
georgia	sorghum	27.43	17.90	-13.58
georgia	oats	194.29	11.80	-47.10
georgia	silage	1.92	3.85	99.02
georgia	hay	29.59	29.25	19.14



georgia	tomatofrsh	20.49	10.06	5.03
georgia	PASTURE	49.29	0.00	0.00
idaho	corn	44.44	40.00	17.78
idaho	HRSW	29.63	18.75	-26.50
idaho	HRWW	29.63	18.75	-26.50
idaho	barley	118.52	75.00	-106.00
idaho	oats	118.52	75.00	-106.00
idaho	silage	0.00	40.00	17.78
idaho	hay	39.62	56.00	48.82
idaho	SUGARBEET	0.00	56.00	48.82
idaho	POTATOES	-18.30	-18.60	22.50
idaho	PASTURE	83.20	0.00	0.00
ILLINOISN	corn	19.30	16.95	20.75
ILLINOISN	soybeans	10.53	37.11	-35.25
ILLINOISN	SOFT	68.00	11.80	-47.10
ILLINOISN	sorghum	73.30	0.00	0.00
ILLINOISN	oats	272.00	11.80	-47.10
ILLINOISN	silage	19.30	16.95	20.75
ILLINOISN	hay	55.22	52.11	31.50
ILLINOISN	POTATOES	14.30	0.00	0.00
ILLINOISN	PASTURE	35.15	0.00	0.00
ILLINOISS	corn	19.30	16.95	20.75
ILLINOISS	soybeans	10.53	37.11	-35.25
ILLINOISS	SOFT	68.00	11.80	-47.10
ILLINOISS	sorghum	73.30	25.08	-50.24
ILLINOISS	oats	272.00	0.00	0.00
ILLINOISS	silage	19.30	0.00	0.00
ILLINOISS	hay	55.22	52.11	31.50
ILLINOISS	PASTURE	35.15	0.00	0.00
INDIANAN	corn	7.69	7.58	15.84
INDIANAN	soybeans	10.53	36.58	-43.61
INDIANAN	SOFT	61.54	8.50	-48.00
INDIANAN	sorghum	73.30	0.00	0.00
INDIANAN	oats	246.15	0.00	0.00
INDIANAN	silage	7.69	7.58	15.84
INDIANAN	hay	48.61	42.67	20.39
INDIANAN	POTATOES	14.30	-8.60	-12.30
INDIANAN	tomatofrsh	28.04	18.32	-65.42
INDIANAN	tomatoproc	28.04	18.32	-65.42
INDIANAN	PASTURE	28.49	0.00	0.00
INDIANAS	corn	7.69	7.58	15.84

INDIANAS	soybeans	10.53	36.58	-43.61
INDIANAS	SOFT	61.54	8.50	-48.00
INDIANAS	sorghum	73.30	0.00	0.00
INDIANAS	oats	246.15	0.00	0.00
INDIANAS	silage	7.69	0.00	0.00
INDIANAS	hay	48.61	42.67	20.39
INDIANAS	tomatofrsh	28.04	18.32	-65.42
INDIANAS	tomatoproc	28.04	18.32	-65.42
INDIANAS	PASTURE	28.49	0.00	0.00
IOWAW	corn	20.00	20.00	29.67
IOWAW	soybeans	10.53	37.70	-37.09
IOWAW	SOFT	48.28	0.00	0.00
IOWAW	sorghum	183.22	0.00	0.00
IOWAW	oats	193.10	0.00	0.00
IOWAW	silage	20.00	0.00	0.00
IOWAW	hay	38.67	37.18	40.07
IOWAW	PASTURE	40.05	0.00	0.00
IOWACENT	corn	20.00	20.00	29.67
IOWACENT	soybeans	10.53	37.70	-37.09
IOWACENT	SOFT	48.28	0.00	0.00
IOWACENT	sorghum	183.22	0.00	0.00
IOWACENT	oats	193.10	7.10	-28.90
IOWACENT	silage	20.00	0.00	0.00
IOWACENT	hay	38.67	37.18	40.07
IOWACENT	PASTURE	40.05	0.00	0.00
IOWANE	corn	20.00	20.00	29.67
IOWANE	soybeans	10.53	37.70	-37.09
IOWANE	SOFT	48.28	0.00	0.00
IOWANE	sorghum	73.30	0.00	0.00
IOWANE	oats	193.10	0.00	0.00
IOWANE	silage	20.00	0.00	0.00
IOWANE	hay	38.67	37.18	40.07
IOWANE	POTATOES	26.20	1.50	-13.80
IOWANE	PASTURE	40.05	0.00	0.00
IOWAS	corn	20.00	20.00	29.67
IOWAS	soybeans	10.53	37.70	-37.09
IOWAS	SOFT	48.28	0.00	0.00
IOWAS	sorghum	73.30	0.00	0.00
IOWAS	oats	193.10	0.00	0.00
IOWAS	silage	20.00	0.00	0.00
IOWAS	hay	38.67	37.18	40.07

IOWAS	PASTURE	40.05	0.00	0.00
kansas	corn	6.25	6.45	19.49
kansas	soybeans	-17.65	28.97	-9.32
kansas	HRWW	52.94	17.37	-35.00
kansas	sorghum	61.05	15.69	-31.86
kansas	barley	211.76	69.47	-140.00
kansas	oats	211.76	69.47	-140.00
kansas	silage	6.25	6.45	19.49
kansas	hay	25.81	52.27	57.95
kansas	SUGARBEET	25.81	0.00	0.00
kansas	PASTURE	29.22	0.00	0.00
kentucky	corn	11.59	8.33	6.12
kentucky	soybeans	-4.76	37.16	-17.39
kentucky	SOFT	75.00	0.00	0.00
kentucky	sorghum	76.04	0.00	0.00
kentucky	barley	300.00	0.00	0.00
kentucky	oats	300.00	0.00	0.00
kentucky	silage	11.59	0.00	0.00
kentucky	hay	27.96	27.37	6.17
kentucky	PASTURE	27.07	0.00	0.00
louisiana	cotton	66.67	131.93	59.81
louisiana	corn	6.35	6.56	94.86
louisiana	soybeans	-11.76	27.18	7.95
louisiana	SOFT	29.27	11.80	-47.10
louisiana	sorghum	42.92	20.77	-27.27
louisiana	rice	0.00	17.50	7.07
louisiana	silage	6.35	0.00	0.00
louisiana	hay	29.59	29.25	19.14
louisiana	SUGARCANE	17.50	17.50	7.07
louisiana	tomatofrsh	20.49	10.06	5.03
louisiana	PASTURE	53.35	0.00	0.00
maine	oats	242.86	0.00	0.00
maine	silage	32.43	0.00	0.00
maine	hay	43.75	35.29	55.18
maine	POTATOES	16.00	3.70	-2.70
maine	PASTURE	20.89	0.00	0.00
maryland	corn	15.00	17.50	111.36
maryland	soybeans	15.38	28.83	14.29
maryland	SOFT	82.14	8.50	-48.00
maryland	barley	328.57	8.50	-48.00
maryland	oats	328.57	0.00	0.00

maryland	silage	15.00	17.50	111.36
maryland	hay	43.75	35.29	55.18
maryland	POTATOES	21.90	-0.30	-12.50
maryland	tomatofrsh	24.40	17.65	5.04
maryland	tomatoproc	24.40	17.65	5.04
maryland	PASTURE	19.86	0.00	0.00
mass	silage	24.39	0.00	0.00
mass	hay	43.75	35.29	55.18
mass	POTATOES	16.00	0.00	0.00
mass	tomatofrsh	46.30	46.20	-26.98
mass	PASTURE	20.89	0.00	0.00
michigan	corn	47.73	51.11	72.10
michigan	soybeans	53.85	54.10	-22.05
michigan	SOFT	70.00	11.50	-20.00
michigan	barley	280.00	0.00	0.00
michigan	oats	280.00	11.50	-20.00
michigan	silage	47.73	51.11	72.10
michigan	hay	45.16	50.77	70.32
michigan	SUGARBEET	45.16	50.77	70.32
michigan	POTATOES	40.00	-1.50	-12.40
michigan	tomatofrsh	70.69	57.64	-22.30
michigan	tomatoproc	70.69	57.64	-22.30
michigan	PASTURE	35.26	0.00	0.00
minnesota	corn	32.00	35.29	61.29
minnesota	soybeans	40.00	85.01	-17.32
minnesota	HRSW	50.00	11.50	-20.00
minnesota	HRWW	50.00	11.50	-20.00
minnesota	DURW	50.00	11.50	-20.00
minnesota	barley	200.00	46.00	-80.00
minnesota	oats	200.00	46.00	-80.00
minnesota	silage	32.00	35.29	61.29
minnesota	hay	33.33	45.24	87.99
minnesota	SUGARBEET	33.33	45.24	87.99
minnesota	POTATOES	26.20	1.50	-13.80
minnesota	PASTURE	24.81	0.00	0.00
mississippi	cotton	111.29	131.93	59.81
mississippi	corn	-5.00	5.08	41.68
mississippi	soybeans	-17.65	27.18	7.95
mississippi	SOFT	55.88	11.80	-47.10
mississippi	sorghum	42.92	20.77	-27.27
mississippi	rice	0.00	22.72	6.42

mississippi	silage	-5.00	5.08	41.68
mississippi	hay	29.59	29.25	19.14
mississippi	PASTURE	59.75	0.00	0.00
missouri	cotton	99.33	77.93	59.81
missouri	corn	7.94	7.81	2.50
missouri	soybeans	-5.00	28.97	-9.32
missouri	SOFT	70.97	11.80	-47.10
missouri	sorghum	51.95	14.31	-43.91
missouri	rice	0.00	17.50	7.07
missouri	oats	283.87	0.00	0.00
missouri	silage	7.94	7.81	2.50
missouri	hay	38.64	35.05	17.51
missouri	PASTURE	42.86	0.00	0.00
montana	corn	0.00	51.22	22.13
montana	HRSW	26.92	5.50	-10.70
montana	HRWW	26.92	5.50	-10.70
montana	DURW	26.92	5.50	-10.70
montana	barley	107.69	22.00	-42.80
montana	oats	107.69	22.00	-42.80
montana	silage	-28.57	51.22	22.13
montana	hay	15.56	44.58	49.71
montana	SUGARBEET	0.00	44.58	49.71
montana	POTATOES	-18.30	-18.60	22.50
montana	PASTURE	21.05	0.00	0.00
nebraska	corn	6.25	25.00	36.06
nebraska	soybeans	-17.65	46.33	-7.14
nebraska	HRWW	46.43	24.50	2.70
nebraska	sorghum	129.06	46.07	-25.73
nebraska	barley	185.71	98.00	10.80
nebraska	oats	185.71	98.00	10.80
nebraska	silage	6.25	25.00	36.06
nebraska	hay	30.91	50.00	56.52
nebraska	SUGARBEET	0.00	50.00	56.52
nebraska	POTATOES	-37.80	-27.60	8.40
nebraska	PASTURE	9.63	0.00	0.00
nevada	HRSW	0.00	18.75	-26.50
nevada	HRWW	0.00	18.75	-26.50
nevada	barley	0.00	37.50	-53.00
nevada	hay	0.00	16.04	7.15
nevada	POTATOES	0.00	-18.60	22.50
nevada	PASTURE	84.04	0.00	0.00

newhampshi	silage	28.57	0.00	0.00
newhampshi	hay	43.75	0.00	0.00
newhampshi	PASTURE	28.97	0.00	0.00
newjersey	corn	23.53	23.08	77.15
newjersey	soybeans	25.00	28.83	14.29
newjersey	SOFT	113.64	8.50	-48.00
newjersey	barley	454.55	0.00	0.00
newjersey	oats	454.55	0.00	0.00
newjersey	silage	23.53	0.00	0.00
newjersey	hay	43.75	35.29	55.18
newjersey	POTATOES	21.90	-0.30	-12.50
newjersey	tomatofrsh	46.30	46.20	-26.98
newjersey	tomatoproc	46.30	46.20	-26.98
newjersey	PASTURE	28.97	0.00	0.00
newmexico	cotton	84.16	53.31	59.81
newmexico	corn	-7.69	40.00	76.80
newmexico	HRWW	78.57	3.20	-50.20
newmexico	sorghum	129.06	46.07	-25.73
newmexico	barley	314.29	3.20	-50.20
newmexico	silage	-7.69	40.00	76.80
newmexico	hay	72.22	59.74	84.26
newmexico	SUGARBEET	72.22	0.00	0.00
newmexico	POTATOES	0.00	-7.80	8.40
newmexico	PASTURE	24.60	0.00	0.00
newyork	corn	31.82	31.82	80.60
newyork	soybeans	46.15	0.00	0.00
newyork	SOFT	89.29	0.00	0.00
newyork	oats	357.14	8.50	-48.00
newyork	silage	31.82	31.82	80.60
newyork	hay	43.75	35.29	55.18
newyork	POTATOES	21.90	-0.30	-12.50
newyork	tomatofrsh	46.30	46.20	-26.98
newyork	tomatoproc	46.30	46.20	-26.98
newyork	PASTURE	28.97	0.00	0.00
northcarol	cotton	68.97	87.56	59.81
northcarol	corn	8.00	7.84	43.27
northcarol	soybeans	7.14	28.83	14.29
northcarol	SOFT	59.37	11.80	-47.10
northcarol	sorghum	37.39	0.00	0.00
northcarol	barley	237.50	0.00	0.00
northcarol	oats	237.50	11.80	-47.10

northcarol	silage	8.00	7.84	43.27
northcarol	hay	29.59	29.25	19.14
northcarol	POTATOES	21.90	-0.30	-12.50
northcarol	tomatofrsh	24.40	17.65	5.04
northcarol	PASTURE	19.86	0.00	0.00
northdakot	corn	-14.63	20.37	41.96
northdakot	soybeans	20.00	46.33	-7.14
northdakot	HRSW	13.33	10.70	-10.10
northdakot	HRWW	13.33	10.70	-10.10
northdakot	DURW	13.33	10.70	-10.10
northdakot	barley	53.33	42.80	-40.40
northdakot	oats	53.33	42.80	-40.40
northdakot	silage	-14.63	20.37	41.96
northdakot	hay	-1.85	37.66	69.37
northdakot	SUGARBEET	-1.85	37.66	69.37
northdakot	POTATOES	10.90	-0.80	-3.80
northdakot	PASTURE	32.17	0.00	0.00
OHIONW	corn	16.67	19.67	37.43
OHIONW	soybeans	10.00	36.58	-43.61
OHIONW	SOFT	79.31	8.50	-48.00
OHIONW	oats	317.24	0.00	0.00
OHIONW	silage	16.67	0.00	0.00
OHIONW	hay	40.00	38.55	37.41
OHIONW	SUGARBEET	40.00	38.55	37.41
OHIONW	POTATOES	14.30	-8.60	-12.30
OHIONW	tomatofrsh	23.16	13.99	-52.87
OHIONW	tomatoproc	23.16	13.99	-52.87
OHIONW	PASTURE	13.36	0.00	0.00
OHIOS	corn	16.67	19.67	37.43
OHIOS	soybeans	10.00	36.58	-43.61
OHIOS	SOFT	79.31	8.50	-48.00
OHIOS	oats	317.24	0.00	0.00
OHIOS	silage	16.67	0.00	0.00
OHIOS	hay	40.00	38.55	37.41
OHIOS	SUGARBEET	40.00	0.00	0.00
OHIOS	tomatofrsh	23.16	13.99	-52.87
OHIOS	tomatoproc	23.16	13.99	-52.87
OHIOS	PASTURE	13.36	0.00	0.00
OHIONE	corn	16.67	0.00	0.00
OHIONE	soybeans	10.00	36.58	-43.61
OHIONE	SOFT	79.31	0.00	0.00

OHIONE	oats	317.24	34.00	-192.00
OHIONE	silage	16.67	0.00	0.00
OHIONE	hay	40.00	38.55	37.41
OHIONE	SUGARBEET	40.00	0.00	0.00
OHIONE	tomatofrsh	23.16	13.99	-52.87
OHIONE	tomatoproc	23.16	13.99	-52.87
OHIONE	PASTURE	13.36	0.00	0.00
oklahoma	cotton	159.33	123.56	59.81
oklahoma	corn	5.26	-1.67	-3.33
oklahoma	soybeans	-23.53	28.97	-9.32
oklahoma	HRWW	44.74	13.60	-35.30
oklahoma	sorghum	107.14	14.93	-34.65
oklahoma	barley	178.95	0.00	0.00
oklahoma	oats	178.95	54.40	-141.20
oklahoma	silage	5.26	-1.67	-3.33
oklahoma	hay	28.74	35.92	31.28
oklahoma	PASTURE	33.27	0.00	0.00
oregon	corn	17.39	22.41	12.73
oregon	HRSW	34.29	14.05	-22.90
oregon	HRWW	34.29	14.05	-22.90
oregon	barley	137.14	28.10	-45.80
oregon	oats	137.14	28.10	-45.80
oregon	silage	17.39	22.41	12.73
oregon	hay	35.85	39.29	44.71
oregon	SUGARBEET	0.00	39.29	44.71
oregon	POTATOES	7.60	-12.25	12.65
oregon	PASTURE	74.00	0.00	0.00
pennsylvan	corn	40.82	42.86	49.08
pennsylvan	soybeans	57.14	0.00	0.00
pennsylvan	SOFT	72.41	8.50	-48.00
pennsylvan	sorghum	37.39	0.00	0.00
pennsylvan	barley	289.66	0.00	0.00
pennsylvan	oats	289.66	0.00	0.00
pennsylvan	silage	40.82	42.86	49.08
pennsylvan	hay	43.75	35.29	55.18
pennsylvan	POTATOES	21.90	-0.30	-12.50
pennsylvan	tomatofrsh	46.30	46.20	-26.98
pennsylvan	tomatoproc	46.30	46.20	-26.98
pennsylvan	PASTURE	28.97	0.00	0.00
rhodeislan	silage	34.29	0.00	0.00
rhodeislan	hay	43.75	35.29	55.18



rhodeislan	POTATOES	21.90	-0.30	-12.50
rhodeislan	PASTURE	28.97	0.00	0.00
southcarol	cotton	80.96	87.56	59.81
southcarol	corn	9.26	12.96	94.87
southcarol	soybeans	7.14	18.38	-5.99
southcarol	SOFT	55.17	11.80	-47.10
southcarol	sorghum	53.45	20.45	-20.00
southcarol	barley	220.69	0.00	0.00
southcarol	oats	220.69	0.00	0.00
southcarol	silage	9.26	12.96	94.87
southcarol	hay	29.59	29.25	19.14
southcarol	tomatofrsh	19.37	12.72	6.96
southcarol	PASTURE	58.75	0.00	0.00
southdakot	corn	-17.95	25.93	34.14
southdakot	soybeans	20.00	46.33	-7.14
southdakot	HRSW	22.58	7.10	-28.90
southdakot	HRWW	22.58	7.10	-28.90
southdakot	DURW	22.58	7.10	-28.90
southdakot	sorghum	183.22	45.21	-31.62
southdakot	barley	90.32	28.40	-115.60
southdakot	oats	90.32	28.40	-115.60
southdakot	silage	-17.95	25.93	34.14
southdakot	hay	16.67	43.94	68.03
southdakot	POTATOES	10.90	-0.80	-3.80
southdakot	PASTURE	35.48	0.00	0.00
tennessee	cotton	71.15	87.56	59.81
tennessee	corn	13.24	14.29	24.56
tennessee	soybeans	5.00	22.71	-11.42
tennessee	SOFT	80.65	0.00	0.00
tennessee	sorghum	76.04	0.00	0.00
tennessee	oats	322.58	0.00	0.00
tennessee	silage	13.24	0.00	0.00
tennessee	hay	27.96	27.37	6.17
tennessee	POTATOES	21.90	0.00	0.00
tennessee	tomatofrsh	24.40	17.65	5.04
tennessee	PASTURE	17.39	0.00	0.00
TXHIPLAINS	cotton	73.73	65.71	59.81
TXHIPLAINS	corn	-5.56	-5.00	12.59
TXHIPLAINS	soybeans	-18.75	28.97	-9.32
TXHIPLAINS	HRWW	2.70	19.30	-14.80
TXHIPLAINS	sorghum	117.62	13.39	-19.88

TXHIPLAINS	barley	10.81	77.20	-59.20
TXHIPLAINS	oats	10.81	77.20	-59.20
TXHIPLAINS	silage	-5.56	-5.00	12.59
TXHIPLAINS	hay	380.00	35.00	-9.43
TXHIPLAINS	SUGARBEET	380.00	35.00	-9.43
TXHIPLAINS	POTATOES	-5.60	-7.80	8.40
TXHIPLAINS	PASTURE	39.02	0.00	0.00
TXROLINGPL	cotton	123.55	91.88	59.81
TXROLINGPL	corn	-5.56	-5.00	12.59
TXROLINGPL	HRWW	2.70	19.30	-14.80
TXROLINGPL	sorghum	117.62	13.39	-19.88
TXROLINGPL	barley	10.81	0.00	0.00
TXROLINGPL	oats	10.81	77.20	-59.20
TXROLINGPL	silage	-5.56	-5.00	12.59
TXROLINGPL	hay	380.00	35.00	-9.43
TXROLINGPL	POTATOES	-5.60	0.00	0.00
TXROLINGPL	PASTURE	39.02	0.00	0.00
TXCNTBLACK	cotton	79.50	76.04	59.81
TXCNTBLACK	corn	-5.56	-5.00	12.59
TXCNTBLACK	soybeans	-18.75	0.00	0.00
TXCNTBLACK	HRWW	2.70	19.30	-14.80
TXCNTBLACK	sorghum	117.62	13.39	-19.88
TXCNTBLACK	rice	0.00	17.69	13.36
TXCNTBLACK	barley	10.81	0.00	0.00
TXCNTBLACK	oats	10.81	19.30	-14.80
TXCNTBLACK	silage	-5.56	-5.00	12.59
TXCNTBLACK	hay	380.00	35.00	-9.43
TXCNTBLACK	PASTURE	34.57	0.00	0.00
TXEAST	cotton	75.24	55.40	59.81
TXEAST	corn	-5.56	-5.00	12.59
TXEAST	soybeans	-18.75	27.18	7.95
TXEAST	HRWW	2.70	19.30	-14.80
TXEAST	sorghum	117.62	13.39	-19.88
TXEAST	rice	0.00	17.69	13.36
TXEAST	oats	10.81	19.30	-14.80
TXEAST	silage	-5.56	0.00	0.00
TXEAST	hay	380.00	35.00	-9.43
TXEAST	tomatofrsh	20.49	10.06	5.03
TXEAST	PASTURE	34.57	0.00	0.00
TXEDPLAT	cotton	48.56	80.17	59.81
TXEDPLAT	corn	-5.56	-5.00	12.59

TXEDPLAT	soybeans	-18.75	0.00	0.00
TXEDPLAT	HRWW	2.70	19.30	-14.80
TXEDPLAT	sorghum	117.62	13.39	-19.88
TXEDPLAT	barley	10.81	0.00	0.00
TXEDPLAT	oats	10.81	19.30	-14.80
TXEDPLAT	silage	-5.56	-5.00	12.59
TXEDPLAT	hay	380.00	35.00	-9.43
TXEDPLAT	tomatofrsh	0.00	10.06	5.03
TXEDPLAT	PASTURE	47.29	0.00	0.00
TXCOASTBE	cotton	19.54	28.53	59.81
TXCOASTBE	corn	-5.56	-5.00	12.59
TXCOASTBE	soybeans	-18.75	27.18	7.95
TXCOASTBE	HRWW	2.70	0.00	0.00
TXCOASTBE	sorghum	117.62	13.39	-19.88
TXCOASTBE	rice	0.00	17.69	13.36
TXCOASTBE	oats	10.81	19.30	-14.80
TXCOASTBE	hay	380.00	35.00	-9.43
TXCOASTBE	tomatofrsh	20.49	0.00	0.00
TXCOASTBE	PASTURE	47.29	0.00	0.00
TXSOUTH	cotton	-1.56	30.32	59.81
TXSOUTH	corn	-5.56	-5.00	12.59
TXSOUTH	soybeans	0.00	27.18	7.95
TXSOUTH	HRWW	2.70	19.30	-14.80
TXSOUTH	sorghum	117.62	13.39	-19.88
TXSOUTH	oats	10.81	19.30	-14.80
TXSOUTH	silage	-5.56	-5.00	12.59
TXSOUTH	hay	380.00	35.00	-9.43
TXSOUTH	POTATOES	0.00	-7.80	8.40
TXSOUTH	tomatofrsh	20.49	10.06	5.03
TXSOUTH	orangefrsh	0.00	103.60	13.80
TXSOUTH	orangeproc	0.00	103.60	13.80
TXSOUTH	grpfrtfrsh	0.00	103.60	13.80
TXSOUTH	grpfrtproc	0.00	103.60	13.80
TXSOUTH	PASTURE	47.29	0.00	0.00
TXTRANSPEC	cotton	67.26	119.70	59.81
TXTRANSPEC	corn	-5.56	0.00	0.00
TXTRANSPEC	HRWW	2.70	19.30	-14.80
TXTRANSPEC	sorghum	0.00	13.52	-7.36
TXTRANSPEC	barley	0.00	19.30	-14.80
TXTRANSPEC	oats	0.00	19.30	-14.80
TXTRANSPEC	hay	380.00	35.00	-9.43

TXTRANSPEC	PASTURE	14.32	0.00	0.00
utah	corn	0.00	21.15	16.37
utah	HRSW	150.00	18.75	-26.50
utah	HRWW	150.00	18.75	-26.50
utah	barley	600.00	37.50	-53.00
utah	oats	600.00	37.50	-53.00
utah	silage	-50.00	21.15	16.37
utah	hay	83.33	33.98	35.75
utah	SUGARBEET	83.33	0.00	0.00
utah	POTATOES	0.00	-18.60	22.50
utah	PASTURE	84.04	0.00	0.00
vermont	silage	34.09	0.00	0.00
vermont	hay	43.75	35.29	55.18
vermont	PASTURE	28.97	0.00	0.00
virginia	cotton	116.25	87.56	59.81
virginia	corn	12.90	12.50	2.03
virginia	soybeans	10.53	28.83	14.29
virginia	SOFT	68.97	8.50	-48.00
virginia	sorghum	37.39	0.00	0.00
virginia	barley	275.86	8.50	-48.00
virginia	oats	275.86	0.00	0.00
virginia	silage	12.90	12.50	2.03
virginia	hay	43.75	35.29	55.18
virginia	POTATOES	21.90	-0.30	-12.50
virginia	tomatofrsh	24.40	17.65	5.04
virginia	tomatoproc	24.40	17.65	5.04
virginia	PASTURE	19.86	0.00	0.00
washington	corn	29.41	64.29	37.01
washington	HRSW	35.29	14.05	-22.90
washington	HRWW	35.29	14.05	-22.90
washington	barley	141.18	56.20	-91.60
washington	oats	141.18	56.20	-91.60
washington	silage	29.41	64.29	37.01
washington	hay	32.79	56.86	67.40
washington	SUGARBEET	0.00	56.86	67.40
washington	POTATOES	-13.50	-3.40	18.70
washington	PASTURE	81.73	0.00	0.00
westvirgin	corn	17.46	0.00	0.00
westvirgin	SOFT	54.05	0.00	0.00
westvirgin	barley	216.22	0.00	0.00
westvirgin	oats	216.22	0.00	0.00

westvirgin	silage	17.46	0.00	0.00
westvirgin	hay	27.96	27.37	6.17
westvirgin	PASTURE	17.39	0.00	0.00
wisconsin	corn	47.83	52.17	112.36
wisconsin	soybeans	61.54	44.69	-32.00
wisconsin	HRSW	60.00	0.00	0.00
wisconsin	HRWW	60.00	0.00	0.00
wisconsin	barley	240.00	0.00	0.00
wisconsin	oats	240.00	0.00	0.00
wisconsin	silage	47.83	52.17	112.36
wisconsin	hay	50.75	52.94	101.39
wisconsin	POTATOES	26.20	1.50	-13.80
wisconsin	PASTURE	36.79	0.00	0.00
wyoming	corn	-28.57	37.78	27.86
wyoming	HRSW	20.00	7.10	-28.90
wyoming	HRWW	20.00	7.10	-28.90
wyoming	barley	80.00	14.20	-57.80
wyoming	oats	80.00	14.20	-57.80
wyoming	silage	-28.57	37.78	27.86
wyoming	hay	16.67	41.67	65.57
wyoming	SUGARBEET	0.00	41.67	65.57
wyoming	POTATOES	0.00	-0.80	-3.80
wyoming	PASTURE	46.36	0.00	0.00



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