

Crops

Several major U.S. field crops continue to receive safety net assistance during the projection period through marketing loan benefits provided by the 1996 Farm Act. Soybeans receive these benefits in the early years of the baseline, and rice and cotton receive benefits for the entire period. In contrast, there are no significant marketing loan benefits for wheat and feed grains, reflecting projected prices and the baseline's assumed use of formula loan rates. In the initial years of the baseline, U.S. corn and wheat markets adjust to reduced global supplies and weak U.S. exports, before moving back to a longer-term trend of consumption growth. The U.S. soybean sector adjusts to large global supplies early in the baseline by reducing record acreage and supplies and is aided by record exports, before returning to a longer-term consumption trend. The U.S. rice sector adjusts to large U.S. supplies and exports in the beginning of the baseline period before resuming a long-term trend with increasing domestic use offsetting U.S. rice export declines. U.S. cotton adjusts to large global supplies and consumption in the early years of the baseline, but then adjusts to a long-term trend of declining consumption in response to increased foreign competition. In the longer run, the global economy provides growth in consumption, trade, and exports for most U.S. field crops, but gains in trade are constrained by a strong U.S. dollar and by export competition for some important markets.

Major Policy Assumptions

The baseline assumes a continuation of current agricultural legislation. Most policy features assumed reflect provisions of the 1996 Farm Act. Major domestic policy assumptions for field crops are summarized in this section.

Production Flexibility Contracts

Decoupled income support payments provided through 2002 under 7-year production flexibility contracts of the 1996 Farm Act are assumed to continue through the baseline, with annual funding for contract payments remaining at the 2002 level of \$4.008 billion. Payment levels are allocated among contract crops (wheat, corn, grain sorghum, barley, oats, rice, and upland cotton) according to percentages specified in the 1996 Farm Act (table 4). Production flexibility contract payment rates for each of these crops (table 5) are paid on a payment quantity equal to 0.85 times the farm program payment yield times the contract acreage.

Marketing Assistance Loans

Starting in 2002, the baseline assumes that marketing assistance loan rates for corn, wheat, upland cotton, and oilseeds will be determined based on formulas in the 1996 Farm Act, subject to the maximum levels specified in the law for these crops and the minimum levels specified for upland cotton and oilseeds (table 5). Under this assumption, loan rates for corn and wheat decline in the early part of the baseline, but return to their maximum levels later in the projection period as market prices strengthen. In contrast, legislative minimum loan rates for soybeans and cotton constrain the full use of the price-based formulas. Thus, loan rates for those crops fall to those minimums and remain at those levels for most of the baseline. Loan rates for sorghum,

barley, and oats are assumed to be set in relation to the corn loan rate, taking into account their feed values relative to corn as measured by ratios of 5-year lagged moving average prices relative to corn prices. The loan rate for rice is set at \$6.50 per hundredweight.

Marketing loan provisions allow the repayment of commodity loans at less than the loan rate when posted county prices (wheat, feed grains, and oilseeds) or world prices (upland cotton and rice) are below the loan rate. Also, loan deficiency payments may instead be made to eligible producers of wheat, feed grains, upland cotton, rice, and oilseeds who agree to forgo obtaining a loan.

Commodity Certificates

The baseline assumes that commodity certificates will be available to producers of wheat, rice, feed grains, upland cotton, soybeans, and other designated oilseeds throughout the projections period. Commodity certificates may be purchased by producers with outstanding nonrecourse marketing assistance loans for these crops and then immediately exchanged for the commodities pledged as collateral for those loans. Certificates are primarily designed to limit loan program forfeitures of crops to the government—they facilitate the repayment of loans when producers would not otherwise be able to exercise their full opportunity to repay those loans. In so doing, certificates provide a vehicle for producers to receive marketing loan benefits unconstrained by payment limitations.

Cotton User Marketing Payments

The baseline assumes that cotton user marketing payments (the Step 2 program) continue to be made to domestic users and exporters of upland cotton throughout the projections whenever the lowest-priced U.S. growth of upland cotton quoted for delivery in Northern Europe exceeds the Northern Europe price by more than 1.25 cents per pound for 4 consecutive weeks, and if during the same 4-week period, the adjusted world price does not exceed 134 percent of the base U.S. loan rate. Payments are made in cash or certificates to domestic users on documented raw cotton consumption and to exporters on documented export shipments during the fifth week at a payment rate equal to the difference between the U.S. price and the Northern Europe price, minus 1.25 cents per pound during the fourth week of the period.

Emergency, Disaster, and Market Loss Assistance

The baseline assumes that no further emergency, disaster, or market loss assistance payments are made after those specified in the Crop Year 2001 Agricultural Economic Assistance Act and in the fiscal year 2002 agricultural appropriations legislation.

Conservation Reserve Program

The baseline assumes that the amount of land enrolled in the Conservation Reserve Program (CRP) will gradually build from 33.7 million acres in fiscal year 2001 to its maximum level authorized in the 1996 Farm Act of 36.4 million acres in 2005, and remain at this level for the rest of the projection period (table 6). The allocation of the CRP to specific crops for 2000 and

2001 reflects plantings for those years, with the 2001 allocation assumed for subsequent years. Acreage allocated to wheat, corn, and soybeans accounts for about half of the CRP area throughout the baseline.

Bioenergy Program and Ethanol

A Bioenergy Program was announced by USDA in October 2000 for fiscal years 2001 and 2002, with an annual program level of \$150 million assumed in the baseline for each of those two years. The program provides incentive payments to ethanol and biodiesel producers who expand bioenergy production from eligible commodities.

The federal tax credit for ethanol use extends through 2007 and is assumed in the baseline to continue through the end of the projections.

The baseline also assumes that many States will ban methyl tertiary butyl ether (MTBE) as a gasoline additive, including California in 2003 and New York in 2004. This results in increasing production of ethanol, an alternative oxygenate, and greater use of corn in that industry.

Export Enhancement Program

The annual expenditure limit for the Export Enhancement Program (EEP), set in the Uruguay Round Agreement on Agriculture, is \$478 million beginning in fiscal year 2001. This funding level is assumed in the budget to be available for EEP programming in subsequent years should market conditions warrant. However, the baseline commodity supply and demand projections assume no use of the EEP for crops.

Land Use

The 1996 Farm Act provides nearly full planting flexibility, permitting producers to respond to net returns in their acreage allocation decisions. In this policy environment, area planted to a particular crop is primarily a function of its expected net returns per acre relative to those of competing crops. In addition to returns from the marketplace, marketing loan benefits also enter into acreage response decisions. These benefits have a direct impact in the baseline on returns and acreage decisions for soybeans, cotton, and rice, and an indirect impact on acreage for competing crops. Thus, expected net returns are a function of market prices augmented by marketing loan benefits in years when prices are near loan rates, productivity in the form of yields, and variable costs. Changes in acreage for specific crops reflect relative net returns for competing crops and the relative magnitude of crop-specific acreage responses to those returns. Land-use competition is particularly strong between corn and soybeans, where the mix of plantings is quite responsive to changes in relative prices and relative program benefits. For example, although continued marketing loan benefits support soybean net returns and acreage, increasing returns for competing crops are projected to curtail soybean plantings between 2003 and 2005. Although production flexibility contract payments augment farmers' income, these payments are not linked to production choices or market conditions. They are therefore deemed "decoupled" and are not considered to have significant effects on producers' planting decisions.

Area planted to the eight major U.S. program crops (corn, sorghum, barley, oats, wheat, rice, upland cotton, and soybeans) is expected to rise to 256.7 million acres in 2011 (table 7), somewhat less than the recent high level of plantings, 260.5 million acres, attained in 1996. Compared to 1996, expectations are for fewer planted acres of wheat, sorghum, barley, oats, and upland cotton, while more area is devoted to corn, soybeans, and rice. Aggregate crop area is projected to generally increase throughout the baseline period, attributed mostly to rising corn, wheat, and soybean area. This land-use increase reflects producer response to generally rising net returns as demand and prices strengthen. Total harvested acreage for major crops mirrors aggregate planted area.

Area planted to feed grains rises for most of the projection period. Planted area to corn is anticipated to remain relatively large and grow slowly over the forecast period, as use strengthens and prices improve. Area planted to soybeans is anticipated to decline through the middle of the projection period and then rise to a record 76.3 million acres in 2011. Stronger returns for competing crops are seen curtailing soybean plantings between 2003 and 2005, but soybean plantings rise later as soybean prices and returns increase. Wheat planted area remains constant for the initial years of the baseline, but market prices rise sufficiently to entice additional wheat acreage beginning in 2005. Rice area is projected to decline slightly to 3.2 million acres in the later periods as soybeans provide a better return per acre. Planted area of upland cotton is projected to decline from 15.1 to 13.8 million acres in response to reduced relative net returns.

Crop Supply and Demand Overview

During the beginning of the baseline period, the corn and wheat sectors adjust to reduced global supplies and recovering exports accompanied by firm growth in domestic consumption, whereas soybeans, cotton, and rice are faced with large global supplies and low prices. Acreage for corn and wheat is initially flat but then is expected to increase as prices and returns improve. Plantings for soybeans, rice, and cotton are projected to decline from recent large levels, but soybean area recovers and establishes a new record in 2011. Later in the projection period, aggregate acreage rises in response to improving net returns per acre. However, yield gains for many crops are sufficient to support much of the needed production growth, thereby mitigating the need to increase total land use.

The domestic market is the main component of use for the major field crops. However, the export market is projected to increase in importance for several commodities. Gains in projected disappearance for wheat and sorghum are driven by exports, with U.S. trade showing larger absolute increases and growth rates than domestic demand. Exports of corn grow at faster rates than its domestic use, but absolute increases in domestic use are larger than trade gains, reflecting the relative size of its utilization categories. In contrast, projected increases in consumption for barley, oats, rice, soybeans, soybean oil, and soybean meal are driven mainly by domestic use. Growth in domestic consumption for these crops is larger than exports in both absolute and percentage terms. Stocks-to-use ratios decline for corn, wheat, and soybeans, with nominal prices rising.

Feed grain area declines slightly in 2003 before rising over the remainder of the projection period, with yields accounting for most gains in production. Feed grain prices rise throughout the baseline period, as stocks-to-use ratios are expected to decline. Throughout the baseline period, domestic feed grain use is projected to set new records. Feed grain exports are expected to grow about 25 percent, a much more robust growth rate than the past two decades. In the later years of the baseline, feed grain plantings rise in response to higher producer returns resulting from growth in exports and steady gains in the domestic market. Larger livestock inventories boost feed use, while food, seed, and industrial (FSI) use increases mainly due to growth in ethanol use. U.S. export gains are expected to be larger in the later years of the baseline period, as competitors' stocks are reduced early in the baseline.

U.S. wheat production is expected to rise throughout the baseline period. Initially, U.S. wheat area is constant but then is expected to expand in response to increased net returns. Yields are projected to rise at nearly twice the rate of harvested area. Total consumption of U.S. wheat is projected to rise throughout the projection period, accompanied by declining stocks-to-use ratios and rising prices. Beginning in 2003/04, food use of wheat is projected to rise 10 million bushels per year, consistent with rates of population growth. Wheat feed and residual use is expected to adjust downward and remain steady for most of the baseline period as wheat prices rise relative to corn. U.S. wheat exports decline initially, but then are expected to rise over the rest of the projection period. However, continued competition will hold the U.S. share of global wheat trade below the levels of the late 1990s.

U.S. rice area is projected to decline slightly in the later part of the baseline period, as relative net returns are not sufficient to maintain acreage levels. Annual rice production is expected to rise from 203 to 209 million hundredweight during the projection period, as small yield increases offset the modest decline in area. U.S. rice imports are projected to expand about 2.5 percent annually over the baseline period, reaching a record 14 million hundredweight by 2011/12. Steady growth in domestic use of rice is projected, driven by food use, with gains of about 2 percent per year. U.S. rice exports remain strong in the early part of the baseline, a result of declining price differences compared with prices of major competitors in the global market and abundant U.S. supplies, but exports decline slowly for the remainder of the period. Most U.S. exports go to high-quality markets, rarely competing with the low-cost Asian exporters in lower quality rice markets. Domestic producer prices are expected to rise slowly over the next decade as international prices begin to increase from recent low levels. However, world prices are projected to remain below U.S. loan rates during the baseline, thereby making U.S. producers eligible for marketing loan benefits. Rice producers' net returns are projected to decline from \$95 per acre in 2002/03 to \$88 in 2007/08 and slowly rise thereafter as higher farm prices more than offset declining marketing loan benefits.

U.S. upland cotton production is projected to decline from 18 million to 17 million bales during the baseline period as declines in planted area offset slight gains in yields. Planted area is expected to fall from 15 million to 13.8 million acres during the baseline period. Cotton disappearance is expected to rise in the early years of the baseline as global consumption expands, but then declines somewhat through the end of the period. Domestic mill use declines by 7 percent over the baseline due, in part, to the full phaseout of the Multi-Fiber Arrangement's (MFA) textile and apparel import quotas scheduled for 2005. In contrast,

cotton exports are expected to remain at 10 to 10.5 million bales for the first several years of the baseline. Upland exports decrease slightly each year for the remainder of the period, but remain well above mill use. Despite the aid of Step 2 payments, foreign competition contributes to the decline in exports. Ending stocks of upland cotton are projected to decline throughout much of the baseline period, as are stocks-to-use ratios, before stabilizing towards the end of the projections.

U.S. soybean area is anticipated to decline through the middle of the projection period, but rise thereafter to a record 76.3 million acres in 2011. Stronger returns for competing crops are seen curtailing soybean plantings between 2003 and 2005, even though marketing loan benefits continue to support soybean net returns. Soybean production is expected to reach 3.3 billion bushels on 75.3 million harvested acres by the end of the baseline. Producer prices for U.S. soybeans are projected to rise to \$6.20 a bushel by the end of the baseline as supplies come into closer balance with demand. Lower world market soybean prices initially are expected to slow foreign production somewhat, allowing the United States to capture a slightly larger market share of the world soybean market. However, as soybean prices increase, foreign soybean output strengthens and is expected to curtail growth in U.S. soybean exports. Ample soybean supplies and low soybean prices are expected to accelerate domestic crushing in 2002/03 and 2003/04, but tightening domestic soybean supplies and a revival in foreign meal output are projected to slow growth in U.S. meal exports. U.S. soybean oil prices, the lowest since 1971, are anticipated to rise throughout the baseline as consumption converges with supply.

Feed Grains

Feed grain production increases throughout the projection period, as yields account for most of the increase in production. Corn is expected to gain in share of total feed grain production and use. Corn area is projected to experience minor growth over the baseline period. Sorghum plantings are expected to decline through 2003 and slowly rise over the remaining period, returning to the 2002 level. Planted area for barley and oats is not expected to change during the projection period. Net returns for the other feed grains increase over the forecast period, but continue low relative to corn.

Throughout the baseline period, total feed grain use is projected to set new records. Exports are expected to grow about 25 percent, a much more robust growth rate than over the past two decades, but remain lower than the record set in 1979. Despite improved growth in global imports, U.S. feed grain exports are expected to encounter strong competition throughout the projection period.

U.S. ending stocks of feed grains are projected to drop throughout the baseline period to around 31 million metric tons. These ending stocks are much below the average ending stocks in the 1990s of 41 million tons, or the average ending stocks in the 1980s of 85 million tons, characterized by large stockholding due to government programs. As the stocks-to-use ratio declines throughout the baseline, corn prices are expected to rise to \$2.60 per bushel in 2011/12. Productivity is projected to account for about 80 percent of production growth with the remaining increase in production coming from increased plantings.

Corn

The corn sector starts the baseline with stronger prices than the past several years, reflecting total use growing faster than total supply. At the onset of the baseline, domestic corn use is strong, and continues growing throughout the period. In the first year of the baseline, U.S. corn exports drop as normal weather boosts production by competing suppliers and some major importers. Longer-term growth of U.S. corn exports reflects the U.S. corn sector remaining competitive in global markets, a rising global meat demand, and China becoming a net importer later in the baseline period.

Planted area for corn is projected to remain relatively large, and to grow slowly over the forecast period, as use strengthens and prices improve. Corn competes mostly with soybeans for land and is used extensively in rotations with soybeans. Corn area grows relative to soybeans as relative net returns are expected to favor corn throughout most of the baseline.

Gains in corn yields are expected to continue over the entire baseline period, facilitated by genetic improvements and farming practices, such as timely planting and effective input use. Corn production is projected to increase throughout the baseline, surpassing the previous record of 10.1 billion bushels by 2004.

Feed and residual use is expected to drop in the initial year of the forecast period but grow throughout the remainder of the projection period. Reduced numbers of cattle on feed in the first year account for most of the initial decline but increasing meat production and grain-consuming animal units in the U.S. livestock sector account for rising use of grain for the remaining projection period. In addition, feed and residual use of other grains remains low relative to earlier periods.

Food, seed, and industrial (FSI) use of corn is anticipated to increase throughout the baseline period, beginning at a record level. Major growth is expected in ethanol use because many States are banning methyl tertiary butyl ether (MTBE). Ethanol is the principal replacement oxygenate for those States that use reformulated gas requiring 2 percent by weight oxygen. Greater corn use is projected in the baseline as the ethanol industry expands its production. In addition, corn use is boosted in the initial year of the baseline by the bio-energy program, which provides payments for additional production. Policy is a critical determinant of the quantity of corn used for ethanol and different policies could drastically change the use of ethanol in fuels. Gains for high fructose corn syrup (HFCS) and most of the other food and industrial components are projected to be smaller than in most of the previous decade. Food and starch, other segments of FSI use, are mature markets and projected gains largely reflect population growth.

Projected exports demonstrate growth compared with the 1980s and 1990s, but remain below the record established in 1979/80 until the end of the forecast period. Initially, U.S. corn exports are expected to decline slightly, but grow thereafter.

Ending stocks of corn are expected to decline to 978 million bushels in 2011/12. Prices strengthen from recent lows to \$2.60 per bushel by the end of the projection period, as the stocks-to-use ratio progressively declines.

Sorghum

Sorghum production is projected to grow to 640 million bushels by 2011. Plantings decline to 9.5 million acres in 2003 and then rise to 9.8 million acres by the end of the baseline. Trend yield growth of 0.6 bushels an acre per year is assumed. By 2008, sorghum yields exceed the current record of 72.7 bushels per acre.

Since growth in both supply and demand are about equal after 2006/07, ending stocks of sorghum are projected to remain about the same. Steady export gains are largely due to increased shipments to Mexico. Only modest increases in feed and residual use are projected. Food, seed, and industrial use rise slowly in the baseline, remaining record high due to sorghum's industrial use.

Barley

Barley production increases modestly over the baseline, reaching 310 million bushels by 2011. Planted acreage remains steady over the period, as barley's net returns cannot compete for more area. Trend increases of 0.6 bushels per acre a year are assumed for barley yields.

In contrast to sorghum, the increase in barley supplies goes to feed and residual use. Food and industrial use, dominated by malt for beer brewing, is not expected to grow. Barley exports are projected at 30 million bushels each year in the baseline. Imports are expected to be constant at 35 million bushels. The average barley price is projected to rise through the baseline, reaching \$2.55 per bushel by 2011/12.

Oats

A declining long-term trend in oat acreage is projected to bottom out, with oat plantings remaining constant at 4.4 million acres over the baseline period. The crop will remain important in some rotations and as a cover crop. Production is projected to range from 130 to 135 million bushels over the period, while total use starts at 225 million bushels, increasing to 264 million. Imports rise from 105 million bushels to 130 million, or 36 to 39 percent of supply, making up the difference between production and use. Imported oats are particularly important to food and specialty feed use. Food use grows very slowly reflecting population increases. Feed and residual use ranges from 155 million bushels to 185 million. Oat prices begin the projection period at low levels and increase to \$1.45 per bushel by 2011/12.

Wheat

U.S. wheat supplies are projected to begin the baseline period at 2.9 billion bushels, down from recent high levels of more than 3.3 billion bushels attained in the late 1990s, and to rise to only 3.2 billion bushels at the end of the projections. Domestic wheat production is projected to

increase steadily throughout the projection period with yields rising at almost twice the rate of harvested area. Imports are projected to be 3 to 4 percent of total supplies over the projection period. The United States imports hard red spring, durum, and white wheat, mostly from Canada. Stocks rise slightly at the start of the projection period, partly due to lower exports, but stocks then decline for the remainder of the baseline.

As net returns rise over the projections period, additional acreage is attracted to wheat, although wheat acreage of 64 million acres at the end of the baseline is much less than the 75 million acres planted in 1996. Nonetheless, the projected rise in acreage reverses a downward trend from 1996. The Olympic average of harvested to planted acreage for 1997 to 2001 is used to determine harvested area throughout the projection period.

Total wheat consumption is anticipated to rise throughout the projection period. Both food use and exports are expected to rise each year, but feed use slowly decreases as wheat prices rise. Following a slowdown in the last half of the 1990s, food use of wheat is expected to increase 10 million bushels annually beginning in 2003/04. These gains are in line with growth in population, but are slower than growth from the early 1970s to the mid-1990s when changes in consumer preferences led to rapidly rising per capita consumption.

Exports account for a growing share of total U.S. wheat utilization, rising from 42 percent to 48 percent during the projection period. After initially declining, the U.S. share of global trade remains in a 24 to 26 percent range during the rest of the baseline, below levels of the late 1990s, as continued competition and a strong dollar limit U.S. wheat export growth. Key growth markets for global wheat imports include China, Pakistan, Brazil, North Africa, and the Middle East, reflecting rising incomes and populations and, in some markets, changes in policy. The United States faces continued competition from Australia, Canada, and the EU. Importantly, the EU can export wheat without subsidies throughout the projection period. Increased export competition also is seen to arise from Eastern Europe, Ukraine, and Russia. However, Argentina's wheat exports decline in the second half of the projections because other crops become more profitable to produce.

Wheat prices for U.S. producers are anticipated to decline slightly the first two years of the projection period, but rise steadily thereafter. Rising exports and domestic food use are expected to reduce ending stocks and the stocks-to-use ratio. Net returns per acre are expected to rise rapidly in 2004/05 and maintain this growth rate through the rest of the projection period, as rising revenues are projected to outpace increasing variable costs.

Rice

U.S. rice plantings are projected to remain virtually flat at 3.25 million acres from 2002 through 2006, and then slowly decline to 3.2 million acres by the end of the projection period. The decline in rice area is expected to occur mostly in the Mississippi Delta where soybeans are typically rotated with rice. Little change is projected in California's rice acreage over the next decade, with Japan remaining its number one export market. Rice acreage in the Gulf Coast, the highest per-unit cost-of-production region of the United States, is projected to be steady over the next 10 years, as few economically viable alternative crops are available in the region. In 2002,

total U.S. rice acreage is projected to drop slightly, a result of extremely low prices and large carryover stocks.

Stable-to-declining rice acreage, accompanied by small but steady increases in yields, is expected to account for slowly rising production throughout the projection period. Rice yields are projected to grow about 0.5 percent annually due to better farm management practices and some improvements in rice varieties. This growth rate is less than achieved in the 1980s and early 1990s when modern high-yielding varieties were adopted. U.S. average rice yields typically jump 4 to 8 percent every 5 to 7 years as newer varieties are introduced.

U.S. rice imports are projected to expand about 2.5 percent annually over the baseline period, a rate of growth that is slower than during most of the 1980s and early 1990s, reaching a record 14 million-hundredweight by 2011/12. Imports as a share of total domestic use (including seed and residual) are expected to rise fractionally over the baseline period, reaching almost 10 percent by 2011/12. U.S. rice imports are predominantly premium, specialty varieties not currently grown in the United States, mostly Thai jasmine as well as smaller quantities of basmati from India and Pakistan.

Total domestic and residual use is projected to rise gradually throughout the projection period, gaining 2 percent a year. Food use is expected to account for virtually all of the growth in domestic use. The expansion in domestic food use is mostly attributed to a growing share of the U.S. population from Asia and Latin America, a greater emphasis on healthier life styles, versatility of rice as a side dish or main dish, and greater use of rice in processed foods and pet food. The rate of growth in domestic use has slowed since the 1980s and early 1990s due to a growing share of meals eaten away from home, an increasing popularity of precooked meals, a premium on minimal preparation time, competition from other side dishes at restaurants, and the growing popularity of meals that can be eaten on the run. Despite the slower rate of overall consumption growth, per capita rice use is projected to continue rising over the baseline period.

Brewers' use of rice, which has been virtually stagnant since the late 1980s, is projected to expand fractionally over the baseline period. Stronger growth is unlikely due to negligible gains in per capita beer consumption, greater popularity of light beers that use less rice than regular beers, and larger imports of beer. Seed use, a function of planted area, is expected to remain constant through 2006 before declining fractionally through 2011 as rice area slowly contracts.

U.S. rice exports are projected to slowly decline over most of the baseline period. However, in the first year of the baseline, exports are projected to increase 2 percent to 88 million hundredweight. Exports then remain nearly stable through 2004/05. The initially robust export outlook is the result of a declining price difference with Asian exporters' prices and record supplies at home. By 2005/06, U.S. exports are projected to slowly decline as domestic use outstrips production growth and the price difference with Asian exporters widens. The export share of total use is projected to drop from nearly 42 percent in 2002/03 to around 34 percent by 2011/12. The U.S. share of global rice exports is projected to decline from nearly 12 percent in 2002/03 to slightly more than 8 percent by 2011/12.

The United States exports mostly to high-quality markets, rarely competing with the low cost Asian exporters in lower quality milled rice markets. However, Thailand and India compete with the United States in certain high quality indica markets, primarily parboiled, in the Middle East and South Africa. China and Australia compete with the United States for japonica sales to Japan. Australia, Egypt and the EU also compete in the international japonica market, especially in the Eastern Mediterranean. Currently, 25 to 30 percent of U.S. rice exports are rough rice, mostly indica rice from the southern United States going to Latin America. Asian exporters do not export rough rice and ship very little rice to Latin America.

U.S. ending stocks are projected to slowly decline from more than 44 million hundredweight in 2003/04 to 31.4 million in 2011/12, as expanding total use outstrips supply. With total use expanding each year, the stocks-to-use ratio is projected to drop from a high of 20.5 percent in 2003/04 to less than 14 percent in 2011/12, nearly identical to the 1996/97 to 2000/01 average.

Global prices are expected to rise about 3 percent a year from recent low levels due to expanding world rice trade. Trade growth will be largely driven by population growth and some shifting to higher quality rice by importers as incomes rise. However, world prices are not projected to exceed U.S. loan rates during the 10-year baseline period, making U.S. producers eligible for marketing loan benefits throughout the projection period. Net returns for rice producers, including marketing loan benefits, are projected to decline from \$95 per acre in 2002/03 and 2003/04 to \$88 in 2007/08 and then slowly rise as higher farm prices more than offset declining marketing loan benefits.

Upland Cotton

Planted area for upland cotton is expected to decline throughout the baseline period as cotton acreage is bid away to other crops, such as corn or soybeans. Area is projected at 15.1 million acres for 2002, a decline of nearly 1 million acres from the previous year because of more favorable returns to competing crops. Projected harvested area incorporates an average abandonment of 9 percent per year. Upland cotton yields are expected to increase 2 pounds per year, reaching 648 pounds per harvested acre by 2011, well below the 705-pound per acre record yield in 1994. Projected production declines from 18 to 17 million bales during the baseline period, as the reduction in planted area offsets the small rise in productivity.

Total disappearance of U.S. upland cotton is expected to expand modestly in the first two years of the baseline, as global consumption continues to expand to meet the rebounding demand for cotton textile and apparel products. Total use is projected to expand to more than 18 million bales, reaching its peak in 2003/04. For the remainder of the period, total consumption is expected to decline slightly as foreign competition limits U.S. offtake.

Upland cotton mill use is expected to remain in the 8.1 to 8.2 million bale range for the first several years of the baseline period as structural adjustments in the U.S. textile and apparel industry have reduced mill use by 3 million bales over the last three seasons. By 2005/06, the full phaseout of the Multi-Fiber Arrangement's textile and apparel import quotas are scheduled and the liberalization of restrictions on cotton textile and apparel import quotas will likely result in larger imports, primarily apparel, from developing countries with lower wages. Increases in

U.S. textile and apparel imports are projected to more than offset larger textile and apparel exports. As a result, U.S. upland mill use is projected to decline 1 to 2 percent per year beginning in 2005/06, declining to about 7.6 million bales by the end of the baseline.

Exports of upland cotton, on the other hand, are projected to climb to 10.5 million bales in 2003/04 as the U.S. farm program provides competitively priced cotton to the world. However, even with the aid of Step 2 payments, U.S. upland cotton exports decrease slightly each year after 2003/04 as foreign competition develops, but remain well above mill use. With world trade projected to expand throughout the baseline period, averaging 1 percent annually, the U.S. market share is projected to decline to 30 percent by 2011/12 after peaking at 37 percent in 2003/04.

Ending stocks are projected to fall throughout most of the baseline period from initially large levels as acreage and production respond to declines in use and rising production costs. As with stocks, the stocks-to-use ratio declines moderately from 47 percent in 2002/03 to around 35 percent by the end of the baseline period. Net returns for upland cotton are expected to be somewhat stable throughout the baseline period, in part due to marketing loan benefits, but remain below the relatively high levels of the 1996-98 seasons.

Soybeans

Area planted to soybeans is anticipated to decline through the middle of the projection period and then rise to a record 76.3 million acres in 2011. The soybean loan rate is assumed to revert to the formula or minimum level set forth in the 1996 Farm Act. Although marketing loan benefits raise soybean net returns and acreage, reduced loan rates in the baseline and stronger returns for competing crops are seen curtailing soybean plantings between 2003 and 2005. During most of the first half of the projection period, a rise in soybean farm prices is expected to coincide with declining marketing loan benefits. Soybean acreage is expected to rise again beginning in 2006, as farm prices exceed the loan rate.

U.S. soybean yields are projected to have an annual trend growth of 0.5 bushels per acre. Continued improvements in soybean varieties are expected to contribute to the U.S. yield trend. Soybean production is expected to exceed 3.3 billion bushels on 75.3 million harvested acres by 2011. Growth in soybean yields and area begin to lag demand growth after 2002.

Increasing use for soybeans is expected to gradually reduce ending stocks throughout the projection period. Soybean prices are projected to rise slowly from a low of \$4.30 per bushel in 2001/02. For about the first four years of the baseline, marketing loan benefits are expected to supplement revenue from farm marketings, until 2006/07 when the soybean price substantially exceeds the loan rate. U.S. farm prices are projected to rise to \$6.20 per bushel by the end of the baseline period, as soybean supplies come into closer balance with demand. By 2011, soybean net returns per acre are expected to approach but not match the \$196 level of 1996/97.

U.S. soybean exports are projected to increase to a record 1.04 billion bushels by 2003/04 as low world market prices initially are anticipated to slow foreign soybean production somewhat and support import growth. Consequently, the United States is expected to capture a slightly larger

share of the world soybean market. But as prices begin to firm thereafter, the expansion of foreign soybean output is expected to strengthen, with the competition slowing the growth of U.S. soybean exports.

The pace of U.S. crush is partly determined by demand for world soybean meal and the rate of foreign crushing. Ample soybean supplies and low prices are expected to accelerate domestic crushing in 2002/03 and 2003/04. Subsequently, as foreign supplies increase, annual increases in crushing are expected to moderate and slightly exceed 2 billion bushels by 2011/12. The average price for soybean meal is projected to decline to \$152.50 per short ton by 2003/04, which should support domestic consumption and keep U.S. soybean meal exports competitive. Beginning in 2004/05, U.S. soybean meal prices are anticipated to strengthen modestly, because of a slowing growth in supply and a continuing growth in demand for domestic soybean meal, supported in part by rising pork and poultry production. Thereafter, growth in U.S. soybean meal exports slows, because of tightening domestic soybean supplies and a revival in foreign meal output, but is expected to reach 8.6 million short tons by 2011/12.

Recent soybean prices have been pressured by the lowest soybean oil values since 1971. But, as consumption converges with supply and gradually reduces ending stocks, a modest recovery in U.S. soybean oil prices is projected. Prices are projected to increase from 16.3 cents per pound in 2002/03 to 25.0 cents by 2011/12. Domestic disappearance of soybean oil is expected to rise at a relatively steady rate, reaching 20.3 billion pounds by 2011/12. U.S. soybean oil exports are projected to grow to 2.8 billion pounds by 2011/12. The pace of U.S. soybean oil exports is projected to grow slowly throughout the baseline period, as domestic prices rise and world palm oil production expands.

Sugar

The USDA sugar baseline assumes a continuation of current U.S. sugar policy through the end of the projections period in fiscal year (FY) 2012. The main components of the U.S. sugar program are the price support loan program and the tariff-rate quota (TRQ) import system. The loan program supports prices of domestically produced sugar. The TRQ system helps support domestic sugar prices by restricting imports of sugar. U.S. commitments under international trade agreements, including the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA), affect the level and allocation of the TRQs throughout the baseline. NAFTA provisions also affect imports of high-tier tariff sugar outside the TRQ system.

U.S. sugar policy is carried out in the context of additional assumptions about trends that affect the production and consumption of U.S. sugar. These include assumptions about technology and the prices of crops that substitute for sugarcane and sugarbeets. In addition, factors affecting Mexican sugar supply and demand influence the U.S. sugar projections.

U.S. Sugar Loan Program

The 1996 Farm Act and subsequent amending legislation provide for the USDA to make nonrecourse loans available to processors of domestically grown sugarcane at a rate of 18 cents per pound and to processors of domestically grown sugarbeets at a rate of 22.9 cents per pound

for refined beet sugar. With a nonrecourse loan, the USDA must accept sugar pledged as collateral for the loan as full payment in lieu of cash repayment of the loan, at the discretion of the processor. Also, the 1996 Farm Act required that processors who forfeit sugar pledged as collateral for a nonrecourse loan pay a penalty of 1 cent a pound for raw cane sugar and 1.072 cents a pound for refined beet sugar. Processors consider these penalties when deciding whether to forfeit sugar to the Commodity Credit Corporation (CCC). For the sugar baseline, the minimum raw sugar market price to discourage forfeitures is calculated at 19.68 cents a pound, while the corresponding minimum refined beet sugar price is calculated at 24.45 cents a pound.

Sugar Tariff-Rate Quota

In the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the United States agreed to import a minimum quantity of raw and refined sugar of 1.256 million short tons, raw value (STRV) each marketing year (October/September). Included in this amount is a commitment to import at least 24,251 STRV of refined sugar. These commitments became binding under the World Trade Organization (WTO) when it replaced the GATT.

The raw cane sugar TRQ is allocated to 40 quota-holding countries based on a representative period (1975-81) when trade was relatively unrestricted. An additional quantity of sugar is made available to Mexico to satisfy U.S. obligations under the NAFTA. The USDA sugar baseline assumes that the raw sugar TRQ less the NAFTA commitment to Mexico is set at the minimum access level of 1.231 million STRV throughout the projection period. Based on historical performance, it is assumed that some quota-holding countries will be unable to fulfill their assigned quota, with the aggregate shortfall totaling 65,000 STRV. The WTO minimum access for refined sugar TRQ is 24,251 STRV. It is expected that the refined sugar TRQ will be set higher than the minimum, consistent with the recent historical pattern that has allowed additional specialty sugar to be imported at a low duty within the TRQ. Therefore, the yearly refined sugar TRQ for the baseline period is assumed to be set at 37,478 STRV, the same level as for FY 2002.

North American Free Trade Agreement

Low-tier Tariff NAFTA Imports. According to the NAFTA, Mexican sugar low-tier tariff exports to the United States are restricted by Mexico's net surplus production of sugar. The net surplus is defined as Mexico's production of sugar less its consumption of sugar and high fructose corn syrup (HFCS). From FY 2001 through 2007, Mexico is to have duty-free access to the U.S. market for the amount of its surplus as measured by the formula, up to a maximum of 250,000 metric tons, raw value (MTRV). Beginning in FY 2008, Mexico is to have duty-free access with no quantitative limit. The sugar baseline projects that Mexico will achieve net surplus producer status through 2007, but the surplus is expected to be less than 250,000 MTRV in each year.

High-tier Tariff NAFTA Imports. The NAFTA specifies a declining high-tier tariff schedule for raw and refined sugar over the transition period to duty-free sugar trade in 2008. For calendar year 2002 the raw sugar tariff is 9.07 cents a pound, and the refined sugar tariff is 9.61 cents a pound. The raw sugar tariff drops about 1.5 cents each year, and the refined sugar tariff drops about 1.6 cents a year. Both rates reach zero in 2008.

The economic incentive for Mexico to export high-tier tariff raw sugar exists if a price threshold is less than or equal to the U.S. sugar price. The threshold is equal to the sum of the world price of sugar (No. 11 New York contract), the high-tier NAFTA tariff rate, unit marketing costs (about 1.1 cents a pound for raw sugar), plus marketing premiums (assumed to be about \$30 a metric ton, or 1.36 cents a pound). The threshold price is compared to the U.S. price for entry in Gulf ports. This U.S. price runs about 1 cent lower than the No. 14 New York contract price. If the threshold is below the U.S. Gulf price, then Mexico would be encouraged to export sugar to the United States up to that point where the marginal returns from exporting to the U.S. and the world markets are equalized.

The sugar baseline assumes that the world price of sugar will average about 7 cents a pound through 2003, rise to 8 cents a pound in 2004, and then average 9 cents a pound through the remainder of the projections. U.S. sugar processors are expected to use the sugar loan program to keep the U.S. raw sugar price at or above 19.68 cents a pound, with a sufficient level of loan program forfeiture (that removes sugar from the market) to keep prices from falling lower.

Under the foregoing assumptions, significant high-tier tariff imports from Mexico are expected, beginning in FY 2003. Yearly imports through 2007 are projected to be between 540,000 and 620,000 STRV. These projections are made on the assumption that Mexico will keep its countervailing duties on HFCS imports from the United States. These duties limit inroads that HFCS could otherwise make in substituting for sugar in Mexico's beverage and food processing industries. If these duties were reduced or removed completely, it is likely that high-tier sugar imports from Mexico would be much higher as the HFCS substitution would result in additional exportable sugar supplies in Mexico.

Another factor encouraging high-tier tariff imports is the U.S. sugar loan program. Under the assumptions discussed above, the CCC acquires sugar that it holds off the market in order to keep raw and refined sugar prices at the minimums necessary to forestall additional forfeitures. Because the sugar loan program keeps high-tier tariff imports from depressing U.S. sugar prices below the support level, and given a world sugar price between 7 and 9 cents a pound, Mexico is encouraged to ship all exportable sugar to the United States.

After 2007, the high-tier tariff is zero, and Mexican duty-free exports are no longer limited by calculations of net surplus production. It is expected that Mexican prices will be at parity with U.S. sugar prices, which in turn will be supported by CCC stock acquisitions. Higher Mexican prices encourage Mexican production, and encourage substitution toward HFCS because its price relative to Mexican sugar prices is now lower. In 2012, Mexican sugar exports to the United States are projected to be above 1.3 million STRV.

U.S. Sugar Production and Sugar Crop Prices

Trend improvements in sugarcane and sugarbeet growing, harvesting, and processing are expected to continue through the projections period. These improvements are captured in the baseline by sugar produced per acre. The average sugar yield for sugarcane-producing States is projected at 4.37 tons per acre in 2003, and is expected to grow yearly at about 0.6 percent, projected to reach 4.61 tons per acre in 2012. The U.S. sugarbeet yield is projected at 3.14 tons

per acre in 2003, and is expected to grow yearly at about 0.7 percent. In 2012, it is projected at 3.35 tons per acre.

Nominal sugar and sugar crop prices are expected to be at or above levels consistent with current sugar loan rates and forfeiture penalties. Sugarbeet price projections range from a low of about \$38.15 per ton between 2004 to 2007 to above \$41.00 per ton after 2010. Sugarcane prices range from a low of \$25.37 in 2006 to above \$28.00 per ton after 2010. Prices of alternative crops are projected to rebound from the very low levels of 2001. Prices for alternative crops in sugarbeet areas are projected to increase 35 percent between 2001 and 2012, and prices for alternative crops in sugarcane areas are projected to increase 30 percent over the same period.

Producer net returns reflect declining prices of U.S. sugar crops relative to prices for competing crops and result in small reductions in area planted and harvested for sugar crops. For sugarbeets, area planted is expected to slowly decline from 1.44 million acres in 2003 to 1.40 million acres in 2012. For sugarcane, area harvested is expected to reach a high of 1.01 million acres in 2004 but decline to about 950,000 acres after 2006. In spite of reduced acreage, technical improvements reflected in higher sugar yields imply that U.S. sugar production will be fairly constant over the projections period. Beet sugar production is projected to be between 4.4 to 4.6 million STRV, while cane sugar production is projected to be between 4.3 to 4.4 million STRV.

U.S. Sugar Consumption and Ending Stocks

Domestic deliveries are expected to increase 135,000 STRV each year. Consistent with historical trend, delivery growth for industrial uses is expected to be greater than growth for nonindustrial (including household) uses. Although sugar demand by industrial users may be somewhat price-elastic within certain price ranges, wholesale sugar prices are expected to be steady due to support provided by the loan program. Prices of alternative sweeteners, mainly HFCS-42 and HFCS-55, are not expected to be sufficiently high to warrant substitution of sugar for those products.

Ending stocks are projected to grow from 1.5 million STRV in 2002 to over 2.1 million STRV in 2005, and then decline to 1.2 million STRV in 2012. The projected ending stocks-to-use ratio rises above 18.5 percent in the period between 2004 and 2006, but declines to 10.2 percent at the end of the projections. The CCC is projected to own significant sugar stocks during FY 2004 through 2006.

Sensitivity to Developments in Mexico

U.S. sugar baseline projections are very sensitive to sugar industry developments in Mexico. Mexican sugarcane area harvested is not expected to grow outside the range of 630,000 to 640,000 hectares prior to 2009. After 2008, area is expected to grow to 656,000 hectares by 2012. Sugarcane yields are expected to be about 72 tons per hectare, with little growth expected. Any upward adjustments to these expectations would result in increased exports to the U.S. market. Also, significant substitution of HFCS for liquid sugar in the production of Mexican soft drinks would swell the amount of the Mexican exportable sugar surplus, resulting in much larger U.S. sugar stocks and lower prices.

High-tier Tariff Sugar Imports from Mexico—An Alternative Scenario

The U.S. sugar baseline projects the entry of 545,000 STRV of sugar from Mexico, imported at the high-tier tariff in FY 2003, with higher levels in subsequent years. The economic incentive for Mexico to export high-tier tariff sugar to the United States exists if the pricing threshold is less than or equal to the U.S. sugar price. The threshold is defined as the sum of the world price of sugar (No. 11 New York contract), the high-tier NAFTA tariff rate, and unit marketing costs, premiums, and locational discounts. The high-tier tariff in 2003 is 7.56 cents per pound. The sum of marketing margins, premiums, and locational discounts used in the baseline is 3.46 cents per pound. With a projected world price of 7 cents a pound, the threshold price equals 18.02 cents a pound. Because the threshold is below the minimum raw sugar price to avoid forfeitures (19.68 cents a pound), Mexico is encouraged to ship its entire exportable surplus to the United States rather than third-party destinations at the world price.

It may be argued that Mexico is exporting its sugar below its cost of producing it. For example, if Mexican sugar is sold at 19.68 cents, subtracting out the tariff and all margins would leave a return of 8.66 cents a pound. If the cost of producing Mexican sugar is higher, one might argue that Mexico is exporting sugar into the U.S. market with a subsidy. An argument for an anti-dumping or countervailing duty investigation could be made.

As a modeling experiment, an additional scenario to the baseline is presented to illustrate the effect if the implied export subsidy were eliminated. An estimate of the Mexican cost of producing sugar is used in place of the world price in setting the threshold pricing level. This substitution results in a higher threshold price level that is compared with the U.S. sugar price. The accompanying table shows scenario results for selected variables, along with corresponding results from the baseline.

The most notable effect is that large high-tier tariff imports from Mexico do not occur until FY 2005, compared with FY 2003 in the baseline. Ending sugar stock levels are projected much lower during FY 2003 through FY 2008, down an average of 476,000 STRV per year. In FY 2004, ending stocks are about 850,000 tons less than in the baseline. The ending stocks-to-use ratio in FY 2004 is 10.9 percent, compared with 18.9 percent in the baseline. During FY 2003 through 2008, U.S. raw sugar prices (not shown) average about 1.9 cents per pound higher than in the baseline. Higher sugar prices imply higher U.S. sugar production. The average yearly production level during 2004 and 2008 is higher than in the baseline by 185,000 STRV. In contrast to the baseline, there are no loan rate forfeitures in this alternative scenario.

Sugar alternative scenario results, selected variables

Item and Scenario	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<i>Thousand short tons</i>											
High-tier tariff NAFTA imports											
Baseline	25	545	576	590	604	621	786	1,101	1,114	1,222	1,329
Alternative	25	0	83	587	604	621	787	1,195	1,003	1,175	1,275
U.S. sugar production											
Baseline	8,345	8,814	8,713	8,763	8,772	8,765	8,766	8,817	8,854	8,905	8,960
Alternative	8,345	8,814	8,884	8,997	8,963	8,931	8,929	8,944	8,917	8,960	9,009
U.S. ending stocks											
Baseline	1,496	1,876	2,038	2,112	2,059	1,863	1,585	1,538	1,405	1,295	1,213
Alternative	1,496	1,331	1,174	1,482	1,621	1,594	1,479	1,652	1,472	1,371	1,283
Ending stocks-to-use ratio											
Baseline	14.1	17.6	18.9	19.3	18.6	16.6	14.0	13.4	12.1	11.0	10.2
Alternative	14.1	12.5	10.9	13.5	14.6	14.2	13.0	14.4	12.7	11.7	10.8

Source: USDA/Economic Research Service.

Tobacco

Tobacco leaf grown in the United States is primarily used for domestic manufacture of cigarettes and for exports for cigarette production in other countries. As U.S. cigarette output has shrunk in recent years, manufacturers have needed less leaf. Furthermore, use of imported leaf has increased, displacing some domestic leaf. Purchase intentions plummeted through the end of the 1990s but have stabilized, loan stocks are lower because of a loan forgiveness program for 1999 leaf, and exports have stabilized. As a result, after lower marketing quotas for flue-cured and burley tobacco in 1999 and 2000, quotas increased in 2001. In 2002, flue-cured quotas will likely continue increasing but burley quotas will fall as stocks are built up. After the turbulent 1990s, short-run demand for U.S. tobacco has stabilized. However, the long-term trend remains unchanged: reduction in leaf use is likely to continue. Cigarette output is expected to continue its decline of 2 to 3 percent a year as expenses associated with litigation and settlement push prices up. On January 1, 2002, Federal excise taxes on cigarettes increased 5 cents per pack, putting additional pressure on prices. Numerous States increased their taxes in 2001.

Stocks of both flue-cured and burley tobacco are nearly 320 million pounds lower because of the loan forgiveness of 1999 tobacco held by cooperatives. This, along with stable exports, had a positive impact on quotas. Although flue-cured purchase intentions increased and burley fell, the bulk of the loan forgiveness stocks were burley and the net effect was higher quotas for both in 2001. Marketing quotas for flue-cured and burley are set by totaling (1) intended purchases by domestic cigarette manufacturers from the previous crop; (2) average exports for the most recent 3 marketing years; and (3) an adjustment to maintain loan stocks at the specified reserve-stock level of 15 percent of basic quota, or a minimum of 100 million pounds of flue-cured or 50 million pounds of burley. This amount may be adjusted up or down by a maximum of 3 percent by the Secretary of Agriculture. The resulting "basic" quota is then adjusted by carrying forward over-marketings and under-marketings from previous years for each individual quota holder. This "effective" quota is the amount growers are allowed to market in a given season.

Cigarette consumption is likely to continue declining for the next decade, further eroding demand for leaf. Although the percentage of the U.S. adult population that smokes has been fairly stable at about 24 percent, cigarette use per person among smokers has fallen, underlying part of the overall decline in domestic tobacco use. Projections assume declines in both the percentage of the U.S. population that smokes and per-person cigarette use among U.S. smokers.

Quotas will continue to fall. Imports are expected to increase annually after a period of stability. Export markets for both flue-cured and for burley are expected to tighten as quality and competitiveness of foreign-produced tobacco gains and global cigarette consumption falls.

Tobacco yields remain constant throughout the baseline. Poundage quotas reduce incentives to raise production per acre. Prices for U.S.-grown tobacco rise in correspondence with increases in the support price, which is based in part on changes in production costs.

Horticulture

The farm value of U.S. horticultural production is projected to reach \$42 billion in 2002, up 4 percent from 2001 and 8 percent above 2000. Production value gains are expected in most horticultural industries, primarily resulting from increased production. During 2001, the 4-percent increase in U.S. horticultural crop value was due mainly to higher prices for many non-citrus fruits, fresh vegetables, potatoes, and pulses. The value of horticultural production is projected to increase \$1.1 to \$1.7 billion annually during 2003-2011, an average annual growth rate of about 3 percent.

Exports continue to be crucial to the success of the U.S. horticultural sector, accounting for about 22 percent of annual total crop value since the mid-1990s. On average, export sales are projected to continue generating about 22 percent of U.S. horticultural production value during 2002-2011. The value of U.S. horticultural exports is projected to increase about 3.0 percent per year from fiscal year 2001 to fiscal year 2011, reaching about \$14.8 billion by the end of the baseline. Leading export crops (including both fresh and processed products) for fruit and nuts are grapes, almonds, and oranges, and for vegetables are potatoes, tomatoes, and dry beans. However, the United States will remain a net importer of horticultural products, with the trade gap widening slightly. Total import value is expected to increase an average of 3.4 percent annually throughout the baseline, which would put import value at \$23 billion in 2011. Leading import crops (including both fresh and processed products) for fruit and nuts are grapes, bananas, and cashews, and for vegetables are tomatoes, potatoes, and peppers.

Potato production for 2001 is forecast down 12 percent from the record crop of a year earlier. Reduced U.S. production was accompanied by reductions in Canadian and European potato production in the fall of 2001. As a result, U.S. potato prices are expected to be up significantly for the 2001 crop. Additionally, with reduced supplies of potatoes in the world, U.S. exports of potatoes and potato products may increase by 4 to 10 percent in 2002. During 2003-2011, exports are expected to increase by about 4 to 5 percent annually. Domestic demand for potatoes and potato products is expected to increase by just over 2 percent annually from 2003-2011, while domestic production is expected to increase an average of nearly 3 percent a year. Even though domestic production and exports are expected to continue increasing, imports of frozen French fries from Canada, which have grown by more than 11-fold since 1989, are also expected to exhibit continued growth for the remainder of the decade.

Domestic demand for other fresh-market vegetables is expected to increase an average of 2.6 percent annually during 2002-2011. Per capita consumption is projected to increase about 1.7 percent a year, while annual population growth is projected at slightly less than 1 percent. Consumer awareness of the importance of fresh produce in a healthy diet and increasing product diversity and availability boost domestic consumption in the projections. During this 10-year period, U.S. production of fresh vegetables is expected to increase an average 2.3 percent per year. Exports should continue to increase, but will likely be outpaced by imports. Imports will continue to play an important role in the domestic supply of fresh vegetables during the winter months and, increasingly, during other times of the year.

Fruit and nut production in 2002 is expected to increase by 3.2 percent from 2001, with non-citrus fruits slightly outpacing citrus fruits. For the remainder of the baseline period (2003-2011), however, fruit and nut production is expected to increase an average of 1 percent per year. Citrus and non-citrus production are each expected to grow at an average of about 1 percent a year, with production of nuts growing an average of about 2 percent a year. On the demand side, domestic per capita consumption of fruit and nuts is expected to increase by less than 1 percent per year. In contrast to the relatively slow projected growth rates for domestic fruit production and consumption, trade in fruit and nuts is expected to increase. As consumers worldwide become increasingly accustomed to year-round availability of fresh produce, as well as produce not produced domestically, international trade in these products will increase. U.S. fruit and nut exports are projected to increase about 3 percent annually during 2002-2011, while imports are expected to increase slightly more than 3 percent annually. The United States will remain a net importer of fresh fruit through 2011.

Domestic use of fruit and vegetables for processing (excluding potatoes, sweet potatoes, pulses, and mushrooms) is projected to increase during 2002-2011 by an average of 1 percent a year, with processed fruit consumption gaining at a slightly faster pace than processed vegetables. The processed fruit category includes juices and wine, which account for a little over 50 percent of total fruit production. Processed fruit and vegetable exports are likely to continue to increase between 3 and 5 percent annually for the next decade. Export potential for virtually all processed fruit and vegetable categories looks promising, with perhaps the strongest growth occurring in wine exports.

Table 4. Production flexibility contract payments under the 1996 Farm Act, crop years

Table 4. Production flexibility contract payments under the 1996 Farm Act, crop years								
Commodity	Commodity share	1996	1997	1998	1999	2000	2001	2002
Percent		Million dollars						
1996 Farm Act gross contract payments								
Wheat	26.26	1,463	1,414	1,523	1,471	1,347	1,085	1,053
Corn	46.22	2,574	2,489	2,681	2,590	2,371	1,909	1,852
Sorghum	5.11	285	275	296	286	262	211	205
Barley	2.16	120	116	125	121	111	89	87
Oats	0.15	8	8	9	8	8	6	6
Upland cotton	11.63	648	626	675	652	597	480	466
Rice	8.47	472	456	491	475	435	350	339
Total payments, unadjusted		5,570	5,385	5,800	5,603	5,130	4,130	4,008
Adjusted contract payments, before payment limitations¹								
Wheat		1,976	1,426	1,534	1,483	1,362	1,096	1,060
Corn		1,771	3,434	2,694	2,603	2,389	1,925	1,861
Sorghum		206	347	298	288	265	214	206
Barley		141	117	126	122	112	91	88
Oats		9	8	9	8	8	6	6
Upland cotton		746	639	689	665	616	501	478
Rice ²		472	461	498	480	442	357	348
Total adjusted payments		5,321	6,433	5,847	5,650	5,195	4,190	4,047
Contract payments after payment limitations and other adjustments (crop year basis)								
Wheat		1,940	1,397	1,496	1,446	1,338	1,087	1,041
Corn		1,745	3,384	2,633	2,546	2,351	1,915	1,833
Sorghum		201	338	287	277	257	211	202
Barley		137	113	120	115	107	89	85
Oats		9	8	9	8	8	6	6
Upland cotton		699	597	637	614	575	482	452
Rice		455	448	478	466	433	355	343
Total payments		5,186	6,285	5,659	5,471	5,068	4,144	3,962

1/ Adjusted for prior-year earned deficiency payments paid in these years, repayments of unearned 1995 deficiency payments, and repayments of prior-year PFC payments, and other adjustments. These adjusted contract payments are used for payment rate calculations.

2/ 1996 Farm Act includes additional rice payments of \$8.5 million annually, FY 1997 through FY 2002.

Note: FY-1999 appropriations for agriculture provided \$3.057 billion for market loss assistance, with \$2.857 billion paid to farmers eligible for production flexibility payments in the previous year. FY-2000 appropriations for agriculture provided \$5.544 billion for market loss assistance paid to farmers eligible for production flexibility payments in the previous year. The Agricultural Risk Protection Act of 2000 provided \$5.465 billion for market loss assistance payments to be paid in September 2000 to farmers who were eligible for PFC payments in fiscal 2000. The Crop Year 2001 Agricultural Economic Assistance Act provided \$4.622 billion in market loss assistance payments for farmers who were eligible for PFC payments in fiscal 2001.

Table 5. Summary baseline policy variables

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Marketing assistance loan rates												
	<i>Dollars¹</i>											
Corn	1.89	1.89	1.67	1.67	1.72	1.81	1.85	1.89	1.89	1.89	1.89	1.89
Sorghum	1.71	1.71	1.54	1.55	1.63	1.72	1.72	1.74	1.73	1.73	1.73	1.74
Barley	1.62	1.65	1.42	1.43	1.51	1.56	1.57	1.61	1.60	1.59	1.59	1.59
Oats	1.16	1.21	1.02	0.97	1.00	1.05	1.07	1.08	1.10	1.10	1.09	1.09
Wheat	2.58	2.58	2.30	2.27	2.30	2.36	2.40	2.42	2.49	2.58	2.58	2.58
Rice	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Upland cotton	0.5192	0.5192	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Soybeans	5.26	5.26	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	5.03
Production flexibility contract payment rates												
Corn	0.33	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Sorghum	0.40	0.32	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Barley	0.25	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Oats	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wheat	0.59	0.47	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Rice	2.60	2.10	2.05	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Upland cotton	0.073	0.060	0.057	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058

1/ Units are dollars per bushel except for upland cotton (per pound) and rice (per hundredweight).

Table 6. Conservation Reserve Program acreage assumptions

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<i>Million acres</i>												
Crop allocation¹												
Corn	4.7	4.9	5.0	5.1	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Sorghum	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Barley	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Oats	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Wheat	7.0	7.2	7.4	7.5	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Upland cotton	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Soybeans	4.1	4.7	4.8	4.9	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Subtotal	19.2	20.5	20.8	21.2	21.9	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Other	12.2	13.2	13.4	13.6	14.1	14.2	14.2	14.2	14.2	14.2	14.2	14.2
Total	31.4	33.7	34.2	34.9	35.9	36.4	36.4	36.4	36.4	36.4	36.4	36.4

1/ The allocation of the CRP to specific crops for 2000 and 2001 reflects plantings for those years. Crop-specific allocations for 2002-2011 are based on the 2001 allocations. These allocations provide general indicators of the influence of the CRP on land available for plantings.

Table 7. Planted and harvested acreage for major field crops, baseline projections

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<i>Million acres</i>												
Planted acreage, 8 major crops												
Corn	79.5	76.0	77.5	77.5	78.5	79.0	79.5	79.0	79.5	79.5	80.0	80.0
Sorghum	9.2	10.0	9.8	9.5	9.6	9.6	9.6	9.6	9.7	9.7	9.8	9.8
Barley	5.9	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Oats	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Wheat	62.6	59.6	61.0	61.0	61.0	61.5	62.0	62.0	63.0	63.5	64.0	64.0
Rice	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2
Upland cotton	15.3	16.0	15.1	14.8	14.7	14.6	14.5	14.3	14.1	14.0	13.9	13.8
Soybeans	74.3	75.2	75.5	74.5	74.0	73.8	74.3	75.0	75.5	75.8	76.0	76.3
Total	254.4	249.5	251.8	250.2	250.7	251.4	252.8	252.7	254.6	255.3	256.5	256.7
Harvested acreage, 8 major crops												
Corn	72.7	69.2	70.7	70.7	71.7	72.2	72.7	72.2	72.7	72.7	73.2	73.2
Sorghum	7.7	8.8	8.6	8.3	8.4	8.4	8.4	8.4	8.5	8.5	8.6	8.6
Barley	5.2	4.3	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Oats	2.3	1.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Wheat	53.1	48.7	52.8	52.8	52.8	53.3	53.7	53.7	54.6	55.0	55.4	55.4
Rice	3.0	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Upland cotton	12.9	13.9	13.7	13.5	13.4	13.3	13.2	13.0	12.8	12.7	12.6	12.6
Soybeans	72.4	74.1	74.5	73.5	73.0	72.8	73.3	74.0	74.5	74.8	75.0	75.3
Total	229.3	224.2	230.2	228.7	229.2	229.9	231.2	231.2	233.0	233.6	234.7	235.0

Table 8. Selected supply, use, and price variables for major field crops, baseline projections

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Yields¹												
Corn	137.1	136.3	137.7	139.4	141.1	142.8	144.5	146.2	147.9	149.6	151.3	153.0
Sorghum	60.9	61.0	69.1	69.7	70.3	70.9	71.5	72.1	72.7	73.3	73.9	74.5
Barley	61.1	58.2	62.1	62.7	63.3	63.9	64.5	65.1	65.7	66.3	66.9	67.5
Oats	64.2	61.3	61.1	61.5	61.9	62.3	62.7	63.1	63.5	63.9	64.3	64.7
Wheat	42.0	40.2	41.5	41.9	42.3	42.7	43.1	43.5	43.9	44.3	44.7	45.1
Rice	6,281	6,328	6,300	6,332	6,363	6,395	6,427	6,460	6,493	6,527	6,560	6,594
Upland cotton	626	672	630	632	634	636	638	640	642	644	646	648
Soybeans	38.1	39.2	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0
Production²												
Corn	9,968	9,430	9,735	9,855	10,115	10,310	10,505	10,555	10,750	10,875	11,075	11,200
Sorghum	470	536	595	580	590	595	600	605	620	625	635	640
Barley	319	250	285	290	290	295	295	300	300	305	310	310
Oats	150	117	130	130	130	130	130	135	135	135	135	135
Wheat	2,232	1,958	2,190	2,210	2,235	2,275	2,315	2,335	2,395	2,435	2,475	2,500
Rice	190.9	208.2	203.0	204.1	205.1	206.2	207.2	207.6	208.0	208.5	208.9	209.3
Upland cotton	16,799	19,457	18,000	17,800	17,700	17,600	17,500	17,300	17,100	17,000	17,000	17,000
Soybeans	2,758	2,907	2,945	2,940	2,955	2,985	3,040	3,110	3,165	3,215	3,265	3,310
Exports²												
Corn	1,940	2,050	1,925	1,950	2,000	2,050	2,100	2,175	2,275	2,325	2,375	2,425
Sorghum	240	240	250	250	255	255	260	265	270	275	285	290
Barley	58	30	30	30	30	30	30	30	30	30	30	30
Oats	2	2	2	2	2	2	2	2	2	2	2	2
Wheat	1,061	1,025	950	975	1,025	1,075	1,100	1,150	1,200	1,225	1,250	1,275
Rice	83.2	86.0	88.0	88.0	88.0	87.0	86.0	85.0	84.0	82.0	80.0	78.0
Upland cotton	6,326	8,540	10,000	10,500	10,000	9,900	9,800	9,700	9,600	9,500	9,400	9,300
Soybeans	1,000	980	1,010	1,040	1,050	1,060	1,070	1,080	1,090	1,100	1,110	1,120
Soybean meal	7,575	7,400	7,550	7,750	7,900	8,000	8,100	8,200	8,300	8,400	8,500	8,600
Ending stocks²												
Corn	1,899	1,458	1,428	1,298	1,228	1,193	1,218	1,133	1,053	988	988	978
Sorghum	42	53	83	83	83	88	88	88	88	88	88	88
Barley	106	84	92	105	113	121	119	122	120	118	121	119
Oats	73	55	65	69	67	69	65	70	69	72	69	70
Wheat	876	652	674	691	677	672	672	656	639	627	620	602
Rice	28.4	40.6	42.9	44.1	44.0	43.8	43.2	41.7	39.1	36.7	34.1	31.4
Upland cotton	5,881	8,614	8,500	7,600	7,100	6,750	6,550	6,350	6,150	6,000	6,000	6,150
Soybeans	248	345	415	410	375	320	275	255	240	230	225	220
Prices³												
Corn	1.85	2.10	2.10	2.20	2.25	2.30	2.30	2.40	2.45	2.55	2.55	2.60
Sorghum	1.88	2.05	1.95	2.05	2.05	2.10	2.10	2.20	2.25	2.35	2.35	2.40
Barley	2.11	2.25	2.25	2.35	2.35	2.40	2.40	2.45	2.50	2.55	2.55	2.55
Oats	1.10	1.30	1.20	1.25	1.30	1.35	1.35	1.40	1.40	1.45	1.45	1.45
Wheat	2.62	2.85	2.75	2.75	2.85	2.95	3.00	3.15	3.25	3.35	3.40	3.50
Rice	5.56	4.25	4.30	4.40	4.53	4.67	4.81	4.97	5.18	5.39	5.62	5.88
Soybeans	4.55	4.30	4.35	4.50	4.75	5.10	5.45	5.75	5.90	6.10	6.15	6.20
Soybean oil	0.142	0.155	0.163	0.178	0.193	0.208	0.220	0.228	0.235	0.240	0.245	0.250
Soybean meal	173.6	155.0	155.0	152.5	154.0	161.0	168.5	177.0	179.0	185.0	185.0	185.0

1/ Bushels per acre except for upland cotton and rice (pounds per acre).

2/ Million bushels except for upland cotton (thousand bales), rice (million hundredweight), and soybean meal (thousand tons).

3/ Dollars per bushel except for soybean oil (per pound), rice (per hundredweight), and soybean meal (per ton).

Table 9. Corn baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	79.5	76.0	77.5	77.5	78.5	79.0	79.5	79.0	79.5	79.5	80.0	80.0
Harvested acres	72.7	69.2	70.7	70.7	71.7	72.2	72.7	72.2	72.7	72.7	73.2	73.2
Yields (bushels per acre):												
Yield/harvested acre	137.1	136.3	137.7	139.4	141.1	142.8	144.5	146.2	147.9	149.6	151.3	153.0
Supply and use (million bushels):												
Beginning stocks	1,718	1,899	1,458	1,428	1,298	1,228	1,193	1,218	1,133	1,053	988	988
Production	9,968	9,430	9,735	9,855	10,115	10,310	10,505	10,555	10,750	10,875	11,075	11,200
Imports	7	10	10	10	10	10	10	10	10	10	10	10
Supply	11,693	11,338	11,203	11,293	11,423	11,548	11,708	11,783	11,893	11,938	12,073	12,198
Feed & residual	5,887	5,800	5,700	5,775	5,850	5,925	5,975	6,025	6,075	6,100	6,150	6,200
Food, seed, & industrial	1,967	2,030	2,150	2,270	2,345	2,380	2,415	2,450	2,490	2,525	2,560	2,595
Fuel alcohol use	628	680	790	890	950	970	990	1,010	1,030	1,050	1,070	1,090
Domestic use	7,854	7,830	7,850	8,045	8,195	8,305	8,390	8,475	8,565	8,625	8,710	8,795
Exports	1,940	2,050	1,925	1,950	2,000	2,050	2,100	2,175	2,275	2,325	2,375	2,425
Total use	9,794	9,880	9,775	9,995	10,195	10,355	10,490	10,650	10,840	10,950	11,085	11,220
Ending stocks	1,899	1,458	1,428	1,298	1,228	1,193	1,218	1,133	1,053	988	988	978
Stocks/use ratio, percent	19.4	14.8	14.6	13.0	12.0	11.5	11.6	10.6	9.7	9.0	8.9	8.7
Prices (dollars per bushel):												
Farm price	1.85	2.10	2.10	2.20	2.25	2.30	2.30	2.40	2.45	2.55	2.55	2.60
Loan rate	1.89	1.89	1.67	1.67	1.72	1.81	1.85	1.89	1.89	1.89	1.89	1.89
Variable costs of production (dollars):												
Per acre	160.34	165.68	165.17	166.40	168.71	171.16	173.81	176.61	179.44	182.28	185.27	188.35
Per bushel	1.17	1.22	1.20	1.19	1.20	1.20	1.20	1.21	1.21	1.22	1.22	1.23
Returns over variable costs (dollars per acre):												
Net returns ¹	128.94	120.55	124.00	140.28	148.77	157.28	158.54	174.27	182.92	199.20	200.54	209.45

1/ Net returns include estimates of marketing loan benefits.

Table 10. Sorghum baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	9.2	10.0	9.8	9.5	9.6	9.6	9.6	9.6	9.7	9.7	9.8	9.8
Harvested acres	7.7	8.8	8.6	8.3	8.4	8.4	8.4	8.4	8.5	8.5	8.6	8.6
Yields (bushels per acre):												
Yield/harvested acre	60.9	61.0	69.1	69.7	70.3	70.9	71.5	72.1	72.7	73.3	73.9	74.5
Supply and use (million bushels):												
Beginning stocks	65	42	53	83	83	83	88	88	88	88	88	88
Production	470	536	595	580	590	595	600	605	620	625	635	640
Imports	0	0	0	0	0	0	0	0	0	0	0	0
Supply	535	578	648	663	673	678	688	693	708	713	723	728
Feed & residual	219	240	250	265	265	265	265	265	270	270	270	270
Food, seed, & industrial	35	45	65	65	70	70	75	75	80	80	80	80
Domestic	254	285	315	330	335	335	340	340	350	350	350	350
Exports	240	240	250	250	255	255	260	265	270	275	285	290
Total use	494	525	565	580	590	590	600	605	620	625	635	640
Ending stocks	42	53	83	83	83	88	88	88	88	88	88	88
Stocks/use ratio, percent	8.5	10.1	14.7	14.3	14.1	14.9	14.7	14.5	14.2	14.1	13.9	13.8
Prices (dollars per bushel):												
Farm price	1.88	2.05	1.95	2.05	2.05	2.10	2.10	2.20	2.25	2.35	2.35	2.40
Loan rate	1.71	1.71	1.54	1.55	1.63	1.72	1.72	1.74	1.73	1.73	1.73	1.74
Variable costs of production (dollars):												
Per acre	85.25	86.60	86.77	87.39	88.60	89.89	91.30	92.77	94.25	95.74	97.29	98.89
Per bushel	1.40	1.42	1.26	1.25	1.26	1.27	1.28	1.29	1.30	1.31	1.32	1.33
Returns over variable costs (dollars per acre):												
Net returns ¹	38.38	38.45	47.98	55.49	55.52	59.00	58.85	65.85	69.32	76.51	76.37	79.91

1/ Net returns include estimates of marketing loan benefits.

Table 11. Barley baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	5.9	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Harvested acres	5.2	4.3	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Yields (bushels per acre):												
Yield/harvested acre	61.1	58.2	62.1	62.7	63.3	63.9	64.5	65.1	65.7	66.3	66.9	67.5
Supply and use (million bushels):												
Beginning stocks	111	106	84	92	105	113	121	119	122	120	118	121
Production	319	250	285	290	290	295	295	300	300	305	310	310
Imports	29	25	35	35	35	35	35	35	35	35	35	35
Supply	459	381	404	417	430	443	451	454	457	460	463	466
Feed & residual	123	95	110	110	115	120	130	130	135	140	140	145
Food, seed, & industrial	172	172	172	172	172	172	172	172	172	172	172	172
Domestic	295	267	282	282	287	292	302	302	307	312	312	317
Exports	58	30	30	30	30	30	30	30	30	30	30	30
Total use	353	297	312	312	317	322	332	332	337	342	342	347
Ending stocks	106	84	92	105	113	121	119	122	120	118	121	119
Stocks/use ratio, percent	30.0	28.3	29.5	33.7	35.6	37.6	35.8	36.7	35.6	34.5	35.4	34.3
Prices (dollars per bushel):												
Farm price	2.11	2.25	2.25	2.35	2.35	2.40	2.40	2.45	2.50	2.55	2.55	2.55
Loan rate	1.62	1.65	1.42	1.43	1.51	1.56	1.57	1.61	1.60	1.59	1.59	1.59
Variable costs of production (dollars):												
Per acre	81.94	84.09	84.10	84.79	86.03	87.34	88.76	90.25	91.75	93.26	94.83	96.46
Per bushel	1.34	1.44	1.35	1.35	1.36	1.37	1.38	1.39	1.40	1.41	1.42	1.43
Returns over variable costs (dollars per acre):												
Net returns ¹	62.87	52.68	55.62	62.55	62.73	66.02	66.04	69.25	72.50	75.81	75.76	75.67

1/ Net returns include estimates of marketing loan benefits.

Table 12. Oats baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Harvested acres	2.3	1.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Yields (bushels per acre):												
Yield/harvested acre	64.2	61.3	61.1	61.5	61.9	62.3	62.7	63.1	63.5	63.9	64.3	64.7
Supply and use (million bushels):												
Beginning stocks	76	73	55	65	69	67	69	65	70	69	72	69
Production	150	117	130	130	130	130	130	135	135	135	135	135
Imports	106	90	105	110	110	115	115	120	120	125	125	130
Supply	332	280	290	305	309	312	314	320	325	329	332	334
Feed & residual	189	155	155	165	170	170	175	175	180	180	185	185
Food, seed, & industrial	68	68	68	69	70	71	72	73	74	75	76	77
Domestic	257	223	223	234	240	241	247	248	254	255	261	262
Exports	2	2	2	2	2	2	2	2	2	2	2	2
Total use	259	225	225	236	242	243	249	250	256	257	263	264
Ending stocks	73	55	65	69	67	69	65	70	69	72	69	70
Stocks/use ratio, percent	28.2	24.4	28.9	29.2	27.7	28.4	26.1	28.0	27.0	28.0	26.2	26.5
Prices (dollars per bushel):												
Farm price	1.10	1.30	1.20	1.25	1.30	1.35	1.35	1.40	1.40	1.45	1.45	1.45
Loan rate	1.16	1.21	1.02	0.97	1.00	1.05	1.07	1.08	1.10	1.10	1.09	1.09
Variable costs of production (dollars):												
Per acre	50.75	52.54	52.33	52.81	53.53	54.31	55.14	56.01	56.89	57.78	58.72	59.67
Per bushel	0.79	0.86	0.86	0.86	0.86	0.87	0.88	0.89	0.90	0.90	0.91	0.92
Returns over variable costs (dollars per acre):												
Net returns ¹	39.13	33.89	22.21	24.07	26.94	29.80	29.51	32.33	32.01	34.87	34.52	34.14

1/ Net returns include estimates of marketing loan benefits.

Table 13. Wheat baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	62.6	59.6	61.0	61.0	61.0	61.5	62.0	62.0	63.0	63.5	64.0	64.0
Harvested acres	53.1	48.7	52.8	52.8	52.8	53.3	53.7	53.7	54.6	55.0	55.4	55.4
Yields (bushels per acre):												
Yield/harvested acre	42.0	40.2	41.5	41.9	42.3	42.7	43.1	43.5	43.9	44.3	44.7	45.1
Supply and use (million bushels):												
Beginning stocks	950	876	652	674	691	677	672	672	656	639	627	620
Production	2,232	1,958	2,190	2,210	2,235	2,275	2,315	2,335	2,395	2,435	2,475	2,500
Imports	90	90	100	105	110	115	115	115	115	115	115	115
Supply	3,272	2,924	2,942	2,989	3,036	3,067	3,102	3,122	3,166	3,189	3,217	3,235
Food	957	960	960	965	975	985	995	1,005	1,015	1,025	1,035	1,045
Seed	80	87	83	83	84	85	85	86	87	87	87	88
Feed & residual	297	200	275	275	275	250	250	225	225	225	225	225
Domestic	1,334	1,247	1,318	1,323	1,334	1,320	1,330	1,316	1,327	1,337	1,347	1,358
Exports	1,061	1,025	950	975	1,025	1,075	1,100	1,150	1,200	1,225	1,250	1,275
Total use	2,396	2,272	2,268	2,298	2,359	2,395	2,430	2,466	2,527	2,562	2,597	2,633
Ending stocks	876	652	674	691	677	672	672	656	639	627	620	602
Stocks/use ratio, percent	36.6	28.7	29.7	30.1	28.7	28.1	27.7	26.6	25.3	24.5	23.9	22.9
Prices (dollars per bushel):												
Farm price	2.62	2.85	2.75	2.75	2.85	2.95	3.00	3.15	3.25	3.35	3.40	3.50
Loan rate	2.58	2.58	2.30	2.27	2.30	2.36	2.40	2.42	2.49	2.58	2.58	2.58
Variable costs of production (dollars):												
Per acre	59.04	61.08	60.89	61.48	62.43	63.42	64.49	65.62	66.75	67.89	69.09	70.33
Per bushel	1.41	1.52	1.47	1.47	1.48	1.49	1.50	1.51	1.52	1.53	1.55	1.56
Returns over variable costs (dollars per acre):												
Net returns ¹	66.96	56.70	53.23	53.74	58.13	62.54	64.81	71.40	75.92	80.51	82.89	87.52

1/ Net returns include estimates of marketing loan benefits.

Table 14. Rice baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (thousand acres):												
Planted	3,060	3,317	3,250	3,250	3,250	3,250	3,250	3,240	3,230	3,220	3,210	3,200
Harvested	3,039	3,290	3,224	3,224	3,224	3,224	3,224	3,214	3,204	3,194	3,184	3,174
Yields (pounds per acre):												
Yield/harvested acre	6,281	6,328	6,300	6,332	6,363	6,395	6,427	6,460	6,493	6,527	6,560	6,594
Supply and use (million cwt):												
Beginning stocks	27.5	28.4	40.6	42.9	44.1	44.0	43.8	43.2	41.7	39.1	36.7	34.1
Production	190.9	208.2	203.0	204.1	205.1	206.2	207.2	207.6	208.0	208.5	208.9	209.3
Imports	10.9	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1	13.4	13.8	14.1
Total supply	229.2	247.6	254.9	258.6	261.0	262.4	263.4	263.6	262.7	261.1	259.3	257.5
Domestic use and residual	117.6	121.0	124.0	126.5	129.0	131.6	134.2	136.9	139.6	142.4	145.2	148.1
Exports	83.2	86.0	88.0	88.0	88.0	87.0	86.0	85.0	84.0	82.0	80.0	78.0
Total use	200.8	207.0	212.0	214.5	217.0	218.6	220.2	221.9	223.6	224.4	225.2	226.1
Ending stocks (million cwt.)	28.4	40.6	42.9	44.1	44.0	43.8	43.2	41.7	39.1	36.7	34.1	31.4
Stocks/use ratio, percent	14.2	19.6	20.2	20.5	20.3	20.0	19.6	18.8	17.5	16.3	15.1	13.9
Milling rate, percent	69.0	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
Prices (dollars per cwt.):												
World price	3.20	3.00	3.10	3.19	3.29	3.39	3.49	3.59	3.70	3.81	3.92	4.04
Average market price	5.56	4.25	4.30	4.40	4.53	4.67	4.81	4.97	5.18	5.39	5.62	5.88
Loan rate	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Variable costs of production (dollars):												
Per acre	386	389	390	393	400	406	413	421	428	436	443	451
Per cwt.	6.15	6.15	6.19	6.21	6.28	6.35	6.43	6.51	6.59	6.67	6.76	6.85
Returns over variable costs (dollars per acre):												
Net returns ¹	160	101	95	95	93	91	89	88	90	92	95	99

^{1/} Net returns include estimates of marketing loan benefits.

Table 15. Upland cotton baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage (million acres):												
Planted acres	15.3	16.0	15.1	14.8	14.7	14.6	14.5	14.3	14.1	14.0	13.9	13.8
Harvested acres	12.9	13.9	13.7	13.5	13.4	13.3	13.2	13.0	12.8	12.7	12.6	12.6
Yields (pounds per acre):												
Yield/harvested acre	626	672	630	632	634	636	638	640	642	644	646	648
Supply and use (thousand bales):												
Beginning stocks	3,672	5,881	8,614	8,500	7,600	7,100	6,750	6,550	6,350	6,150	6,000	6,000
Production	16,799	19,457	18,000	17,800	17,700	17,600	17,500	17,300	17,100	17,000	17,000	17,000
Imports	3	0	5	5	5	5	5	5	5	5	5	5
Supply	20,474	25,338	26,619	26,305	25,305	24,705	24,255	23,855	23,455	23,155	23,005	23,005
Domestic use	8,760	8,190	8,100	8,200	8,200	8,050	7,900	7,800	7,700	7,650	7,600	7,550
Exports	6,326	8,540	10,000	10,500	10,000	9,900	9,800	9,700	9,600	9,500	9,400	9,300
Total use	15,086	16,730	18,100	18,700	18,200	17,950	17,700	17,500	17,300	17,150	17,000	16,850
Ending stocks	5,881	8,614	8,500	7,600	7,100	6,750	6,550	6,350	6,150	6,000	6,000	6,150
Stocks/use ratio, percent	39.0	51.5	47.0	40.6	39.0	37.6	37.0	36.3	35.5	35.0	35.3	36.5
Prices (dollars per pound):												
Farm price ¹	0.498	--	--	--	--	--	--	--	--	--	--	--
Loan rate	0.5192	0.5192	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Variable costs of production (dollars):												
Per acre	289.79	301.53	300.16	303.44	309.14	314.99	321.31	327.79	334.37	340.98	347.78	354.81
Per pound	0.46	0.45	0.48	0.48	0.49	0.50	0.50	0.51	0.52	0.53	0.54	0.55
Returns over variable costs (dollars per acre):												
Net returns ²	115.42	138.30	77.46	68.43	72.47	70.10	67.30	65.42	69.26	73.05	70.83	67.82

^{1/} USDA is prohibited from publishing cotton price projections.

^{2/} Net returns include estimates of marketing loan benefits.

Table 16. Soybean and products baseline

Item	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Soybeans												
Acreage (million acres)												
Planted	74.3	75.2	75.5	74.5	74.0	73.8	74.3	75.0	75.5	75.8	76.0	76.3
Harvested	72.4	74.1	74.5	73.5	73.0	72.8	73.3	74.0	74.5	74.8	75.0	75.3
Yield/harvested acre (bushels)	38.1	39.2	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0
Supply (million bushels)												
Beginning stocks, Sep. 1	290	248	345	415	410	375	320	275	255	240	230	225
Production	2,758	2,907	2,945	2,940	2,955	2,985	3,040	3,110	3,165	3,215	3,265	3,310
Imports	4	3	7	8	9	8	5	9	7	5	7	9
Total supply	3,052	3,158	3,297	3,363	3,374	3,368	3,365	3,394	3,427	3,460	3,502	3,544
Disposition (million bushels)												
Crush	1,641	1,660	1,700	1,740	1,775	1,810	1,840	1,875	1,910	1,940	1,975	2,010
Seed and residual	162	173	173	173	175	177	180	184	187	190	192	194
Exports	1,000	980	1,010	1,040	1,050	1,060	1,070	1,080	1,090	1,100	1,110	1,120
Total disposition	2,804	2,813	2,883	2,953	3,000	3,047	3,091	3,139	3,187	3,230	3,277	3,324
Carryover stocks, Aug. 31												
Total ending stocks	248	345	415	410	375	320	275	255	240	230	225	220
Stocks/use ratio, percent	8.8	12.3	14.4	13.9	12.5	10.5	8.9	8.1	7.5	7.1	6.9	6.6
Prices (dollars per bushel)												
Loan rate	5.26	5.26	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	5.03
Soybean price, farm	4.55	4.30	4.35	4.50	4.75	5.10	5.45	5.75	5.90	6.10	6.15	6.20
Variable costs of production (dollars):												
Per acre	76.99	79.19	79.42	79.85	80.98	82.15	83.43	84.77	86.14	87.50	88.92	90.40
Per bushel	2.02	2.02	2.01	2.00	2.00	2.00	2.01	2.02	2.03	2.03	2.04	2.05
Returns over variable costs (dollars per acre):												
Net returns ¹	131.04	136.80	124.79	126.95	128.41	129.82	142.74	156.73	164.61	174.80	178.60	182.40
Soybean oil (million pounds)												
Beginning stocks, Oct. 1	1,995	2,800	2,490	2,235	2,070	1,950	1,875	1,795	1,770	1,775	1,720	1,665
Production	18,480	18,760	19,210	19,670	20,085	20,500	20,865	21,290	21,715	22,075	22,495	22,915
Imports	75	80	85	90	95	100	105	110	115	120	125	130
Total supply	20,550	21,640	21,785	21,995	22,250	22,550	22,845	23,195	23,600	23,970	24,340	24,710
Domestic disappearance	16,350	16,700	17,050	17,400	17,750	18,100	18,450	18,800	19,175	19,550	19,925	20,300
Exports	1,400	2,450	2,500	2,525	2,550	2,575	2,600	2,625	2,650	2,700	2,750	2,800
Total demand	17,750	19,150	19,550	19,925	20,300	20,675	21,050	21,425	21,825	22,250	22,675	23,100
Ending stocks, Sep. 30	2,800	2,490	2,235	2,070	1,950	1,875	1,795	1,770	1,775	1,720	1,665	1,610
Soybean oil price (dollars per lb)	0.142	0.155	0.163	0.178	0.193	0.208	0.220	0.228	0.235	0.240	0.245	0.250
Soybean meal (thousand short tons)												
Beginning stocks, Oct. 1	293	325	275	250	250	250	250	250	250	250	250	250
Production	39,409	39,750	40,660	41,570	42,410	43,200	44,000	44,800	45,600	46,400	47,200	48,000
Imports	48	50	65	80	90	100	100	100	100	100	100	100
Total supply	39,750	40,125	41,000	41,900	42,750	43,550	44,350	45,150	45,950	46,750	47,550	48,350
Domestic disappearance	31,850	32,450	33,200	33,900	34,600	35,300	36,000	36,700	37,400	38,100	38,800	39,500
Exports	7,575	7,400	7,550	7,750	7,900	8,000	8,100	8,200	8,300	8,400	8,500	8,600
Total demand	39,425	39,850	40,750	41,650	42,500	43,300	44,100	44,900	45,700	46,500	47,300	48,100
Ending stocks, Sep. 30	325	275	250	250	250	250	250	250	250	250	250	250
Soybean meal price (dollars per ton)	173.60	155.00	155.00	152.50	154.00	161.00	168.50	177.00	179.00	185.00	185.00	185.00
Crushing yields (pounds per bushel)												
Soybean oil	11.26	11.30	11.30	11.31	11.32	11.33	11.34	11.36	11.37	11.38	11.39	11.40
Soybean meal	48.04	47.88	47.84	47.80	47.80	47.80	47.80	47.80	47.80	47.80	47.80	47.80
Crush margin (dollars per bushel)	1.21	1.16	1.20	1.16	1.11	1.10	1.07	1.07	1.05	1.05	1.06	1.07

^{1/} Net returns include estimates of marketing loan benefits.

Table 17. U.S. sugar: supply, disappearance, and prices, fiscal years 1/

Item	Units	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugarbeets													
Planted area	1,000 acres	1,565	1,368	1,440	1,431	1,440	1,434	1,424	1,414	1,409	1,404	1,402	1,401
Harvested area	1,000 acres	1,374	1,331	1,409	1,401	1,409	1,404	1,394	1,384	1,379	1,375	1,373	1,372
Yield	Tons/acre	23.6	21.3	21.4	21.5	21.5	21.7	21.8	21.9	22.0	22.1	22.2	22.3
Production	Mil. s. tons	32.4	28.3	30.2	30.1	30.4	30.4	30.3	30.3	30.3	30.4	30.5	30.6
Sugarcane													
Harvested area	1,000 acres	968	973	1,005	979	971	962	953	947	949	947	947	947
Yield	Tons/acre	35.0	35.5	35.3	35.1	35.2	35.2	35.2	35.3	35.3	35.3	35.3	35.3
Production	Mil. s. tons	33.9	34.6	35.4	34.4	34.1	33.9	33.6	33.4	33.5	33.4	33.4	33.4
Supply:													
Beginning stocks	1,000 s. tons	2,218	2,126	1,496	1,876	2,038	2,112	2,059	1,863	1,585	1,538	1,405	1,295
Production	1,000 s. tons	8,712	8,345	8,814	8,713	8,763	8,772	8,765	8,766	8,817	8,854	8,905	8,960
Beet sugar	1,000 s. tons	4,640	4,150	4,426	4,428	4,485	4,501	4,503	4,505	4,521	4,539	4,564	4,594
Cane sugar	1,000 s. tons	4,072	4,195	4,388	4,285	4,278	4,271	4,262	4,262	4,296	4,314	4,340	4,366
Total imports	1,000 s. tons	1,549	1,631	2,241	2,259	2,256	2,254	2,255	2,305	2,620	2,633	2,741	2,848
TRQ less NAFTA ²	1,000 s. tons	1,121	1,189	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204
Mexico - NAFTA low-tier	1,000 s. tons	117	152	177	164	147	132	115	0	0	0	0	0
Mexico - NAFTA high-tier ³	1,000 s. tons	3	25	545	576	590	604	621	786	1,101	1,114	1,222	1,329
Re-export and polyhydric	1,000 s. tons	238	265	315	315	315	315	315	315	315	315	315	315
Other imports (17029040)	1,000 s. tons	70	0	0	0	0	0	0	0	0	0	0	0
Total supply	1,000 s. tons	12,479	12,102	12,551	12,848	13,057	13,139	13,078	12,935	13,023	13,025	13,050	13,103
Use:													
Exports	1,000 s. tons	135	125	150	150	150	150	150	150	150	150	150	150
Domestic deliveries	1,000 s. tons	10,208	10,390	10,525	10,660	10,795	10,930	11,065	11,200	11,335	11,470	11,605	11,740
Miscellaneous	1,000 s. tons	10	90	0	0	0	0	0	0	0	0	0	0
Total use	1,000 s. tons	10,353	10,605	10,675	10,810	10,945	11,080	11,215	11,350	11,485	11,620	11,755	11,890
Ending stocks	1,000 s. tons	2,126	1,496	1,876	2,038	2,112	2,059	1,863	1,585	1,538	1,405	1,295	1,213
Stocks/use ratio	Percent	20.5	14.1	17.6	18.9	19.3	18.6	16.6	14.0	13.4	12.1	11.0	10.2
Raw sugar price:													
New York (No. 14)	Cents/lb.	21.50	21.57	19.68	19.67	19.67	19.67	20.12	21.48	21.78	22.44	23.00	23.42
Raw sugar loan rate	Cents/lb.	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Beet sugar loan rate	Cents/lb.	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90
Grower prices:													
Sugarbeets	Dol./ton	38.19	38.85	38.15	38.16	38.16	38.17	38.17	38.76	39.23	40.27	41.14	41.80
Sugarcane	Dol./ton	26.82	26.86	25.40	25.39	25.38	25.37	25.80	27.10	27.35	27.96	28.44	28.80

1/ Fiscal year is October 1 through September 30.

2/ Includes 8,000 STRV allocated to Mexico as part of the raw sugar TRQ and 3,256 STRV to Mexico as part of the refined sugar TRQ.

3/ Starting in FY 2008 under NAFTA, Mexico can ship duty-free sugar to the United States with no quantitative limit.

Table 18. Flue-cured tobacco baseline

Item	Unit	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage, yield, and production:													
Planted area	1,000 acres	251	249	298	302	300	293	285	275	265	255	250	245
Harvested area	1,000 acres	251	249	298	302	300	293	285	275	265	255	250	245
Yield	lbs./acre	2,229	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250
Production	Mil. lbs.	560	560	670	680	675	660	641	619	596	574	563	551
Supply:													
Beginning stocks	Mil. lbs.	1,190	949	809	794	804	824	844	864	889	899	889	874
Marketings	Mil. lbs.	564	560	670	680	675	660	640	620	600	570	560	550
Total ¹	Mil. lbs.	1,754	1,509	1,479	1,474	1,479	1,484	1,484	1,484	1,489	1,469	1,449	1,424
Imports	Mil. lbs.	200	200	220	240	260	280	300	300	310	320	320	330
Use:													
Domestic	Mil. lbs.	479	450	440	430	420	410	390	380	370	365	360	350
Exports	Mil. lbs.	238	250	245	240	235	230	230	225	220	215	210	210
Total ¹	Mil. lbs.	717	700	685	670	655	640	620	605	590	580	570	560
Ending stocks:													
Total ²	Mil. lbs.	949	809	794	804	824	844	864	889	899	889	874	864
Price:													
Avg. to growers	\$/cwt	174	179	182	185	188	172	175	200	203	206	209	212
Support	\$/cwt	164	166	165	169	172	175	182	185	188	191	195	198

1/ Domestic tobacco only.

2/ 2000 ending stocks do not include CCC loan forgiveness of 88 million pounds.

Table 19. Burley tobacco baseline

Item	Unit	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Acreage, yield, and production:													
Planted area	1,000 acres	185	175	155	190	181	179	179	170	170	165	165	160
Harvested area	1,000 acres	185	175	155	190	181	179	179	170	170	165	165	160
Yield	lbs./acre	1,957	2,133	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Production	Mil. lbs.	363	373	326	399	380	376	376	357	357	347	347	336
Supply:													
Beginning stocks	Mil. lbs.	1,040	696	636	551	556	556	566	581	581	581	576	566
Marketings	Mil. lbs.	311	360	325	400	380	375	375	360	355	350	340	335
Total ¹	Mil. lbs.	1,351	1,056	961	951	936	931	941	941	936	931	916	901
Imports	Mil. lbs.	165	175	175	185	195	205	205	205	210	220	225	225
Use:													
Domestic	Mil. lbs.	285	285	280	270	260	260	260	260	250	250	245	245
Exports	Mil. lbs.	140	135	130	125	120	105	100	100	105	105	105	105
Total ¹	Mil. lbs.	425	420	410	395	380	365	360	360	355	355	350	350
Ending stocks:													
Total ²	Mil. lbs.	696	636	551	556	556	566	581	581	581	576	566	551
Price:													
Avg. to growers	\$/cwt	190	196	200	203	206	209	212	216	219	223	227	230
Support	\$/cwt	181	183	188	191	194	197	200	203	206	209	212	214

1/ Domestic tobacco only.

2/ 2000 ending stocks do not include CCC loan forgiveness of 230 million pounds.

Table 20. Fruit, vegetable, and greenhouse/nursery baseline, production and prices

Item	Unit	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Production value:													
Fruit and nuts													
Citrus	\$ Mil.	2,515	2,262	2,569	2,763	2,818	2,871	2,921	2,976	3,030	3,081	3,143	3,201
Noncitrus	\$ Mil.	7,882	7,977	8,315	8,630	8,956	9,272	9,611	9,954	10,286	10,608	10,922	11,231
Nuts	\$ Mil.	1,527	1,828	1,814	2,091	2,008	2,259	2,206	2,360	2,331	2,483	2,471	2,667
Total	\$ Mil.	11,924	12,067	12,698	13,484	13,782	14,402	14,738	15,290	15,647	16,172	16,536	17,099
Vegetables													
Fresh ¹	\$ Mil.	8,590	8,961	9,162	9,554	9,954	10,357	10,770	11,195	11,635	12,091	12,564	13,055
Processed ²	\$ Mil.	1,513	1,337	1,531	1,574	1,615	1,662	1,702	1,741	1,779	1,814	1,849	1,883
Potatoes	\$ Mil.	2,591	3,150	3,263	3,233	3,063	3,050	3,136	3,266	3,390	3,483	3,539	3,569
Sweet potatoes	\$ Mil.	211	221	229	234	240	245	251	256	262	268	274	280
Pulses	\$ Mil.	482	539	644	716	766	792	819	846	875	904	934	966
Mushrooms	\$ Mil.	867	863	896	918	936	953	968	982	995	1,006	1,017	1,027
Total	\$ Mil.	14,254	15,071	15,725	16,229	16,574	17,059	17,646	18,286	18,936	19,566	20,177	20,780
Greenhouse/Nursery	\$ Mil.	13,037	13,487	13,937	14,387	14,837	15,287	15,737	16,187	16,637	17,087	17,537	17,987
Production:													
Fruit and nuts													
Citrus	1,000 MT	15,673	14,871	15,173	15,467	15,543	15,707	15,842	16,089	16,246	16,271	16,483	16,550
Noncitrus	1,000 MT	17,072	15,385	16,103	16,238	16,329	16,418	16,639	16,884	17,093	17,269	17,414	17,532
Nuts	1,000 MT	519	627	592	548	620	603	566	679	557	706	611	650
Total	1,000 MT	33,264	30,883	31,868	32,253	32,492	32,728	33,047	33,652	33,896	34,246	34,508	34,732
Vegetables													
Fresh ¹	1,000 MT	20,031	20,072	20,578	21,116	21,646	22,154	22,654	23,153	23,654	24,159	24,670	25,187
Processed ²	1,000 MT	15,640	14,116	15,556	15,945	16,191	16,472	16,720	16,967	17,203	17,431	17,655	17,875
Potatoes	1,000 MT	23,297	20,412	21,180	22,878	24,354	25,051	25,346	25,473	25,625	25,909	26,342	26,874
Sweet potatoes	1,000 MT	626	642	672	673	680	685	691	697	704	710	717	724
Pulses	1,000 MT	1,530	1,180	1,575	1,787	1,898	1,933	1,969	2,005	2,042	2,079	2,118	2,157
Mushrooms	1,000 MT	394	387	405	420	434	447	459	471	482	493	503	514
Total	1,000 MT	61,518	56,809	59,966	62,819	65,203	66,742	67,839	68,766	69,710	70,781	72,005	73,331
Prices:													
Grower													
Fruit and nuts	1990-92=100	101	108	115	123	125	127	129	132	134	136	138	141
Vegetables	1990-92=100	122	135	129	131	133	135	137	139	142	144	146	148
Potatoes	\$/MT	112	154	154	141	126	122	124	128	132	134	134	133
Dry beans	\$/MT	337	551	446	441	448	454	461	468	475	482	489	497
Retail													
Fruit and vegetables	1982-84=100	205	212	216	220	226	232	238	244	250	256	262	269
Fresh fruit	1982-84=100	258	265	266	275	284	293	302	311	320	328	337	346
Fresh vegetables	1982-84=100	219	231	236	240	246	252	258	265	272	279	285	292
Processed fruit & veg.	Dec 1997=100	106	109	113	118	121	124	127	129	132	135	138	141

1/ Includes artichokes, asparagus, snap beans, broccoli, brussels sprouts, cabbage, carrots, cauliflower, celery, sweet corn, eggplant, escarole-endive, garlic, lettuce, bell peppers, onions, spinach, tomatoes, and melons.

2/ Includes asparagus, lima beans, snap beans, broccoli, beets, cabbage, carrots, cauliflower, sweet corn, cucumbers, green peas, spinach, and tomatoes.

Table 21. Fruit, vegetable, and greenhouse/nursery baseline, trade

Item	Unit	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Imports													
Fruit and nuts ¹													
Fresh	\$ Mil.	3,165	3,269	3,426	3,552	3,678	3,804	3,931	4,057	4,184	4,312	4,439	4,567
Processed	\$ Mil.	3,643	3,600	3,726	3,850	3,996	4,145	4,299	4,460	4,627	4,803	4,986	5,178
Nuts	\$ Mil.	771	694	742	757	772	787	803	819	835	852	869	886
Total	\$ Mil.	7,579	7,563	7,894	8,159	8,446	8,736	9,033	9,336	9,646	9,967	10,294	10,631
Vegetables ²													
Fresh	\$ Mil.	2,255	2,306	2,432	2,500	2,584	2,679	2,780	2,886	2,994	3,103	3,213	3,324
Processed	\$ Mil.	965	1,028	1,060	1,087	1,117	1,149	1,182	1,215	1,247	1,278	1,308	1,339
Potatoes	\$ Mil.	500	484	524	553	568	587	611	638	668	698	729	760
Sweet potatoes	\$ Mil.	22	23	26	26	27	28	28	29	29	30	30	31
Pulses	\$ Mil.	70	65	69	72	76	79	83	86	90	93	97	101
Mushrooms	\$ Mil.	199	201	185	185	186	188	190	192	194	197	199	202
Total	\$ Mil.	4,011	4,107	4,296	4,423	4,558	4,710	4,874	5,046	5,222	5,399	5,576	5,757
Greenhouse/Nursery	\$ Mil.	1,161	1,184	1,267	1,355	1,450	1,552	1,660	1,777	1,901	2,034	2,176	2,329
Exports													
Fruit and nuts ¹													
Fresh	\$ Mil.	2,077	2,129	2,206	2,256	2,308	2,361	2,415	2,470	2,527	2,585	2,645	2,706
Processed	\$ Mil.	1,906	1,903	1,967	2,041	2,119	2,201	2,286	2,376	2,470	2,570	2,674	2,785
Nuts	\$ Mil.	1,109	1,153	1,182	1,211	1,239	1,267	1,295	1,322	1,349	1,376	1,402	1,429
Total	\$ Mil.	5,092	5,185	5,355	5,508	5,666	5,829	5,996	6,168	6,346	6,531	6,721	6,920
Vegetables ²													
Fresh	\$ Mil.	1,175	1,138	1,190	1,199	1,255	1,278	1,327	1,356	1,399	1,431	1,470	1,504
Processed	\$ Mil.	1,093	1,094	1,159	1,200	1,245	1,278	1,315	1,362	1,394	1,430	1,478	1,508
Potatoes	\$ Mil.	768	810	840	872	937	998	1,046	1,088	1,128	1,167	1,209	1,254
Sweet potatoes	\$ Mil.	11	12	12	13	14	14	15	16	16	17	18	19
Pulses	\$ Mil.	257	289	311	330	341	346	352	357	362	368	374	379
Mushrooms	\$ Mil.	23	21	26	28	29	30	31	33	34	35	36	38
Total	\$ Mil.	3,327	3,364	3,538	3,642	3,821	3,944	4,086	4,212	4,333	4,448	4,585	4,702
Greenhouse/Nursery	\$ Mil.	278	281	290	299	307	317	326	336	346	356	367	378

1/ Fresh fruit includes bananas, excludes melons. Processed fruit includes juices and wine.

2/ Fresh vegetables includes melons. Processed includes seed and juices.

Note: Fiscal year trade value projections for total horticultural products are shown in table 35.