

Crops

The baseline assumes a continuation of the 1996 Farm Act through the entire projection period. The 1996 Farm Act accelerates trends of the 1985 Act and 1990 farm legislation toward greater market orientation. Income support was changed for wheat, corn, grain sorghum, barley, oats, rice, and upland cotton by replacing the target price/deficiency payment provisions of the previous legislation with production flexibility contract payments. Production flexibility contract payments decline over the next 5 years and then are assumed in the baseline to stay constant beyond 2002. Because these payments are unrelated to current production levels or prices, market returns play the primary role in determining what crops are planted. Planting flexibility is increased under the 1996 Farm Act since any crop may be planted on contract acreage, except for fruits and vegetables. Annual Acreage Reduction Programs (ARPs) were eliminated, further enhancing farmer flexibility in responding to market prices in cropping decisions. This increased planting flexibility facilitated the gain in total plantings and the shifts among crops seen in 1996 and 1997, the first 2 years under the new Act (see box, page 39).

Land Use

Total acreage planted to the eight major field crops (corn, soybeans, sorghum, barley, oats, wheat, rice, and upland cotton) rises from about 261 million acres in 1997 to over 270 million acres in 2007, with most of the change accounted for by corn and wheat (table 7). Harvested acreage for these eight crops is up from 242.5 million to 249.5 million acres over the same period. These increases in land use reflect the response of producers to higher prices and market returns, and the 1996 changes in farm policy which eliminated ARPs and the 0,50/85-92 programs. Total plantings of feed grains stay high due to continued large plantings of corn. Acreage planted to wheat increases by 4.5 million acres. Soybean planted acreage remains significantly higher than in the early 1990s. Rice plantings grow slowly from 3.1 million to 3.2 million acres by 2007. Upland cotton plantings increase marginally to 14 million acres by the end of the projection period.

The Conservation Reserve Program (CRP) is assumed to decline to about 32 million acres before rebuilding to over 36 million acres by 2001 (see CRP discussion, page 31, and table 6). Most land enrolled in the CRP is in areas traditionally planted to major field crops, thus limiting the response of planted acreage to rising prices and net returns.

Crop Supply and Demand Overview

The growth in total usage (domestic and exports) for the major field crops outstrips production increases, causing tighter stocks-to-use ratios with prices rising for all of the major field crops from 1999 to 2007. Although there is higher domestic utilization for the major field crops during the projection period, the biggest driver in demand growth is exports, especially for wheat and corn. Also, a substantial amount of acreage remains in the CRP, which tightens supplies.

U.S. Acreage Shifts Facilitated by 1996 Farm Act Planting Flexibility

In the first two seasons under 1996 Farm Act, U.S. farmers adjusted their planting decisions to take advantage of strong crop prices. In 1996, total acreage planted to principal crops rose more than 16 million acres to 334.4 million, with acreage in 1997 remaining nearly unchanged from the 1996 level.

The new farm law allows farmers more flexibility to respond to market price signals in their planting decisions. The eight major crops most affected by the change in policy are wheat, corn, sorghum, barley, oats, upland cotton, rice--all previously covered by supply management programs--and soybeans. Total plantings for these eight crops rose from 245.3 million acres in 1995 to 261.5 million in 1996, falling only slightly in 1997. These crops accounted for virtually all of the change in principal crop acreage during the past 2 years.

Farm legislation enacted in 1996 made important changes in the nature of government commodity programs, including supply management for major field crops. The 1996 Farm Act increased farmers' planting flexibility by eliminating acreage reduction programs (ARPs), base acreage planting requirements to maintain eligibility for program payments, and limits on flex acreage that farmers could plant to other crops.

This increased planting flexibility has facilitated producers' ability to adjust both total land use and the cropping mix over the past two years. Increased total acreage reflects the supply response to higher absolute prices. In addition, a change in the mix of planted crops is a response to changes in relative prices among the crops, combined with some year-specific weather-related events.

Under a continuation of previous farm law, higher prices in 1996 and 1997 would have brought additional land into production from previously idled acres, and 25-percent planting flexibility would have allowed switching among crops (15 percent "normal" flex acres and 10 percent optional). However, base acreage considerations, limited flexibility, and ARPs would likely have constrained acreage adjustments farmers could have made in response to the large runup in prices and to the price relationships among crops.

By removing the base acreage planting constraints and flexibility limitations of previous farm law, the 1996 Farm Act permits a faster supply response to the economic incentives provided by absolute and relative price movements. Greater ability of producers to respond to signals from the marketplace results in agricultural production being economically more efficient.

The significant gain in the 1996 aggregate acreage planted to major field crops was largely due to higher prices for most major field crops, combined with commodity program changes that

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U.S. Acreage Shifts Facilitated by 1996 Farm Act Planting Flexibility, Continued

increased planting flexibility. Some of the 1996 acreage increase resulted from double counting of failed winter wheat land that was replanted to alternative spring-planted crops. In 1997, total plantings remained near the 1996 level, but a new set of relative prices led to a different mix of crops planted.

Land idled in 1995 likely provided much of the acreage gains during the past 2 years, brought into use in response to high price incentives. In 1995, the last year under the previous farm law, nearly 5 million acres had been idled under corn and rice ARP requirements. Flex acreage voluntarily left idle by farmers accounted for an additional 5 million acres. Another 13.6 million acres had been idled under voluntary 0,50/85-92 programs.

Within the higher acreage total of the last 2 years, changes in the mix of crops planted have resulted from relative price shifts among various crops combined with year-specific weather-related events. Large acreage shifts to corn and spring wheat in 1996 and to soybeans in 1997 reflected price incentives that favored planting those crops rather than competing crops, as well as some weather-induced planting adjustments. Nearly complete planting flexibility of the 1996 Farm Act helped in attaining these cropping shifts.

Feed grain production rises through 2007, primarily reflecting increasing acreage and yields for corn. Larger livestock and poultry inventories boost feed use, while food, seed, and industrial (FSI) use increases mainly due to higher corn sweetener and ethanol use. Feed grain exports, primarily corn, show the strongest growth. Higher global incomes, diet diversification, and trade liberalization resulting from both the GATT agreement and ongoing unilateral policy reforms in developing countries raise feed grain exports.

Competition with corn for cropland limits soybean acreage in the baseline with area gains largely occurring because of greater double-cropping with wheat. However, soybean production is enhanced by higher projected yield growth because of increased narrow-row planting and greater use of herbicide-tolerant soybeans. Rising global import demand increases soybean exports during the baseline but greater domestic crushings and a relatively fixed resource base constrain exportable supplies, allowing U.S. competitors to capture a greater share of world soybean exports.

Greater flexibility in planting choices permitted under the 1996 Farm Act permits wheat production to expand in order to meet increases in wheat demand, particularly in domestic and international food markets. Beginning in 2000, increasing wheat prices and producer returns draw more land into wheat. However, the large amount of land enrolled in the CRP from areas that have traditionally been planted to wheat, combined with relatively stronger prices for other crops, limits the response of planted acreage to rising wheat prices. Growth in per capita food consumption of wheat in the United States continues but at a slower rate than recent years. U.S. wheat exports rise steadily over the projection period but face greater EU competition after 2001

because strong international wheat prices allow the EU to export wheat without subsidies, thus resulting in EU wheat exports higher than its quantity limits on subsidized wheat exports in the GATT agreement.

Unlike feed grains and wheat, domestic use of rice increases more than exports over the baseline. Domestic food use of rice continues to grow because of greater emphasis on healthier life styles and increasing Asian and Latin American populations in the United States, keeping demand strong. Continued strong U.S. and world rice prices are expected to result in a small, but steady, expansion in U.S. rice acreage through 2007. However, competition from other crops for land as well as the provisions of the 1996 Farm Act that allow producers almost total planting flexibility are responsible for preventing rice acreage rising to higher levels. The combination of modest increases in U.S. rice production matched by strong growth in domestic demand for high quality U.S. rice results in an increasing differential between domestic rice prices and those of key competitors. This makes U.S. rice exports less competitive in some international markets, limiting the expansion in exports in the baseline.

Upland cotton production rises in response to increases in domestic mill use and exports as the Uruguay Round agreement improves market access and expands global trade. Domestic mill use rises slightly over 1 percent annually despite the easing of restrictions on textile quotas and greater competition from man-made fibers. Although significant increases in textile imports are expected, largely in the form of apparel, greater U.S. exports of cotton yarn, fabric, and semi-finished products will promote growth in mill use. U.S. exports of upland cotton increase 15 percent by the end of the baseline, maintaining a 25-26 percent share of a growing global market.

Sugar production rises in the baseline, led by gains in beet sugar production. Beet sugar rises from 56 percent of domestic sugar production in 1998 to 58 percent in 2007. Per capita sugar use rises about 2.5 pounds per person in the baseline, with growth slowing from recent years due to continued substitution of other sweeteners. Grower prices for sugar beets and sugarcane show little change in the baseline. Sugar imports are projected to remain above the level of 1.5 million tons necessary to assure nonrecourse loan price support. However, normal production variations could lead to a Tariff Rate Quota on sugar imports at or below 1.5 million tons in some years, with the sugar loan program offering recourse loans.

Tobacco production generally declines after 1997 due to reduced domestic disappearance and declining leaf exports. Domestic use falls as cigarette exports stabilize and domestic consumption continues its long-term decline due to higher taxes, increased regulation limiting smoking and sales, and heightened awareness of links between smoking and various diseases. Leaf exports decline due to the price and quality competitiveness of foreign producers.

The farm value of U.S. horticultural crop production increases about 6 percent in 1998, followed by 3 to 4 percent annual gains for the rest of the baseline. Production of fresh vegetables is up about 1 percent annually from 1998 to 2007, which, combined with higher imports, allows per capita fresh vegetable consumption to increase. Per capita consumption of fresh noncitrus fruits,

New Crop Technology and Implications for the Baseline

Many new developments in crop technology are beginning to reach the marketplace that could have significant impacts on agriculture, both in the United States and overseas. The recent brisk pace of innovation is expected to continue and possibly accelerate over the next decade, reflecting sizable research investments and breakthroughs facilitated by biotechnology¹.

New technology could lead to many changes over time, but it is still too early to be able to quantify them for these projections. However, there is potential for a wide range of economic effects on the crop and livestock sectors. Impacts on productivity and input use could alter unit production costs and producer returns. If substantial enough, these economic impacts could alter the cropping mix as well as the supply, demand, and price outcomes from those projected in this baseline. Additionally, a growing emphasis on end-use characteristics implies changes in the traditional marketing system in the field crop sector, including more identity preservation and more contracting. New technologies may also have environmental benefits, such as reduced chemical use and more efficient animal feeding.

New technology can be broadly characterized in two categories. First, there are those that generally reduce input use. The major products to date are insect resistant Bt corn and Bt cotton, derived from the soil bacterium *Bacillus thuringiensis* (Bt), and herbicide resistant soybeans (Roundup Ready™), all developed through biotechnology. Second, there are crops with enhanced value traits designed for specific end uses, that have mainly been developed through conventional breeding and research. These include products such as high oil corn, hard endosperm corn, food grade soybeans, and soybeans with a lower fatty acid profile. The distinction between these technology categories is expected to become blurred over time due to gene stacking and the use of biotechnology in conjunction with high-value traits.

Production Issues

Adoption. U.S. farmers are expected to be highly receptive to new technology, particularly given their widespread interest in gaining more value for their products and mitigating risk. Farmers overseas will also use much of this technology, although the products and adoption rates may be different. Adoption of some of the first new varieties, such as Roundup Ready™ soybeans, has been quick despite the extra cost of the seed. Farmers will readily pay premiums for the technology if the benefits are perceived to outweigh the costs.

Early indications of the effects of many of the new technologies are favorable, although their adoption is not without risk. Performance of the new technologies under stress conditions, such as a drought, is an unknown that could influence future adoption rates along with the sustained performance over time. In addition, changing market conditions could be a factor, if higher production were to lead to a lower price premium for some end traits, for example.

Yield Effects. Most new technologies introduced so far have not been explicitly aimed at increasing yields. However, technology may have yield effects, both positive and negative, not just from developments in genetics, but from associated changes in management demands. Some of the new products will effectively boost yields by cutting losses to pests or weeds, protecting yield potential already present in the crop. Benefits will vary from year to year and over different locations depending on environmental factors such as the amount of pest infestation.

¹Products from biotechnology are also referred to as transgenic and genetically modified organisms (GMO's) .

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New Crop Technology and Implications for the Baseline, continued

The focus of most enhanced value crops is an attribute for end use, where, in some cases, yields may be compromised. Over time, gene stacking and more research may be able to overcome any yield penalties. Biotechnology increases the tools available to scientists, and its use is likely to speed the pace of research, with positive implications for yields. This does not necessarily mean that there will be revolutionary jumps in productivity, but it should provide for continued “evolutionary” gains.

Resistance. There are concerns that insects or weeds may develop resistance to the technology intended to suppress them. To address this issue, the industry is taking preventive measures. For example, farmers using Bt corn and Bt cotton are not allowed to plant 100 percent of their fields in the Bt variety. This provides a refuge for the survival of non-resistant insects, and thus prevents or slows the development of resistant insects. Additionally, biotechnology products introduced to date have been based on single genes, and the seed industry is prepared to offer new generations of products if resistance does occur. The effectiveness of these measures will need to be evaluated over time.

Marketing and Price Issues

Crops developed through biotechnology are basically indistinguishable from conventional crops at present. Thus, there should be little or no impact on prices received by farmers or marketing arrangements for these crops, assuming the varieties are approved under the regulatory process and are accepted by consumers, and assuming no major shifts in productivity. For a relatively small group of consumers, a niche market for non-GMO products may develop, similar to the present market for organic foods. Such a market would involve separate marketing channels and would result in premium prices.

The rise of enhanced-value products does imply changes, however. Identity preservation will be required at all points in the marketing chain, starting at the farm. Product prices will be higher to cover the higher costs involved in storing and transporting the crops separately. More contracting is expected as a means to assure a guaranteed market for farmers and reduce risk, similar to the way many specialty crops are currently contracted, such as popcorn or white corn.

Evaluating the economic effects on overall prices and returns from more value enhanced crops will hinge on the extent these products are grown. If the products remain only as specialty crops, there will be a fairly small impact, but if the products become very popular, larger changes will occur. As more farmers grow enhanced value crops, the size of the premium needed as an incentive to farmers could change. Economies of scale could also reduce marketing costs if adoption is widespread. If taken far enough, this trend to more emphasis on end use traits will reduce the traditional bulk focus of the commodity markets, which emphasize large volumes and blending. The existing system of grades and standards, which do not identify the inherent traits of the crops, will become less useful.

Trade. There is currently some trade friction about acceptance of some GMO products in certain overseas markets. These are expected to be resolved with trade proceeding on the basis of sound science. Labeling requirements are not expected to develop into significant trade barriers. Thus, wider use of GMOs or other products will not disrupt trade. On the other hand, there is potential for expansion of identity preserved trade if users in foreign markets are prepared to pay more for value enhanced products. Recent growth in U.S. exports of high oil corn indicates this is a realistic possibility.

excluding bananas, increases less than 1 percent annually. Fresh citrus consumption remains flat as increases in production are used for processing or exports. The United States remains a netimporter of fresh fruits (in terms of value) into the next century. The use of fruits and vegetables for processing is projected to increase during 1998 to 2007, due to increases in both domestic and export demand.

Feed Grains

The feed grains baseline is initially marked by a modest easing of tight supplies as supply gains outpace increases in use. This is short lived, however, and demand growth is projected to outstrip increases in production by 2000. Robust growth in exports accounts for more than half the gains in use over the projection period. After small increases in feed grain stocks at the onset, ending stocks progressively decline through 2007. Farm prices for feed grains begin to increase from 2000, reflecting the tightening supply and demand balance.

Corn's dominance of the feed grain sector continues to increase over the baseline. Only corn acreage increases significantly, while acreage of the other feed grains stays flat or increases only slightly. Corn production rises the most, but increasing yields account for growth in production of each grain. Total feed grain output increases steadily and matches the previous record high (set in 1994) in 2000. Total feed grain use is projected to surpass the previous record early in the projections, with corn's share of domestic disappearance and exports expanding through the baseline. Imports, basically consisting of oats and barley, are expected to be steady.

Strong demand prospects and fairly tight supplies result in favorable market opportunities for corn producers, and corn acreage increases from an already high starting point. Corn will compete primarily with soybeans for land, as well as being used extensively in rotations with soybeans. The combined area planted to corn and soybeans is expected to remain large and even expand over the next few years. This reflects the impact of the 1996 Farm Act that eliminated most land idling programs and allowed more flexibility in selection of crops. Both corn and soybeans have been expanding into more "fringe" areas outside the main Corn Belt, such as the South and Plains States. This pattern is expected to continue.

Corn production grows steadily, hitting new records after 2002, and surpassing 11 billion bushels by 2005. Planted acreage climbs throughout the baseline, reaching 84.5 million acres by 2007, slightly higher than the peak levels planted during the export boom of the mid-1970s and early 1980s. Harvested corn acres are projected to exceed previous peak levels by even more, as less corn acreage is now cut for silage. Corn yields are projected to increase 1.7 bushels per acre per year, a long-term trend. Variability based on weather is expected to remain a concern, and yields could swing substantially above or below the trend in any given year.

Total corn demand grows sharply throughout the baseline. Feed and residual use of corn increases 550 million bushels between 1997 and 2007, with the largest gains in the earlier years. Animal inventories are projected to show the largest increases at the start and then grow more moderately. Feed use of the other feed grains and wheat is expected to decline in the next few years and then grow only moderately, also contributing to higher feed use of corn. Food, seed,

and industrial (FSI) use is projected to grow 425 million bushels over the 10-year period, a smaller absolute increase than feed and residual, but a faster rate. Corn used for ethanol continues a sharp rebound in the early years, exceeding the 1994 peak use by 2000, and then expands at a somewhat slower pace. It is assumed in the baseline that the Federal tax credit for ethanol is extended beyond 2000. However, uncertainty in the passage of this extension delays long-term investment into expansion of industry plant capacity. Most other FSI uses are projected to continue to grow near their recent rates.

Corn exports are projected to increase 1,100 million bushels between 1997 and 2007, more than the gains in total domestic use. Exports match the previous record high of 2.4 billion bushels in 2000 and then surpass 3 billion by the end of the baseline. A key factor underpinning this growth is the assumption that China develops into a significant net importer of corn. In contrast to wheat and soybeans where there are more alternative suppliers, this leaves the United States as the major source to meet the world's growing import demand for corn.

Ending stocks of corn climb above 1 billion bushels over the next few years and then retreat for the remainder of the baseline, ending at less than 700 million bushels. After 2000, the stocks-to-use ratio falls to less than 10 percent, creating strong upward pressure on prices. Corn prices bottom out at \$2.55 per bushel in 1999 and then strengthen to \$3.10 by 2007, as tightening market conditions push the stocks-to-use ratio to under 6 percent.

Unlike corn, production of the other feed grains is not projected to even approach previous record highs because of substantially lower acreage than in previous years. Barley and oats acres are likely to remain around recent record lows, while sorghum acres are modestly higher than the low levels reached in 1993-95, the last years under the old farm program. Thus, yield increases account for nearly all of the production gains projected for sorghum, barley, and oats. While yield projections for these crops are also based on trend, the yield increases are smaller than for corn, partly reflecting the lower scale of research.

Sorghum production ranges from 610 million bushels to 745 million bushels. Yields are projected to increase at a rate of 0.6 bushels per year. Sorghum plantings gradually expand to around 11 million acres. Sorghum tends to be grown in areas that are too dry for corn, and sorghum is also an important rotation crop with wheat. As in 1992 and 1996, sorghum plantings could spike up sharply in the event of weather problems that affect other crops.

Sorghum use stays relatively low by historical measures because of lower supplies. Exports advance more than domestic use, which grows slowly. Feed and residual use, the largest single category, fails to recover to even the 1997 level by the end of the baseline. Stocks remain fairly low, indicative of a generally tight outlook. The farm price of sorghum is projected to follow a similar path to corn, weakening slightly at first and then increasing. The price relative to corn strengthens in the latter half of the baseline.

Barley production does not increase consistently until after 2000 because of early dips in acreage. By 2007, barley output is projected at 430 million bushels, well below levels achieved in the 1980s and early 1990s. Barley plantings vary little in the baseline, remaining in a range of 6.8 to

7.1 million acres. This is low by historical standards, with more producers projected to favor wheat and other crops due to better expected returns. At the beginning of the baseline, disease concerns in the northern Plains, the most important growing area, also discourage some barley growers. Barley disappearance is projected to increase slowly due to small gains in feed and residual use. Exports and FSI use of barley are expected to be steady.

Oats production is virtually flat over the baseline, for the most part staying at 170 million bushels. Acreage slips early and then flattens out at 4.7 million acres, about the historical low reached in 1996. Although not needed as a cover crop for land idled under the old farm programs, oats are expected to continue to be important in crop rotations. Food demand for oats is expected to increase slightly, while feed use shows little change. A large share of the U.S. market, especially for high quality milling oats and premium feed oats, will continue to depend on imports, mainly from Canada. Quality of the oat crop in Canada tends to be more reliable due to generally more favorable growing conditions. A favorable exchange rate also makes imports attractive.

Market revenue for feed grains producers declines slightly in the beginning of the baseline. Starting in 2000, market returns increase for each crop. For corn, average net returns are projected to reach \$200 per acre midway through the baseline and then grow to nearly \$250 by 2007. During 1995/96, when corn prices were record high, average net returns were estimated at about \$210 per acre.

Wheat

For most of the baseline period, demand growth for wheat outstrips yield growth and additional land is brought into production. Tightening supplies and increasing prices draw more land into wheat beginning in 2000. However, the large amount of land enrolled in the CRP from areas that have traditionally been planted to wheat limits the response of planted acreage to rising wheat prices. Nonetheless, wheat plantings rise to 76 million acres by 2007.

Wheat prices increase at a faster rate than for other crops, in part because of slower yield growth for wheat than for most other crops. Planting flexibility under the 1996 Farm Act will allow wheat area to continue to shift to more profitable feed grains and soybeans in regions where these crops are viable. Increased wheat area will likely come from regions where there are few alternatives. After 2000, when wheat prices are projected to exceed \$4.00 per bushel, wheat plantings rise from 71 million acres to 76 million by the end of the baseline.

Domestic use of wheat grows through the baseline. Increases in food use of 10 million bushels a year imply increasing per capita food use of wheat, but at a slowing rate. Feed and residual use declines steadily through 2000 and continues to drift lower as wheat prices rise compared with other feeds.

U.S. wheat exports will continue to rise as global imports expand. Early in the baseline, reduced competition from the EU, which faces limits on the amount of subsidized wheat it can export, increases marketing opportunities for the United States. By 2000, however, global prices are projected to rise high enough that the EU will be able to export wheat without subsidies. This,

together with tight supplies and strengthening prices, will lead to slow growth in U.S. exports in the latter years of the baseline.

Under the 1996 Farm Act, production flexibility contract payments decline each year from 1998 to 2002, and then are assumed to remain constant through 2007/08. Strengthening prices will result in market net returns for wheat producers rising more than 50 percent between 1998/99 and 2007/08, reaching about \$100 per acre by 2007.

Rice

Continued strong U.S. and world rice prices are expected to result in a small, but steady, expansion in U.S. rice acreage through 2007. Rising domestic prices are spurred by continued growth in domestic use as well as strong international demand for both rough rice--of which the U.S. is the primary exporter--and high-quality milled rice. Higher international prices are the result of a greater level of world rice trade than previously experienced and the tight global stocks-to-use ratio projected during the entire baseline period. With U.S. yields forecast to increase about 0.5 percent a year, production is expected to rise almost 1 percent annually through 2007. U.S. yields are projected to increase modestly during the baseline due to better farm management practices and some improvements in rice varieties. However, a "jump" in yields due to adoption of new technology or development of new varieties is not expected.

U.S. rice planted area is projected to post small annual increases of 15,000 acres through 2007 in response to steadily rising domestic prices, with plantings exceeding 3.2 million acres by 2007. However, this would still be below 1994's planted area of 3.3 million acres and well below the 1981 record of 3.8 million acres. Competition from other crops for land as well as the provisions of the 1996 Farm Act that allow producers almost total planting flexibility are responsible for rice acreage remaining below peak levels. Under prior farm legislation, producers who shifted out of rice could lose eligibility for some government payments. Under current farm law, government payments are not dependent on planting decisions.

Projected larger area and higher yields will pull rice production up over 2 percent in 1998 to more than 184 million hundredweight. Starting in 1999, rice production increases almost 1 percent annually, reaching over 200 million hundredweight by 2007. This level of production would be more than 20 million hundredweight greater than 1997's crop, but only slightly larger than the current record of 197.8 million hundredweight achieved in 1994.

U.S. rice imports are projected to expand 5 percent annually in the baseline. Most internationally traded rice is of lower quality than demanded domestically. U.S. rice imports are predominantly high quality, specialty varieties--mostly Thai Jasmine and Basmati from India and Pakistan. These varieties are not capable of being grown domestically and are most often sold in niche markets with limited growth potential. Quality of rice and reliability of most exporters limit the presence of additional foreign rices in the U.S. market.

Rising domestic demand for rice will capture nearly all of the gains in U.S. rice production, with exports projected to increase only slightly from 1998/99 through 2007/08. Total domestic use is

projected to rise about 2 percent a year and reach almost 125 million hundredweight by 2007/08, up 22 percent from 1997/98. Food use will account for over 96 percent of the growth in domestic use, rising almost 2.5 percent a year, reaching nearly 105 million hundredweight by 2007/08. A growing share of the U.S. population from Asia and Latin America and a greater emphasis on healthier life styles account for most of the expansion in domestic food use of rice. However, food use expansion will be slower than the nearly 4-percent annual growth achieved during the previous decade. Higher prices limit growth of rice in some processed uses, such as pet foods, which expanded rapidly in the 1980s and early 1990s when rice prices were lower.

Brewers' use of rice, which has been virtually stagnant since the late 1980s, is projected to expand about 0.1 million hundredweight annually from 1997/98 to 2007/08, reaching 16 million hundredweight. No growth in per capita beer consumption and the greater popularity of light beers--which use less rice than regular beers--limit the projected growth in brewers' use of rice. Seed use, essentially a function of planted area, will expand slightly to match the modest area growth, rising to 4.2 million hundredweight in 2007 from 4.0 million hundredweight in 1997.

The combination of modest increases in U.S. rice production matched by strong growth in domestic demand for high quality U.S. rice results in an increasing differential between domestic rice prices and those of key competitors. This makes U.S. rice exports less competitive in some international markets, limiting the expansion in rice exports in the baseline. Thailand is the principle competitor of the United States in certain high quality markets. U.S. rice exports are projected to be relatively stable in the baseline, ranging from 82 to 85 million hundredweight. Strong growth in domestic demand coupled with only modest production growth is the primary factor accounting for the nearly stagnant level of exports. The U.S. exports mostly to high-quality markets, rarely competing with the low cost Asian exporters in low-quality markets. With the domestic market projected to expand each year, the near-stagnant level of exports means that the international market will account for a declining share of U.S. rice use. The export share of total use is projected to drop from 43 percent in 1996/97 to 39 percent in 2007/08. The declining reliance on the international market will likely reduce price risk for producers since the growing domestic market is more stable, and typically higher priced, than the export market.

Ending stocks grow slowly to 28.2 million hundredweight in 2007/08, maintaining a stocks-to-use ratio of about 13 percent for most of the baseline, low by historical standards.

Strong demand growth in the domestic market with only modest expansion in production will cause season-average U.S. farm prices to rise annually, from \$10.15 per hundredweight projected for 1998/99 to over \$12 per hundredweight in 2007/08, well above levels during most of the 1980s and early 1990s. Season-average farm prices have exceeded \$9 per hundredweight since 1995/96, with the 1997/98 price projected at \$9.75, just below the \$9.90 reported for 1996/97. The 1996/97 price was the highest since 1980/81. Market returns to rice producers rise more than a fourth from 1998 to 2007, growing to over \$300 per acre by the end of the baseline. These gains from the marketplace help to offset declining production flexibility contract payments.

Increasing U.S. rough rice exports and steady growth in domestic demand are behind much of the current price strength. In addition, quality standards for many processed uses of rice have

increased in recent years. For example, brewers now use mostly whole grain rice with high quality standards instead of the lower priced brewers' rice used prior to the early 1990s. In addition, U.S. food aid shipments, which are typically the lower quality portion of U.S. rice, are a much smaller share of U.S. exports than in previous years. Greater demand for higher quality rice continues to put upward pressure on rice prices through the baseline.

Upland Cotton

Land planted to upland cotton rises slowly during the baseline in response to expanding demand and strengthening prices. Planted area rises slowly to 14.0 million acres in 2007, while harvested area increases gradually to 13.0 million acres. The national average upland cotton yield rises 8 pounds per year, reaching 749 pounds per harvested acre in 2007. Production increases to 20.3 million bales by 2007 to meet increases in domestic mill use and export demands.

Growth in domestic mill use and exports will be affected by the GATT accord, which lowers trade barriers and increases world trade. Mill use increases slightly over 1 percent annually, rising nearly 1.5 million bales to approach 12.8 million bales by 2007. Easing of restrictions on textile import quotas and increased competition from manmade fibers limit domestic mill use gains. Significant increases in textile imports, primarily apparel, are likely. However, larger U.S. exports of cotton yarn, fabric, and semi-finished apparel products should continue to support growing mill use.

Foreign imports and consumption of upland cotton are each projected to rise nearly 2 percent annually after 1998. Meanwhile, world trade is projected to expand 1.5 to 2.0 percent annually. U.S. cotton exports are also expected to rise, maintaining a 25-26 percent share of the world market. During the baseline, U.S. exports rise more than 1 million bales from 1998 to approach 7.6 million by 2007.

Market net returns to upland cotton producers rise during the baseline from \$218 per acre in 1998 to \$243 in 2007. Net returns to producers enrolled in production flexibility contracts vary only slightly, ranging from \$259 to \$271 per acre, as increasing market receipts are partly offset by declining contract payments after 1998.

Soybeans

Gains in soybean acreage will be small in the baseline, despite rising soybean net returns. Increases in prices and yields for corn strengthen its returns relative to soybeans, limiting soybean area gains mostly to greater double cropping with wheat. In the last 2 years, farmers have shifted more wheat area into soybeans, but a progressively tighter wheat market over time may limit this tendency.

Based on significant yield gains in recent years, average soybean yields are expected to trend up at 0.5 bushels an acre annually over the next 10 years. More universal adoption of narrow row planting, a practice enhanced by acceptance of Roundup-Ready™ varieties, is anticipated. The

U.S. average soybean yield is projected to increase from 39.2 to 44.0 bushels per acre between 1997/98 and 2007/08. Within 10 years, U.S. soybean production would exceed 3 billion bushels.

Domestic soybean crush surges in 1998/99, coinciding with a larger supply and increased demand for meal and oil. However, a more modest annual increase in crush develops in later years as growth in meal and oil consumption slows. Following a rebound next season, ending soybean stocks are projected to slide to 205 million bushels. A declining stocks-to-use ratio means that U.S. soybean and soybean product prices will rise. This especially curtails export demand for meal and oil and slows growth in domestic crush.

The average soybean farm price rises to \$7.25 per bushel by the end of the baseline, after turning up from a low of \$5.65 projected for 1999/2000. Although average soybean net returns are expected to decline in the near term, increasing farm prices are projected to then push returns higher, reaching \$221 per acre by 2007/08. Similarly, the aggregate value of farm production for soybeans eventually climbs to nearly \$22 billion, up one-fourth from 1997/98.

While rising foreign demand for soybeans will produce an upward trend in U.S. soybean exports, expanding to 1.1 billion bushels by 2007/08, increasingly tight supplies and rising prices will slow the annual growth. The comparatively fixed resources available to increase exportable U.S. supplies means that foreign exporters will capture a greater share of world soybean output and trade.

Soybean oil prices remain flat for the next 4 years around 24.5 cents per pound. Solid foreign demand is expected to pull U.S. oil exports up to 3,050 million pounds by 2001/02. However, total demand growth would eventually outstrip new supplies after 2001/02. Oil prices would climb to about 27 cents per pound by 2007/08, which in turn restricts exports. Year-end soybean oil inventories build in absolute terms to around 2 billion pounds in 2007/08, but the balance of potential supplies to use gets even tighter.

Higher soybean supplies and crush push soybean meal prices down in the near term, but prices then firm as soybean supplies tighten through 2007/08. By 1999/2000, rising feed costs slow demand from the domestic livestock sector, curbing domestic meal disappearance. U.S. soybean meal exports are also projected to peak in 1999/2000. After that, soybean meal exports remain relatively flat because of continued price competition from Brazil and Argentina.

Sugar

Current legislation extends the sugar price support program through fiscal 2003. The raw cane sugar loan rate is fixed at 18 cents a pound, raw value, the level in effect since the 1985 crop. The refined beet sugar loan rate is fixed at 22.90 cents a pound. There are no domestic sugar supply restrictions, and supply control is achieved through an import tariff-rate quota (TRQ). If the TRQ is at or below 1.5 million tons, CCC loans to sugar processors will be recourse loans, otherwise they will be nonrecourse loans. The baseline assumes a continuation of the commitment of the United States in the Uruguay Round agreement to provide minimum low-duty sugar import access of 1.256 million short tons, raw value. There is a penalty on sugar forfeited

to the Government under the sugar loan program of 1 cent per pound for raw cane sugar, and 1.07 cents for refined beet sugar. An assessment is applied to all sugar marketings, 0.2475 cents per pound for raw cane sugar and 0.2654 cents per pound for refined beet sugar.

Domestic sugar prices are projected to be flat through the baseline. The raw sugar price (New York No. 14 contract) averaged 22.00 cents a pound in 1997, and is projected to average 22.06 cents in 1998 and then 22.00 cents through 2007. Grower prices for sugar beets derive from the wholesale refined beet sugar price, and grower prices for sugarcane derive from the raw cane sugar price.

Sugar beet area harvested was up 8 percent in fiscal 1998 (the 1997/98 crop) to 1.43 million acres, due in part to lower prices of alternative crops combined with stronger sugar beet prices in the past year. Sugar beet acreage rises 60,000 acres in 1999 and 30,000 acres in 2000, reflecting expanding acreage in beet sugar cooperatives in Minnesota, North Dakota, and the Northwest, and relatively stable acreage in other areas. A new beet sugar factory is scheduled to open in the State of Washington in 1998, the first new factory in the United States since 1975. After 2000, sugar beet acreage grows more slowly at 0.7 percent a year (10,000 acres). Stabilizing effects of the sugar loan program and the adjustable TRQ likely will result in less price variability for sugar beets than for most alternative crops, contributing to the growth in acreage. The gradual shift of acreage from higher-cost areas to lower-cost non-irrigated areas continues. The combination of a rising beet sugar recovery rate and stagnant sugar beet yields per acre results in a slowly rising yield of beet sugar per acre. Beet sugar production rises 120,000 and 110,000 tons in 1999 and 2000, and thereafter about 50,000 tons a year to 4.9 million tons in 2007. The beet sugar share of total domestic sugar production grows from 56 percent in 1997 to 58 percent in 2007.

Sugarcane acreage harvested for sugar rose from 847,000 acres in 1997 to 877,000 acres in 1998. Most of the acreage expansion is in Louisiana, where new areas are being developed in the western part of the State. In recent years acreage has declined in Hawaii, causing national average yields to fall, since Hawaii's yields are much higher than those in other states. After 1999, national average yields stabilize, as research and development create better varieties, and Hawaii's acreage stabilizes.

In Florida, some land is taken out of cane to be used for Everglades restoration purposes. Florida's sugar production declines from 1.73 million tons in 1998 to 1.67 million tons in 2002, then rises slowly as yields and recovery rates rise at half the 1980-97 trend. In Louisiana, sugarcane acreage harvested increases from the 1998 level of 380,000 acres to 450,000 acres in 2003. Some of this additional land was previously in western Louisiana under pasture and rice. Louisiana sugar production rises to 1.35 million tons by the year 2007. Production in Texas recovers from a weather-reduced crop of 90,000 tons in 1998 to 150,000 tons in 2001, and is stable thereafter. Hawaiian sugar production declines from 340,000 tons in 1998 to 300,000 tons by 1999 and then stabilizes. Puerto Rican sugar production is 25,000 tons annually throughout the projection period.

Domestic sugar disappearance rises about 125,000 tons a year from 1998 to 2007. Per capita sugar disappearance rises from 67 pounds, refined basis, in 1997 to 70 pounds in 2007. The rapid

substitution of corn sweeteners for sugar ended in about 1986. Since then, sugar consumption has grown at about 2 percent a year, compared to 3.9 percent for high fructose corn syrup (HFCS). However, the rate of growth of sugar consumption has slowed, and in the last 5 years was 1.4 percent a year, compared to 2.3 percent the previous 5 years. Continued slowing of the growth rate of sugar consumption to 1.2 percent a year from 1997 to 2007 is projected. HFCS consumption will continue to grow more rapidly than sugar, and is projected to overtake sugar consumption by the end of the baseline.

The 1998 raw sugar TRQ was established at 1.98 million tons. Three tranches of 220,000 tons each were initially withheld, and are allocated in January, March, and May 1998 if the forecasted ending stocks-to-use ratio for crop-year 1997 in USDA's *World Agricultural Supply and Demand Estimates* report for those months is less than or equal to 15.5 percent. The 1998 refined sugar TRQ was established at 55,116 short tons, with specific allocations made for the first time to Canada and Mexico. The remainder of the refined sugar TRQ, including a small amount for specialty sugar, enters on a first-come, first-served basis. Under NAFTA provisions, Mexico was again declared a net surplus producer of sugar for 1998 and received an allocation of 27,558 tons, which can be shipped as either raw or refined sugar.

Projected sugar imports for consumption are projected to reach nearly 2.9 million tons by 2007. While imports are shown to remain above the level of 1.5 million tons necessary to assure price support, normal variations of production will likely result in high variation in actual import needs over the projection period, perhaps leading to a TRQ at or below 1.5 million tons in some years, with the sugar loan program being recourse.

Tobacco

Production falls in 1998 after high quotas in 1997 resulted in production increases and replenished stocks. Prospects for lower U.S. cigarette production, reduced prospects for cigarette exports, and uncertain prospects for U.S. leaf exports contributed to the decline.

Flue-cured production increased in 1997 in response to lower than expected production in 1995-96. After 1997, flue-cured tobacco production begins a downward trend, reflecting continuing drops in domestic cigarette consumption and stagnant to declining leaf exports. Domestic use of flue-cured tobacco will slide steadily because of falling domestic cigarette consumption, a leveling off of cigarette exports, and greater utilization of foreign tobacco as manufacturers reduce costs. Flue-cured exports begin a downward trend after 1997. Higher world stocks and increased quality in countries such as Brazil and Zimbabwe will constrain U.S. exports. However, overseas production of cigarettes by U.S. manufacturers may slow the downward trend in exports of U.S. leaf to maintain blend consistency.

Burley production continues to rise through 1998 before trending downward. Poor recent crops and low stocks have created pent-up demand for U.S. burley, boosting production through 1998. However, long-term declines in domestic cigarette consumption will cause burley production to then begin a long-term decline. Domestic burley use is expected to range from 345 to 390 million pounds over the next decade. Exports of burley fall from 1997 levels as other producers continue

to improve quality and maintain price competitiveness. For the remainder of the 1990s, foreign stocks are expected to be abundant, further dampening export prospects.

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.

Horticulture

The farm value of U.S. horticultural crop production is projected to reach about \$39 billion in 1998, up an estimated 6 percent from 1997 and 13 percent above 1996. During 1997, the nearly 7-percent increase in U.S. horticultural crop value is due mainly to higher expected prices for potatoes and fresh vegetables. The value of horticultural production is projected to increase about \$1.5 billion to \$1.7 billion annually during 1999-2007. Approximately one-third of this value will be generated by export sales. In 1998, the value of horticultural exports is expected to total around \$10.8 billion and, based on current trends, could rise to \$18 billion by 2007.

The 1997 fall potato crop is forecast down 8 percent from the previous year's record crop, but up 4 percent from 1995. Grower prices are expected to improve from 1996 levels. The record 1996 crop resulted in large stocks carried into 1997 which sharply reduced prices during the marketing season through August 1997. With stocks still at a high level, particularly stocks of frozen potatoes, 1998 potato production is expected to remain relatively unchanged from last year even though 1998 prices may be up. Consequently, stable output in the fall of 1998 and projected higher prices will raise the crop value for the 1998 potato crop.

Estimated area harvested for fresh vegetables indicates 1997 production is up less than 1 percent from a year earlier. Grower prices for fresh vegetables in 1997 averaged higher than the prior year due to only a fractional increase in production and strong domestic and export demand. Imports of fresh vegetables and melons rose 6 percent in 1997 over 1996. Responding to higher prices during 1997, fresh-market vegetable growers are expected to increase acreage in 1998. Given trend yields, increased acreage would raise fresh-market vegetables supplies, likely lowering returns to fresh-market growers.

The demand for domestically produced fresh-market vegetables is expected to increase by over 1 percent yearly during 1998-2007 given the combination of projected annual increases in fresh vegetable per capita consumption of 0.7 pounds (0.4 percent) and population growth of slightly less than 1 percent. During the same period, U.S. production of fresh vegetables is projected to increase annually also by over 1 percent, about the same as for consumption. Increases in the volume of exports are projected to run at about the same pace as gains in imports. The United States is projected to remain a net importer of fresh vegetables through 2007 (both in volume and value).

Fruit production in 1998 is expected to increase less than 2 percent over 1997 and this annual rate of expansion is projected to continue through 2007. For domestic producers, the projected continuation of flat consumption of U.S.-grown fresh fruit points to the importance of export

demand for higher prices and production value. U.S. per capita consumption of bananas, which are almost all imported, is projected to increase nearly 2 percent annually during 1998-2007. Per capita consumption of other noncitrus fruits, such as apples, grapes, pears, and peaches, is projected to increase less than 1 percent annually, while fresh citrus consumption is projected to remain flat in the baseline. U.S. export volume of fresh fruits was up nearly 3 percent in 1997, partly due to lower domestic prices for fresh apples, oranges, and grapefruit. Fresh fruit exports have increased from about 20 percent of domestic production in 1986 to about 23 percent in 1997. In real terms, fresh fruit exports are projected to increase 5 to 6 percent annually during 1998-2007.

The use of U.S.-produced fruits and vegetables for processing is projected to increase during 1998-2007 reflecting increases in both domestic and export demand. The major processed products are juices and wine (fruit), tomatoes for processing (vegetables, excluding potatoes and pulses), and frozen potatoes. Domestic consumption of processed fruits and vegetables is projected to increase from 423 pounds (farm-weight equivalent) per person in 1998 to 449 pounds in 2007. While per capita consumption is expected to rise more than 1 percent in 1998, projected increases for the rest of the baseline will be slightly less than 1 percent annually. The value of processed fruit and vegetable exports will continue to increase along with that of other high-value farm products.

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

	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
<i>Million acres</i>												
Planted acreage, 8 major crops												
Corn	79.5	80.2	81.5	82.0	82.0	82.5	83.0	83.5	84.0	84.3	84.5	84.5
Sorghum	13.2	10.3	10.0	10.3	10.5	10.5	10.5	10.7	10.9	11.1	11.1	11.2
Barley	7.1	6.9	6.8	7.0	6.9	6.8	6.9	7.0	7.0	7.0	7.1	7.1
Oats	4.7	5.2	5.2	4.9	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Wheat	75.6	71.0	71.5	71.0	71.5	72.5	73.0	73.5	74.0	75.0	75.5	76.0
Rice	2.8	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2
Upland cotton	14.4	13.7	13.4	13.6	13.8	13.8	13.8	13.8	13.9	13.9	14.0	14.0
Soybeans	64.2	70.9	69.5	68.0	68.0	68.0	68.3	68.5	68.8	69.0	69.3	69.5
Total	261.5	261.1	261.0	259.9	260.6	261.9	263.3	264.9	266.5	268.2	269.4	270.2
Harvested acreage, 8 major crops												
Corn	73.1	74.0	75.3	75.8	75.8	76.3	76.8	77.3	77.8	78.1	78.3	78.3
Sorghum	11.9	9.5	8.9	9.2	9.4	9.4	9.4	9.6	9.8	10.0	10.0	10.1
Barley	6.8	6.4	6.4	6.6	6.5	6.4	6.5	6.6	6.6	6.6	6.7	6.7
Oats	2.7	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Wheat	62.9	63.6	63.0	62.6	63.0	63.9	64.3	64.8	65.2	66.1	66.5	67.0
Rice	2.8	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2
Upland cotton	12.6	13.2	12.5	12.6	12.8	12.8	12.8	12.8	12.9	12.9	13.0	13.0
Soybeans	63.4	69.8	68.4	66.9	66.9	66.9	67.2	67.4	67.7	67.9	68.2	68.4
Total	236.2	242.5	240.4	239.6	240.4	241.6	242.9	244.4	245.9	247.5	248.7	249.5

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

	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Yields 4/												
Corn	127.1	126.4	130.0	131.7	133.4	135.1	136.8	138.5	140.2	141.9	143.6	145.3
Sorghum	67.5	69.2	68.3	68.9	69.5	70.1	70.7	71.3	71.9	72.5	73.1	73.7
Barley	58.5	58.3	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5
Oats	57.8	60.5	59.1	59.4	59.7	60.0	60.3	60.6	60.9	61.2	61.5	61.8
Wheat	36.3	39.7	38.0	38.2	38.4	38.7	39.0	39.3	39.6	39.9	40.2	40.5
Rice	6,121.0	5,926.0	6,071.9	6,100.7	6,129.6	6,158.6	6,187.8	6,217.2	6,246.7	6,276.4	6,306.2	6,336.2
Upland cotton	701.0	666.0	677.0	685.0	693.0	701.0	709.0	717.0	725.0	733.0	741.0	749.0
Soybeans	37.6	39.2	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0
Production 2/												
Corn	9,293	9,359	9,790	9,985	10,110	10,310	10,505	10,705	10,910	11,080	11,245	11,375
Sorghum	803	659	610	635	655	660	665	685	705	725	730	745
Barley	396	374	385	400	395	395	405	415	415	420	430	430
Oats	155	176	170	170	175	170	170	170	170	170	170	175
Wheat	2,285	2,527	2,394	2,391	2,419	2,473	2,508	2,547	2,582	2,637	2,673	2,714
Rice	171.3	180.0	184.2	186.0	187.8	189.6	191.4	193.2	195.1	196.9	198.8	200.7
Upland cotton	18,413	18,300	17,600	18,000	18,500	18,700	18,900	19,100	19,500	19,700	20,100	20,300
Soybeans	2,382	2,736	2,700	2,675	2,710	2,745	2,785	2,830	2,875	2,920	2,965	3,010
Exports 2/												
Corn	1,795	1,925	2,125	2,250	2,400	2,500	2,600	2,700	2,800	2,875	2,950	3,025
Sorghum	205	200	225	235	250	260	275	285	295	305	315	320
Barley	31	90	70	70	70	70	70	70	70	70	70	70
Oats	3	2	2	2	2	2	2	2	2	2	2	2
Wheat	1,001	1,075	1,200	1,300	1,350	1,375	1,375	1,400	1,450	1,475	1,500	1,550
Rice	76.4	85.0	82.2	83.1	83.4	83.6	83.8	84.0	84.2	84.4	84.6	84.8
Upland cotton	6,399	6,575	6,500	6,600	6,700	6,800	6,900	7,000	7,100	7,250	7,400	7,550
Soybeans	883	980	990	990	995	1,005	1,020	1,035	1,050	1,065	1,080	1,100
Soybean meal	7,100	7,450	7,650	7,750	7,600	7,500	7,400	7,400	7,450	7,500	7,600	7,700
Ending stocks 2/												
Corn	884	928	1,053	1,118	1,028	928	838	758	698	668	663	648
Sorghum	47	46	46	61	71	71	56	46	46	51	46	51
Barley	110	92	90	99	98	92	90	93	96	94	97	95
Oats	67	71	68	65	67	68	68	68	67	66	64	67
Wheat	444	655	657	610	560	528	516	517	497	496	495	479
Rice	27.1	24.2	25.2	25.6	25.9	26.2	26.5	26.8	27.1	27.5	27.8	28.2
Upland cotton	3,920	4,326	4,000	3,850	3,950	4,000	4,000	3,950	4,050	4,050	4,150	4,150
Soybeans	132	255	285	255	235	220	210	205	205	205	205	205
Prices 3/												
Corn	2.70	2.65	2.60	2.55	2.65	2.75	2.80	2.90	3.00	3.05	3.05	3.10
Sorghum	2.34	2.35	2.30	2.25	2.35	2.45	2.55	2.70	2.80	2.85	2.85	2.90
Barley	2.74	2.40	2.35	2.30	2.40	2.50	2.55	2.60	2.70	2.75	2.75	2.80
Oats	1.96	1.60	1.60	1.60	1.65	1.70	1.70	1.75	1.80	1.85	1.85	1.85
Wheat	4.30	3.55	3.50	3.75	4.05	4.15	4.20	4.25	4.35	4.40	4.40	4.45
Rice	9.90	9.75	10.15	10.35	10.56	10.77	10.99	11.21	11.43	11.66	11.89	12.13
Soybeans	7.38	6.40	5.70	5.65	6.00	6.30	6.50	6.75	7.00	7.10	7.15	7.25
Soybean oil	0.225	0.250	0.248	0.245	0.243	0.243	0.250	0.258	0.263	0.265	0.268	0.270
Soybean meal	270.9	212.5	182.5	182.5	198.0	211.5	216.5	222.5	230.0	233.0	234.0	236.5

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	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	4.8	4.6	4.1	4.4	4.6	4.6	4.5	4.4	4.4	4.4	4.4	4.4
PFC acreage reduction 2/	3.9	3.5	2.2	2.0	1.9	1.8	1.7	1.5	1.5	1.5	1.4	1.4
Planted acres	79.5	80.2	81.5	82.0	82.0	82.5	83.0	83.5	84.0	84.3	84.5	84.5
Harvested acres	73.1	74.0	75.3	75.8	75.8	76.3	76.8	77.3	77.8	78.1	78.3	78.3
Yields (bushels per acre):												
Yield/harvested acre	127.1	126.4	130.0	131.7	133.4	135.1	136.8	138.5	140.2	141.9	143.6	145.3
Supply and use (million bushels):												
Beginning stocks	426	884	928	1,053	1,118	1,028	928	838	758	698	668	663
Production	9,293	9,359	9,790	9,985	10,110	10,310	10,505	10,705	10,910	11,080	11,245	11,375
Imports	13	10	10	10	10	10	10	10	10	10	10	10
Supply	9,733	10,253	10,728	11,048	11,238	11,348	11,443	11,553	11,678	11,788	11,923	12,048
Feed & residual	5,362	5,625	5,725	5,800	5,875	5,950	6,000	6,050	6,100	6,125	6,150	6,175
Food, seed, & industrial	1,691	1,775	1,825	1,880	1,935	1,970	2,005	2,045	2,080	2,120	2,160	2,200
Domestic	7,054	7,400	7,550	7,680	7,810	7,920	8,005	8,095	8,180	8,245	8,310	8,375
Exports	1,795	1,925	2,125	2,250	2,400	2,500	2,600	2,700	2,800	2,875	2,950	3,025
Total use	8,849	9,325	9,675	9,930	10,210	10,420	10,605	10,795	10,980	11,120	11,260	11,400
Ending stocks	884	928	1,053	1,118	1,028	928	838	758	698	668	663	648
Stocks/use ratio, percent	10.0	10.0	10.9	11.3	10.1	8.9	7.9	7.0	6.4	6.0	5.9	5.7
Prices (dollars per bushel):												
Farm price	2.70	2.65	2.60	2.55	2.65	2.75	2.80	2.90	3.00	3.05	3.05	3.10
Loan rate	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Variable costs of production (dollars):												
Per acre	163.77	166.09	168.45	171.20	174.55	178.47	182.26	185.93	189.87	194.07	198.28	202.49
Per bushel	1.29	1.31	1.30	1.30	1.31	1.32	1.33	1.34	1.35	1.37	1.38	1.39
Returns over variable costs (dollars per acre):												
Market returns	179.40	168.87	169.55	164.64	178.96	193.06	200.78	215.72	230.73	238.73	239.70	247.94

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

Table 10. Sorghum baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	1.1	1.1	1.2	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PFC acreage reduction 2/	2.2	2.3	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Planted acres	13.2	10.3	10.0	10.3	10.5	10.5	10.5	10.7	10.9	11.1	11.1	11.2
Harvested acres	11.9	9.5	8.9	9.2	9.4	9.4	9.4	9.6	9.8	10.0	10.0	10.1
Yields (bushels per acre):												
Yield/harvested acre	67.5	69.2	68.3	68.9	69.5	70.1	70.7	71.3	71.9	72.5	73.1	73.7
Supply and use (million bushels):												
Beginning stocks	18	47	46	46	61	71	71	56	46	46	51	46
Production	803	659	610	635	655	660	665	685	705	725	730	745
Imports	0	0	0	0	0	0	0	0	0	0	0	0
Supply	821	706	656	681	716	731	736	741	751	771	781	791
Feed & residual	529	425	350	350	360	365	370	375	375	380	385	385
Food, seed, & industrial	40	35	35	35	35	35	35	35	35	35	35	35
Domestic	569	460	385	385	395	400	405	410	410	415	420	420
Exports	205	200	225	235	250	260	275	285	295	305	315	320
Total use	774	660	610	620	645	660	680	695	705	720	735	740
Ending stocks	47	46	46	61	71	71	56	46	46	51	46	51
Stocks/use ratio, percent	6.1	7.0	7.5	9.8	11.0	10.8	8.2	6.6	6.5	7.1	6.3	6.9
Prices (dollars per bushel):												
Farm price	2.34	2.35	2.30	2.25	2.35	2.45	2.55	2.70	2.80	2.85	2.85	2.90
Loan rate	1.81	1.76	1.74	1.73	1.71	1.67	1.68	1.68	1.70	1.72	1.74	1.76
Variable costs of production (dollars):												
Per acre	81.85	82.82	83.89	85.32	87.05	89.01	90.94	92.79	94.74	96.80	98.86	100.93
Per bushel	1.21	1.20	1.23	1.24	1.25	1.27	1.29	1.30	1.32	1.34	1.35	1.37
Returns over variable costs (dollars per acre):												
Market returns	76.10	79.80	73.20	69.70	76.27	82.73	89.35	99.72	106.58	109.83	109.48	112.80

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

Table 11. Barley baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	0.8	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PFC acreage reduction 2/	2.6	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Planted acres	7.1	6.9	6.8	7.0	6.9	6.8	6.9	7.0	7.0	7.0	7.1	7.1
Harvested acres	6.8	6.4	6.4	6.6	6.5	6.4	6.5	6.6	6.6	6.6	6.7	6.7
Yields (bushels per acre):												
Yield/harvested acre	58.5	58.3	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5
Supply and use (million bushels):												
Beginning stocks	100	110	92	90	99	98	92	90	93	96	94	97
Production	396	374	385	400	395	395	405	415	415	420	430	430
Imports	37	40	50	55	55	55	55	55	55	55	55	55
Supply	532	524	527	545	549	548	552	560	563	571	579	582
Feed & residual	219	170	195	205	210	215	220	225	225	235	240	245
Food, seed, & industrial	172	172	172	171	171	171	172	172	172	172	172	172
Domestic	391	342	367	376	381	386	392	397	397	407	412	417
Exports	31	90	70	70	70	70	70	70	70	70	70	70
Total use	422	432	437	446	451	456	462	467	467	477	482	487
Ending stocks	110	92	90	99	98	92	90	93	96	94	97	95
Stocks/use ratio, percent	26.1	21.3	20.6	22.2	21.7	20.2	19.5	19.9	20.6	19.7	20.1	19.5
Prices (dollars per bushel):												
Farm price	2.74	2.40	2.35	2.30	2.40	2.50	2.55	2.60	2.70	2.75	2.75	2.80
Loan rate	1.55	1.57	1.56	1.59	1.59	1.59	1.55	1.56	1.56	1.55	1.56	1.56
Variable costs of production (dollars):												
Per acre	80.90	81.91	82.97	84.32	85.99	87.89	89.75	91.54	93.45	95.48	97.50	99.54
Per bushel	1.38	1.40	1.38	1.39	1.41	1.43	1.45	1.46	1.48	1.50	1.52	1.54
Returns over variable costs (dollars per acre):												
Market returns	79.39	58.01	58.03	54.83	60.41	65.86	68.35	70.96	76.65	79.15	78.50	81.06

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

Table 12. Oats baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	0.3	0.3	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PFC acreage reduction 2/	1.3	1.3	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Planted acres	4.7	5.2	5.2	4.9	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Harvested acres	2.7	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Yields (bushels per acre):												
Yield/harvested acre	57.8	60.5	59.1	59.4	59.7	60.0	60.3	60.6	60.9	61.2	61.5	61.8
Supply and use (million bushels):												
Beginning stocks	66	67	71	68	65	67	68	68	68	67	66	64
Production	155	176	170	170	175	170	170	170	170	170	170	175
Imports	97	100	100	100	100	100	100	100	100	100	100	100
Supply	319	343	341	338	340	337	338	338	338	337	336	339
Feed & residual	155	175	175	175	175	170	170	170	170	170	170	170
Food, seed, & industrial	95	95	96	96	96	97	98	98	99	99	100	100
Domestic	250	270	271	271	271	267	268	268	269	269	270	270
Exports	3	2	2	2	2	2	2	2	2	2	2	2
Total use	252	272	273	273	273	269	270	270	271	271	272	272
Ending stocks	67	71	68	65	67	68	68	68	67	66	64	67
Stocks/use ratio, percent	26.6	26.1	24.9	23.8	24.5	25.3	25.2	25.2	24.7	24.4	23.5	24.6
Prices (dollars per bushel):												
Farm price	1.96	1.60	1.60	1.60	1.65	1.70	1.70	1.75	1.80	1.85	1.85	1.85
Loan rate	1.03	1.11	1.10	1.13	1.16	1.21	1.17	1.17	1.16	1.15	1.15	1.14
Variable costs of production (dollars):												
Per acre	52.17	52.77	53.46	54.26	55.29	56.46	57.61	58.74	59.97	61.26	62.56	63.87
Per bushel	0.90	0.87	0.90	0.91	0.93	0.94	0.96	0.97	0.98	1.00	1.02	1.03
Returns over variable costs (dollars per acre):												
Market returns	61.12	44.03	41.10	40.78	43.21	45.54	44.90	47.31	49.65	51.96	51.22	50.46

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

Table 13. Wheat baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	9.5	9.1	9.7	10.9	11.3	11.5	11.6	11.8	11.8	11.8	11.8	11.8
PFC acreage reduction 2/	10.1	10.2	8.4	8.7	8.7	8.8	8.8	8.9	8.9	8.9	8.9	8.9
Planted acres	75.6	71.0	71.5	71.0	71.5	72.5	73.0	73.5	74.0	75.0	75.5	76.0
Harvested acres	62.9	63.6	63.0	62.6	63.0	63.9	64.3	64.8	65.2	66.1	66.5	67.0
Yields (bushels per acre):												
Yield/harvested acre	36.3	39.7	38.0	38.2	38.4	38.7	39.0	39.3	39.6	39.9	40.2	40.5
Supply and use (million bushels):												
Beginning stocks	376	444	655	657	610	560	528	516	517	497	496	495
Production	2,285	2,527	2,394	2,391	2,419	2,473	2,508	2,547	2,582	2,637	2,673	2,714
Imports	92	95	100	115	120	120	115	115	110	110	110	110
Supply	2,753	3,065	3,149	3,163	3,149	3,153	3,151	3,178	3,209	3,244	3,279	3,319
Food	892	910	920	930	940	950	960	970	980	990	1,000	1,010
Seed	103	100	97	98	99	100	100	101	102	103	104	105
Feed & residual	314	325	275	225	200	200	200	190	180	180	180	175
Domestic	1,308	1,335	1,292	1,253	1,239	1,250	1,260	1,261	1,262	1,273	1,284	1,290
Exports	1,001	1,075	1,200	1,300	1,350	1,375	1,375	1,400	1,450	1,475	1,500	1,550
Total use	2,310	2,410	2,492	2,553	2,589	2,625	2,635	2,661	2,712	2,748	2,784	2,840
Ending stocks	444	655	657	610	560	528	516	517	497	496	495	479
Stocks/use ratio, percent	19.2	27.2	26.4	23.9	21.6	20.1	19.6	19.4	18.3	18.1	17.8	16.9
Prices (dollars per bushel):												
Farm price	4.30	3.55	3.50	3.75	4.05	4.15	4.20	4.25	4.35	4.40	4.40	4.45
Loan rate	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
Variable costs of production (dollars):												
Per acre	70.01	70.89	71.82	72.97	74.39	76.01	77.60	79.14	80.79	82.55	84.30	86.06
Per bushel	1.93	1.79	1.89	1.91	1.94	1.96	1.99	2.01	2.04	2.07	2.10	2.12
Returns over variable costs (dollars per acre):												
<u>Market returns</u>	<u>88.82</u>	<u>72.76</u>	<u>64.64</u>	<u>74.02</u>	<u>84.97</u>	<u>88.58</u>	<u>90.31</u>	<u>92.12</u>	<u>95.87</u>	<u>97.60</u>	<u>97.42</u>	<u>99.30</u>

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

Table 14. Rice baseline, rough basis

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (thousand acres):												
Planted	2,819	3,065	3,080	3,095	3,110	3,125	3,140	3,155	3,170	3,185	3,200	3,215
Harvested	2,799	3,037	3,034	3,049	3,063	3,078	3,093	3,108	3,122	3,137	3,152	3,167
Yields (lbs per acre):												
Yield/harvested acre	6,121	5,926	6,072	6,101	6,130	6,159	6,188	6,217	6,247	6,276	6,306	6,336
Supply and use (million cwt.):												
Beginning stocks	25.0	27.1	24.2	25.2	25.6	25.9	26.2	26.5	26.8	27.1	27.5	27.8
Production	171.3	180.0	184.2	186.0	187.8	189.6	191.4	193.2	195.1	196.9	198.8	200.7
Imports	10.0	10.0	10.5	11.0	11.6	12.2	12.8	13.4	14.1	14.8	15.5	16.3
Total supply	206.3	217.1	218.9	222.2	224.9	227.6	230.3	233.1	235.9	238.8	241.8	244.8
Domestic use	99.4	102.4	104.4	106.5	108.7	110.8	113.1	115.3	117.6	120.0	122.4	124.8
Exports	76.4	85.0	82.2	83.1	83.4	83.6	83.8	84.0	84.2	84.4	84.6	84.8
Residual	3.4	5.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Total use	179.2	192.9	193.7	196.6	199.0	201.4	203.8	206.3	208.8	211.3	213.9	216.6
Ending stocks (million cwt.)	27.1	24.2	25.2	25.6	25.9	26.2	26.5	26.8	27.1	27.5	27.8	28.2
Stocks/use ratio, percent	15.1	12.4	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Milling rate, percent	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
Prices (dollars per cwt.):												
World price	7.66	7.50	7.65	7.80	7.96	8.12	8.28	8.45	8.62	8.79	8.96	9.14
Average market price	9.90	9.75	10.15	10.35	10.56	10.77	10.99	11.21	11.43	11.66	11.89	12.13
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	372	374	379	387	396	405	415	424	434	444	454	465
Per cwt.	6.07	6.31	6.25	6.34	6.45	6.58	6.71	6.83	6.95	7.08	7.21	7.33
Returns over variable costs (dollars per acre):												
Market returns	234	204	237	245	252	258	265	272	280	287	296	304

Table 15. Upland cotton baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage (million acres):												
CRP acres:												
Cropping history 1/	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PFC acreage reduction 2/	1.4	1.4	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Planted acres	14.4	13.7	13.4	13.6	13.8	13.8	13.8	13.8	13.9	13.9	14.0	14.0
Harvested acres	12.6	13.2	12.5	12.6	12.8	12.8	12.8	12.8	12.9	12.9	13.0	13.0
Yields (pounds per acre):												
Yield/harvested acre	701	666	677	685	693	701	709	717	725	733	741	749
Supply and use (thousand bales):												
Beginning stocks	2,543	3,920	4,326	4,000	3,850	3,950	4,000	4,000	3,950	4,050	4,050	4,150
Production	18,413	18,300	17,600	18,000	18,500	18,700	18,900	19,100	19,500	19,700	20,100	20,300
Imports	403	25	5	5	5	5	5	5	5	5	5	5
Supply	21,359	22,245	21,931	22,005	22,355	22,655	22,905	23,105	23,455	23,755	24,155	24,455
Domestic use	11,020	11,290	11,400	11,550	11,700	11,850	12,000	12,150	12,300	12,450	12,600	12,750
Exports	6,399	6,575	6,500	6,600	6,700	6,800	6,900	7,000	7,100	7,250	7,400	7,550
Total use	17,419	17,865	17,900	18,150	18,400	18,650	18,900	19,150	19,400	19,700	20,000	20,300
Ending stocks	3,920	4,326	4,000	3,850	3,950	4,000	4,000	3,950	4,050	4,050	4,150	4,150
Stocks/use ratio, percent	23	24	22	21	21	21	21	21	21	21	21	20
Prices (dollars per pound): 3/												
Loan rate	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192	0.5192
Variable costs of production (dollars):												
Per acre	298.78	305.53	312.72	319.90	328.14	337.36	346.42	355.08	364.03	373.41	382.83	392.61
Per pound	0.43	0.46	0.46	0.47	0.47	0.48	0.49	0.50	0.50	0.51	0.52	0.52
Returns over variable costs (dollars per acre):												
<u>Market returns</u>	<u>258.43</u>	<u>211.75</u>	<u>218.28</u>	<u>225.07</u>	<u>232.10</u>	<u>233.42</u>	<u>234.71</u>	<u>236.19</u>	<u>238.06</u>	<u>239.58</u>	<u>241.77</u>	<u>243.09</u>

1/ The cropping history allocation is based on 1996 plantings on farms with CRP acreage, and is used as a general indicator influencing land available for plantings.

2/ The production flexibility contract acreage reduction allocation of the CRP affects the acreage available for production flexibility contracts and, therefore, is used in the determination of PFC payment rates.

3/ USDA is prohibited from publishing cotton price projections.

Table 16. Soybean and products baseline

Item	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Soybeans												
Acreage (million acres)												
Planted	64.2	70.9	69.5	68.0	68.0	68.0	68.3	68.5	68.8	69.0	69.3	69.5
Harvested	63.4	69.8	68.4	66.9	66.9	66.9	67.2	67.4	67.7	67.9	68.2	68.4
Yield/harvested acre (bushels)	37.6	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, Sept 1	183	132	255	285	255	235	220	210	205	205	205	205
Production	2,382	2,736	2,700	2,675	2,710	2,745	2,785	2,830	2,875	2,920	2,965	3,010
Imports	10	4	5	7	8	9	7	7	9	6	7	8
Total supply	2,575	2,872	2,960	2,967	2,973	2,989	3,012	3,047	3,089	3,131	3,177	3,223
Disposition (million bushels)												
Crush	1,436	1,500	1,550	1,585	1,605	1,625	1,640	1,665	1,690	1,715	1,745	1,770
Seed and residual	125	137	135	137	138	140	141	142	144	146	147	148
Exports	883	980	990	990	995	1,005	1,020	1,035	1,050	1,065	1,080	1,100
Total disposition	2,443	2,617	2,675	2,712	2,738	2,770	2,801	2,842	2,884	2,926	2,972	3,018
Carryover stocks, August 31												
Total ending stocks	132	255	285	255	235	220	210	205	205	205	205	205
Stocks/use ratio, percent	5.4	9.7	10.7	9.4	8.6	7.9	7.5	7.2	7.1	7.0	6.9	6.8
Prices (dollars per bushel)												
Loan rate	4.97	5.26	5.26	5.26	5.26	5.13	5.10	5.10	5.26	5.26	5.26	5.26
Soybean price, farm	7.38	6.40	5.70	5.65	6.00	6.30	6.50	6.75	7.00	7.10	7.15	7.25
Variable costs of production (dollars):												
Per acre	80.00	81.40	82.40	83.71	85.30	87.19	89.01	90.68	92.49	94.45	96.41	98.38
Per bushel	2.13	2.08	2.09	2.09	2.11	2.13	2.14	2.16	2.18	2.20	2.22	2.24
Returns over variable costs (dollars per acre):												
Market returns	197.28	169.48	142.75	142.29	157.70	171.11	180.74	192.82	205.01	210.85	214.61	220.62
Soybean oil (million pounds)												
Beginning stocks, Oct. 1	2,015	1,520	1,555	1,775	2,010	2,085	2,000	1,900	1,870	1,895	1,900	1,940
Production	15,744	16,725	17,360	17,770	18,010	18,250	18,435	18,730	19,030	19,330	19,685	19,985
Imports	53	60	60	65	65	65	65	65	70	75	80	85
Total supply	17,812	18,305	18,975	19,610	20,085	20,400	20,500	20,695	20,970	21,300	21,665	22,010
Domestic disappearance	14,242	14,350	14,600	14,850	15,100	15,350	15,600	15,850	16,125	16,400	16,675	16,950
Exports	2,050	2,400	2,600	2,750	2,900	3,050	3,000	2,975	2,950	3,000	3,050	3,100
Total demand	16,292	16,750	17,200	17,600	18,000	18,400	18,600	18,825	19,075	19,400	19,725	20,050
Ending stocks, Sept. 30	1,520	1,555	1,775	2,010	2,085	2,000	1,900	1,870	1,895	1,900	1,940	1,960
Soybean oil price (\$/lb)	0.225	0.250	0.248	0.245	0.243	0.243	0.250	0.258	0.263	0.265	0.268	0.270
Soybean meal (thousand short tons)												
Beginning stocks, Oct. 1	212	207	225	225	225	225	225	225	225	225	225	225
Production	34,210	35,593	36,775	37,650	38,100	38,550	39,000	39,550	40,150	40,750	41,400	42,050
Imports	103	125	125	100	100	100	100	100	100	100	100	100
Total supply	34,525	35,925	37,125	37,975	38,425	38,875	39,325	39,875	40,475	41,075	41,725	42,375
Domestic disappearance	27,218	28,250	29,250	30,000	30,600	31,150	31,700	32,250	32,800	33,350	33,900	34,450
Exports	7,100	7,450	7,650	7,750	7,600	7,500	7,400	7,400	7,450	7,500	7,600	7,700
Total demand	34,318	35,700	36,900	37,750	38,200	38,650	39,100	39,650	40,250	40,850	41,500	42,150
Ending stocks, Sept. 30	207	225	225	225	225	225	225	225	225	225	225	225
Soybean meal price (\$/ton)	270.9	212.5	182.5	182.5	198.0	211.5	216.5	222.5	230.0	233.0	234.0	236.5
Crushing yields (pounds per bushel)												
Soybean oil	10.96	11.15	11.20	11.21	11.22	11.23	11.24	11.25	11.26	11.27	11.28	11.29
Soybean meal	47.66	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50
Crush margin (\$ per bushel)	1.54	1.43	1.41	1.43	1.43	1.45	1.45	1.44	1.42	1.42	1.43	1.42

Table 17. U.S. Sugar: Supply, disappearance, and prices, fiscal years 1/

Item	Units	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Sugarbeets-Planted	1,000 Acres	1,445	1,368	1,455	1,515	1,545	1,555	1,565	1,575	1,585	1,595	1,605	1,615
Harvested	1,000 Acres	1,420	1,323	1,430	1,490	1,520	1,530	1,540	1,550	1,560	1,570	1,580	1,590
Yield	Tons/Acre	19.8	20.2	21.0	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
Production	Mil. S. Tons	28.1	26.7	30.0	30.3	30.9	31.1	31.3	31.5	31.7	31.9	32.1	32.3
Sugarcane-Harvested	1,000 Acres	901	847	877	916	918	917	917	927	927	926	926	926
Yield	Tons/Acre	32.8	33.1	32.3	31.4	31.3	31.3	31.2	31.2	31.2	31.3	31.3	31.3
Production	Mil. S. Tons	29.6	28.1	28.3	28.7	28.7	28.7	28.6	28.9	28.9	29.0	29.0	29.0
Supply:													
Beginning Stocks	1,000 S. Tons	1,241	1,492	1,485	1,447	1,500	1,520	1,540	1,550	1,570	1,590	1,610	1,630
Production	1,000 S. Tons	7,370	7,203	7,735	7,885	8,015	8,075	8,125	8,225	8,285	8,355	8,425	8,485
Beet Sugar 2/	1,000 S. Tons	3,916	4,013	4,400	4,520	4,630	4,670	4,710	4,760	4,800	4,850	4,900	4,940
Cane Sugar 3/	1,000 S. Tons	3,454	3,190	3,335	3,365	3,385	3,405	3,415	3,465	3,485	3,505	3,525	3,545
Total imports	1,000 S. Tons	2,772	2,765	2,327	2,518	2,475	2,535	2,595	2,625	2,695	2,755	2,815	2,885
For consumption 4/	1,000 S. Tons	2,232	2,272	2,017	2,068	2,025	2,085	2,145	2,175	2,245	2,305	2,365	2,435
Other imports 5/	1,000 S. Tons	540	493	310	450	450	450	450	450	450	450	450	450
Total supply	1,000 S. Tons	11,383	11,460	11,547	11,850	11,990	12,130	12,260	12,400	12,550	12,700	12,850	13,000
Use:													
Domestic disappearance	1,000 S. Tons	9,554	9,766	9,900	10,020	10,140	10,260	10,380	10,500	10,630	10,760	10,890	11,020
Exports	1,000 S. Tons	385	211	200	330	330	330	330	330	330	330	330	330
Miscellaneous 6/	1,000 S. Tons	-48	-1	0	0	0	0	0	0	0	0	0	0
Total use	1,000 S. Tons	9,891	9,977	10,100	10,350	10,470	10,590	10,710	10,830	10,960	11,090	11,220	11,350
Ending stocks	1,000 S. Tons	1,492	1,485	1,447	1,500	1,520	1,540	1,550	1,570	1,590	1,610	1,630	1,650
Stocks/use ratio	Percent	15.1	14.9	14.3	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Raw sugar prices:													
World (No. 11)	Cents/lb.	12.40	11.67	11.10	11.70	11.80	12.10	12.50	12.80	13.20	13.50	13.80	13.50
N.Y. (No. 14) 7/	Cents/lb.	22.50	22.00	22.06	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
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: 8/													
Sugarbeets	Dol./ton	38.10	41.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Sugarcane	Dol./ton	29.40	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

1/ Fiscal year is October 1 through September 30. The 1996 crop corresponds with fiscal 1997, etc. Historic data for area planted, harvested, yield, production, and prices of sugarbeets and sugarcane are on the NASS crop year basis; all other data are on a fiscal year basis.

2/ Beet sugar yield, raw value, per ton of beets (not including sugar from molasses) rises on trend, at 0.04 percentage points each year. Desugaring of molasses adds a net 275,000 tons in 1998, 300,000 tons in 1999, and then rises slowly to 330,000 tons by 2007.

3/ Raw cane sugar yield per ton of cane rises 0.4 percent per year as new processing technology is adopted.

4/ Quota imports, both raw and refined, at the low rate of duty and very small amounts of high-duty imports. Projected imports do not necessarily reflect the determination by the Secretary which will be made pursuant to Additional U.S. Note 3 of Chap. 17 of the HTSUS.

5/ For re-export and for polyhydric alcohol.

6/ Includes CCC disposals, refining loss, and a statistical adjustment to account for invisible stock change.

7/ Through 1997, fiscal-year average of the nearest futures, No. 14 contract, New York Coffee Sugar and Cocoa Exchange; for 1998 forwards, projected.

8/ For 1998 forwards, projected.

Table 18. Flue-cured tobacco baseline

Item	Unit	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage, yield, and production:													
Planted area	1,000 acres	422	451	351	342	351	356	342	325	309	293	279	265
Harvested area	1,000 acres	422	451	351	342	351	356	342	325	309	293	279	265
Yield	lbs./acre	2,151	2,235	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250
Production	Mil. lbs.	908	1,008	790	770	790	800	770	732	695	660	627	596
Supply:													
Beg. stocks	Mil. lbs.	1,166	1,116	1,219	1,124	1,029	974	949	914	891	870	861	858
Marketings	Mil. lbs.	897	1,008	790	770	790	800	770	732	695	660	627	596
Total 1/	Mil. lbs.	2,063	2,124	2,009	1,894	1,819	1,774	1,719	1,646	1,585	1,531	1,488	1,454
Imports	Mil. lbs.	(260)	(220)	(200)	(200)	(200)	(200)	(220)	(240)	(260)	(280)	(300)	(300)
Use:													
Domestic	Mil. lbs.	555	525	515	505	495	485	475	450	435	415	400	375
Export	Mil. lbs.	391	380	370	360	350	340	330	305	280	255	230	230
Total 1/	Mil. lbs.	946	905	885	865	845	825	805	755	715	670	630	605
Ending stocks:													
Total	Mil. lbs.	1,117	1,219	1,124	1,029	974	949	914	891	870	861	858	849
Price:													
Avg. to growers	\$/Cwt	184	172	175	177	179	182	185	195	198	201	200	203
Support	\$/Cwt	160	163	165	167	169	172	175	183	186	189	191	194

1/ Domestic tobacco only.

Table 19. Burley tobacco baseline

Item	Unit	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Acreage, yield, and production:													
Planted area	1,000 acres	268	301	310	274	238	226	226	226	224	214	214	214
Harvested area	1,000 acres	268	301	310	274	238	226	226	226	224	214	214	214
Yield	lbs./acre	1,940	1,868	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Production	Mil. lbs.	520	563	650	575	500	475	475	475	470	450	450	450
Supply:													
Beg. stocks	Mil. lbs.	890	776	741	821	866	826	776	741	711	696	681	671
Marketings	Mil. lbs.	516	560	650	600	500	475	475	475	470	450	450	450
Total 1/	Mil. lbs.	1,406	1,336	1,391	1,421	1,366	1,301	1,251	1,216	1,181	1,146	1,131	1,121
Imports	Mil. lbs.	(150)	(150)	(160)	(165)	(175)	(175)	(175)	(185)	(195)	(205)	(205)	(205)
Use:													
Domestic	Mil. lbs.	420	405	390	380	370	360	350	350	350	345	345	345
Export	Mil. lbs.	210	190	180	175	170	165	160	155	135	120	115	115
Total 1/	Mil. lbs.	630	595	570	555	540	525	510	505	485	465	460	460
Ending stocks:													
Total	Mil. lbs.	776	741	821	866	826	776	741	711	696	681	671	661
Price:													
Avg. to growers	\$/Cwt	194	195	198	201	204	207	210	211	214	217	215	215
Support	\$/Cwt	174	178	181	184	187	190	193	196	199	202	200	200

1/ Domestic tobacco only.

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

Item	Unit	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Production value:	\$ Mil.	34,521	36,774	38,868	40,328	41,817	43,326	44,865	46,431	48,025	49,649	51,304	52,993
Fruits	\$ Mil.	11,290	12,154	12,791	13,304	13,837	14,385	14,954	15,542	16,151	16,780	17,432	18,108
Vegetables	\$ Mil.	12,318	13,120	14,154	14,600	15,057	15,518	15,988	16,466	16,952	17,446	17,949	18,462
Greenhouse/Nurs.	\$ Mil.	10,912	11,500	11,923	12,423	12,923	13,423	13,923	14,423	14,923	15,423	15,923	16,423
Production:	1,000 MT	88,626	87,785	90,422	91,918	93,430	94,929	96,442	97,959	99,481	101,010	102,549	104,101
Fruits													
Citrus	1,000 MT	14,256	15,693	16,047	16,400	16,755	17,108	17,464	17,820	18,177	18,535	18,895	19,258
Noncitrus	1,000 MT	14,710	14,868	15,063	15,255	15,449	15,641	15,835	16,029	16,223	16,418	16,615	16,813
Nuts	1,000 MT	377	473	483	493	502	512	521	531	540	550	560	569
Total	1,000 MT	29,342	31,034	31,593	32,147	32,707	33,261	33,820	34,380	34,940	35,504	36,070	36,641
Vegetables													
Fresh	1,000 MT	18,366	18,455	18,717	18,935	19,157	19,376	19,598	19,820	20,043	20,267	20,494	20,723
Processed	1,000 MT	15,896	15,014	16,793	17,077	17,364	17,648	17,933	18,218	18,503	18,789	19,075	19,363
Potatoes 1/	1,000 MT	23,235	21,459	21,459	21,862	22,269	22,675	23,086	23,499	23,914	24,333	24,756	25,182
Pulses	1,000 MT	1,429	1,466	1,499	1,531	1,563	1,596	1,628	1,661	1,694	1,727	1,760	1,793
Mushrooms	1,000 MT	357	357	361	366	370	374	378	382	386	390	395	399
Total	1,000 MT	59,283	56,751	58,829	59,771	60,723	61,668	62,623	63,580	64,540	65,506	66,479	67,461
Trade: 2/													
Imports	\$ Mil.	11,631	12,316	12,822	13,385	13,944	14,522	15,118	15,733	16,369	17,025	17,703	18,404
Fruit													
Fresh	\$ Mil.	2,298	2,350	2,446	2,544	2,645	2,749	2,855	2,963	3,075	3,189	3,305	3,425
Processed	\$ Mil.	600	618	636	654	673	693	713	734	755	778	800	824
Other	\$ Mil.	2,879	3,145	3,228	3,328	3,409	3,493	3,578	3,666	3,756	3,849	3,944	4,041
Total	\$ Mil.	5,777	6,113	6,310	6,526	6,728	6,934	7,146	7,363	7,586	7,815	8,049	8,289
Vegetables													
Fresh	\$ Mil.	1,789	1,899	2,014	2,132	2,254	2,381	2,511	2,646	2,785	2,928	3,077	3,230
Processed	\$ Mil.	561	594	613	632	651	671	691	712	733	756	778	801
Potatoes	\$ Mil.	238	249	238	253	267	283	299	315	332	350	368	386
Pulses	\$ Mil.	37	52	54	56	58	60	63	65	67	70	73	75
Other	\$ Mil.	1,053	1,114	1,175	1,236	1,296	1,357	1,418	1,479	1,539	1,600	1,661	1,722
Total	\$ Mil.	3,678	3,908	4,093	4,308	4,527	4,752	4,981	5,217	5,457	5,704	5,956	6,214
Greenhouse/Nurs.	\$ Mil.	952	1,009	1,070	1,134	1,202	1,274	1,350	1,431	1,517	1,608	1,705	1,807
Exports	\$ Mil.	9,088	10,068	10,781	11,510	12,257	13,023	13,807	14,610	15,432	16,275	17,139	18,024
Fruits													
Fresh	\$ Mil.	1,890	1,939	2,053	2,170	2,291	2,416	2,545	2,679	2,816	2,959	3,105	3,257
Processed	\$ Mil.	686	706	726	748	769	792	815	839	863	888	914	941
Other	\$ Mil.	2,368	2,551	2,754	2,961	3,174	3,392	3,615	3,843	4,077	4,317	4,563	4,814
Total	\$ Mil.	4,943	5,196	5,533	5,879	6,235	6,600	6,975	7,361	7,757	8,164	8,582	9,012
Vegetables													
Fresh	\$ Mil.	951	1,162	1,234	1,310	1,387	1,467	1,550	1,636	1,724	1,816	1,910	2,007
Processed	\$ Mil.	633	977	1,061	1,148	1,238	1,331	1,427	1,527	1,630	1,737	1,847	1,961
Potatoes	\$ Mil.	613	617	671	727	785	845	907	972	1,038	1,107	1,178	1,252
Pulses	\$ Mil.	261	279	293	308	322	337	353	369	386	403	421	439
Other	\$ Mil.	1,444	1,589	1,734	1,880	2,025	2,170	2,315	2,461	2,606	2,751	2,896	3,041
Total	\$ Mil.	3,903	4,624	4,994	5,372	5,757	6,151	6,553	6,965	7,384	7,814	8,252	8,701
Greenhouse/Nurs.	\$ Mil.	242	248	254	260	266	272	278	284	291	298	304	311
Prices:													
Grower													
Fruits	1990-92=100	118	115	121	125	127	129	132	134	136	139	141	143
Vegetables	1990-92=100	107	109	112	114	116	119	121	123	126	128	131	133
Potatoes	\$/MT	109	143	152	155	159	162	166	169	173	176	180	183
Dry beans	\$/MT	534	440	460	501	504	508	511	515	519	522	526	529
Retail													
Fruits													
Fresh	1982-84=100	234	235	242	253	263	274	284	295	305	316	326	337
Processed	1982-84=100	145	149	152	155	158	161	164	167	170	173	176	180
Vegetables													
Fresh	1982-84=100	189	193	202	209	217	224	231	238	246	253	260	267
Processed	1982-84=100	144	147	151	154	158	162	165	169	172	176	179	183

1/ Includes sweet potatoes.

2/ Total for imports includes beer and malt beverages. Fruit imports includes bananas. Melons are included in vegetables. Other fruit includes juices, wine, and tree nuts. Other vegetables includes mushrooms, dehydrated vegetables, and miscellaneous processed foods.