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Feed Situation and Outlook Yearbook

Allen Baker and Edward Allen

Abstract

In spite of an expected record utilization in 2005/06, large beginning stocks and the second largest production boosted ending stocks. Corn prices are forecast at \$1.95-\$2.05 per bushel, down from the previous year. Grain sorghum prices also are expected to be weaker because of large supplies of feed grains. The 2005 barley crop is down from last year, and ending stocks are forecast lower. Prices are forecast at \$2.45 to \$2.50 per bushel, about the same as in 2004/05. Season average prices for oats are expected to be stronger because of lower supplies in Canada. Prices for all hay are up in 2005/06 from the previous year. Prices have been strong because production and stocks on December 1 were lower. World coarse grain production is expected to drop 5 percent in 2005/06 compared with the previous year. Foreign coarse grain production is forecast down 4 percent as the European Union (EU-25) dropped 13 percent and the former Soviet Union (FSU-12) fell 12 percent, more than offsetting a record crop in China. Global coarse grain beginning stocks were up 28 percent compared with the previous year, following record 2004/05 production, and the increased 2005/06 beginning stocks offset most of the production decline, leaving 2005/06 global supplies down only slightly year-to-year. World coarse grain consumption is expected to decline slightly in 2005/06 due to the smaller production and outbreaks of animal diseases, especially avian influenza. Even though global consumption is expected to decline slightly, it will be near record levels, trimming world ending stocks an expected 10 million tons to 168 million, the third lowest in the last 20 years. U.S. corn exports for the October-September 2005/06 trade year are forecast at 50.5 million tons, up 12 percent from the previous year. Competition from Argentina is down due to a smaller corn crop. Moreover, corn exports from China, Brazil, and South Africa are expected to decline. However, large foreign supplies of competitively priced wheat for feeding are displacing U.S. corn. Also, avian influenza is expected to slightly reduce world corn trade in 2005/06.

Keywords: Corn, grain sorghum, barley, oats, hay, world coarse grains, world corn trade, ethanol, and corn sweeteners.

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Summary

Corn and Sorghum Prices Fall in 2005/06

For 2005/06, total feed grain disappearance is projected at 296 million tons, up from 291 million tons the previous year. Food, seed, and industrial (FSI) use is forecast at a record 82 million tons, and exports are projected at 55 million tons, up from 51 million last year. The growth in utilization will not exceed the growth in supply, and ending stocks are expected to increase.

Feed and residual use of the four feed grains plus wheat in September-August 2005/06 is expected to be down 3.5 percent from the 170 million tons used in September-August 2004/05. The grain used per grain consuming animal unit (GCAU) in 2005/06 is 1.79 tons, compared with 2004/05's 1.89 tons. Corn is expected to represent 93 percent of feed and residual use in 2005/06, down nearly 1 percent from 2004/05.

Corn production in 2005/06 was 11.1 billion bushels, down from the previous year's record crop of 11.8 billion bushels, but still the second largest crop. Even though yields were down from the record levels of last year, increased planted and harvested area helped keep production high. Beginning stocks were 2.1 billion bushels, and the total 2005/06 corn supply was up 460 million bushels to 13.2 billion bushels. Corn supplies are projected to be up, but utilization is forecast up less, resulting in increased ending stocks. Forecast total corn utilization is projected to rise 273 million bushels to a record 10.9 billion bushels. Utilization is forecast up for FSI and exports but down for feed and residual. Ending corn stocks for 2005/06 are expected to increase to 2.3 billion bushels, their highest level since 1987/88, and prices are expected to slip to \$1.95-\$2.05 per bushel.

Corn FSI use in 2005/06 is expected to total 3.0 billion bushels, up from 2.7 billion in 2004/05. FSI use is expected to represent 27 percent of total corn use, up 2 percent from 2004/05 and 2003/04. Corn used to make ethanol for all of 2005/06 is forecast at 1.6 billion bushels, up 21 percent from 2004/05. In February (latest data available), ethanol production reported by the Department of Energy (DOE) was 302,000 barrels per day, up from 245,000 in February 2005 as new plants have come on stream.

The 2005/06 sorghum crop was 394 million bushels, down from 454 million bushels a year earlier. Lower plantings are responsible for this year-to-year change. Total sorghum supply is 451 million bushels, down from 487 million bushels in 2004/05. Forecasted total sorghum utilization is down in 2005/06. The bulk of this year-over-year decrease comes from lower expected feed and residual use. Forecast sorghum ending stocks are 61 million bushels in 2005/06, up from 57 million a year earlier, and the season average price is projected at \$1.70-\$1.80 per bushel.

The 2005/06 barley crop was 212 million bushels, down from 280 million last year. This decline was caused by lower plantings, harvested area, and yields. Beginning stocks are 128 million bushels, up from 120 million bushels in 2004/05. Estimated total barley supply is 345 million bushels in 2005/06, down from 412 million bushels a year earlier. Total utilization is forecast at 240 million bushels, down from 284 million. The bulk of this year-over-year decrease stems from feed and residual use, as exports are expected to be slightly higher than last year. Ending

barley stocks are forecast at 105 million bushels. The 2005/06 season average barley price is forecast at \$2.45 to \$2.50 per bushel, compared with \$2.48 the previous year.

The 2005/06 oats supply is forecast at 258 million bushels, down from 268 million bushels a year earlier. Beginning stocks are the primary difference in the supply, down 7 million bushels. Total oats utilization is projected at 206 million bushels, down 4 million bushels from the previous year. Ending 2005/06 stocks are forecast to be 52 million bushels, down from 58 million. The 2005/06 season average oats price is expected to be \$1.60 per bushel, compared with \$1.48 a year earlier.

According to the March 31 *Prospective Plantings* report, growers intend to plant 78 million acres of corn, down 5 percent from 2005. Sorghum growers intend to plant 6.5 million acres, up 29,000 acres from 2005. Barley growers intend to plant 3.7 million acres in 2006, down 5 percent from a year earlier and the lowest on record. Oats growers intend to plant 4.3 million oats acres, up 78,000 acres from last year.

Hay production for 2005 is estimated at 151 million tons, down from 158 million in 2005. Harvested area declined from 61.9 million acres to 61.7 million acres, and yields were down from 2.55 tons per acre to 2.44 tons per acre. Stocks of all hay on farms totaled 105 million tons on December 1, 2005, down 8 percent from the previous year. Prices for all hay are up in 2005/06. According to the March 31 *Prospective Plantings* report, farmers indicated that they intend to harvest 61.5 million hay acres in 2006, down 171,000 acres from a year earlier.

World coarse grain production is expected to drop 5 percent in 2005/06 compared with the previous year. Foreign coarse grain production is forecast down 4 percent as the European Union (EU-25) dropped 13 percent and the former Soviet Union (FSU-12) fell 12 percent, more than offsetting a record crop in China. Global coarse grain beginning stocks are up 28 percent compared with the previous year, following record 2004/05 production, and the increased 2005/06 beginning stocks offsets most of the production decline, leaving 2005/06 global supplies down only slightly year-to-year. World coarse grain consumption is expected to decline slightly in 2005/06 due to the smaller production and outbreaks of animal diseases, especially avian influenza. Even though global consumption is expected to decline slightly, it will be near record levels, trimming world ending stocks an expected 10 million tons to 168 million, the third lowest in the last 20 years.

U.S. corn exports for the October-September 2004/05 trade year are forecast at 50.5 million tons, up 12 percent from the previous year. Competition from Argentina is down due to a smaller corn crop. Moreover, corn exports from China, Brazil, and South Africa are expected to decline. However, large foreign supplies of competitively priced wheat for feeding are displacing U.S. corn. Also avian influenza is expected to slightly reduce world corn trade in 2005/06.

Feed Grain Supply and Use

Large Corn Beginning Stocks Resulted in Higher Feed Grain Stocks in 2005/06

A record 2004/05 corn crop led to an increase in beginning 2005/06 stocks. Even though 2005/06 feed grain utilization increased, ending stocks increased. Higher stocks led to lower prices for all feed grains in 2005/06.

Total feed grain disappearance is projected at 296 million tons in 2005/06, up from 291 million tons the previous year. The year-to-year increases came from food, seed, and industrial use (FSI), and exports. Feed grain exports are projected at 55 million tons, up from 51 million the previous year. Feed and residual use and FSI are projected at 160 million tons and 82 million tons, respectively. Record ethanol production is driving most of the increase in FSI.

Total feed grain supply was up in 2005/06, enough to more than offset the increase in utilization. Feed grain production was down from the previous year, but large beginning stocks raised supplies, which are now projected at 359 million tons. Beginning 2005/06 stocks are 59 million tons, and imports were 2 million tons.

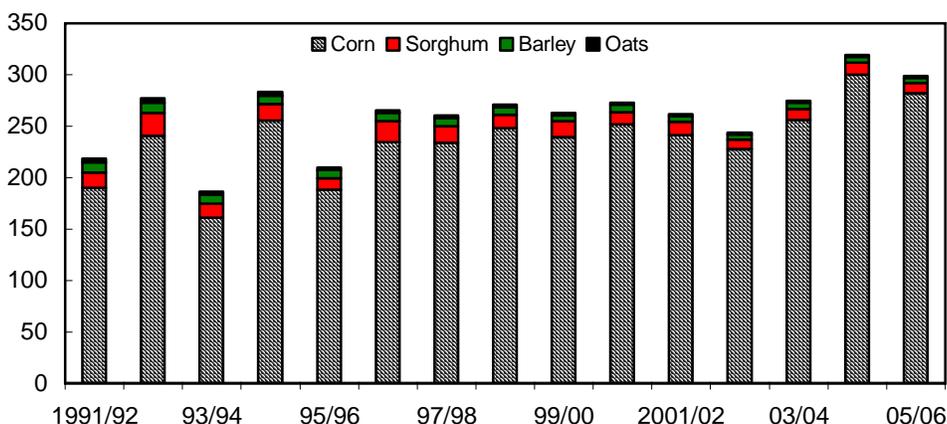
With supply increasing faster than utilization, ending stocks are projected to increase. Ending stocks for 2005/06 are projected at 63 million tons, the largest since 1992/93. The larger 2005/06 stocks led to lower prices for the entire feed grain complex.

The *Prospective Plantings* report for 2006 indicates that as of early March farmers intend to plant 78 million corn acres, down 3.7 million acres from the previous year and the lowest since 2001. Prospective plantings for 2006/07 sorghum, barley, and oats are 6.5 million acres, 3.7 million acres, and 4.3 million acres, respectively, with sorghum and oats up from the previous year, but barley is down 208,000 acres.

Figure 1

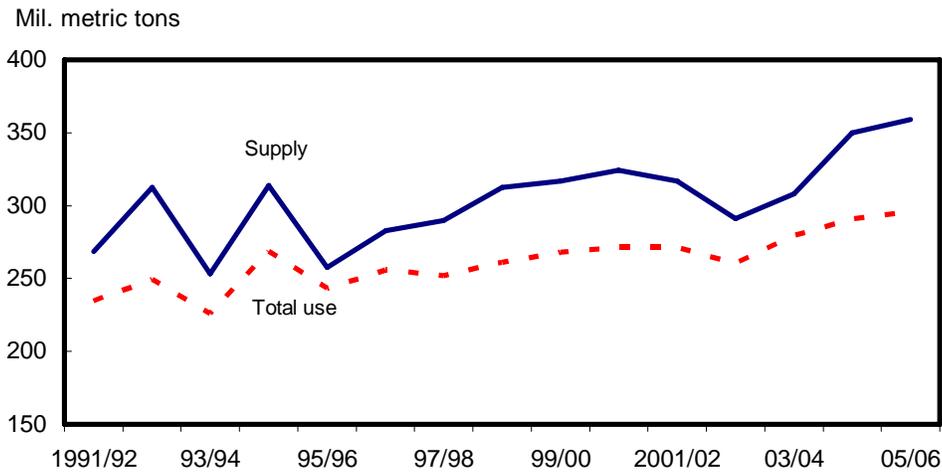
U.S. feed grain production

Mil. metric tons



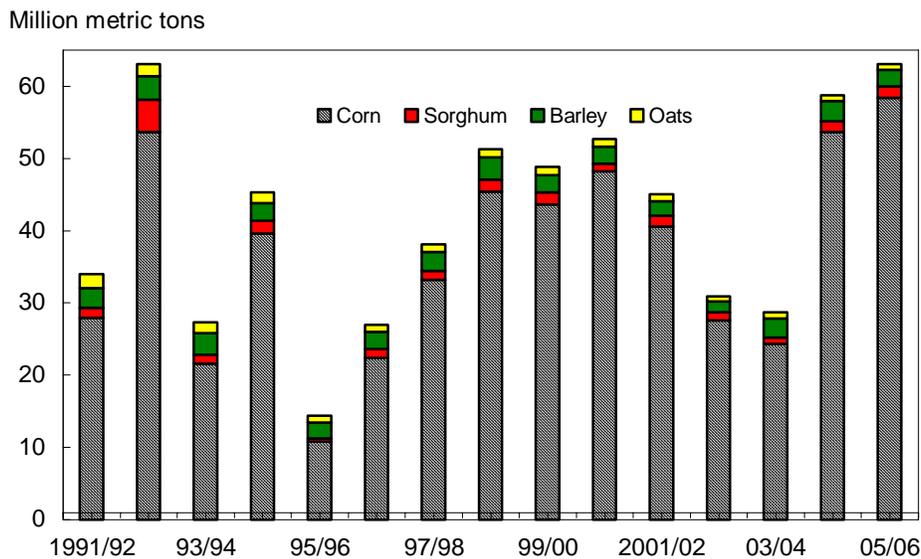
Source: USDA, National Agricultural Statistics Service, *Quick Stats*.

Figure 2
U.S. feed grain supply and use



Source: USDA, World Agricultural Outlook Board, WASDE.

Figure 3
Ending stocks of feed grains



Sources: USDA, Foreign Agricultural Service, *Production, Supply and Distribution (PS&D)*, and Grain: World Markets and Trade (*Grain Circular*).

Corn Prices Slip in 2005/06 With Large Ending Stocks

Increased planted area in 2005/06 led to the second largest corn crop, and with abundant beginning stocks, corn supplies increased. The year-to-year change in corn utilization came from increased food, seed, and industrial use and exports. This led to larger ending stocks and the lowest prices since 2001/02.

Corn Production Down From 2004/05

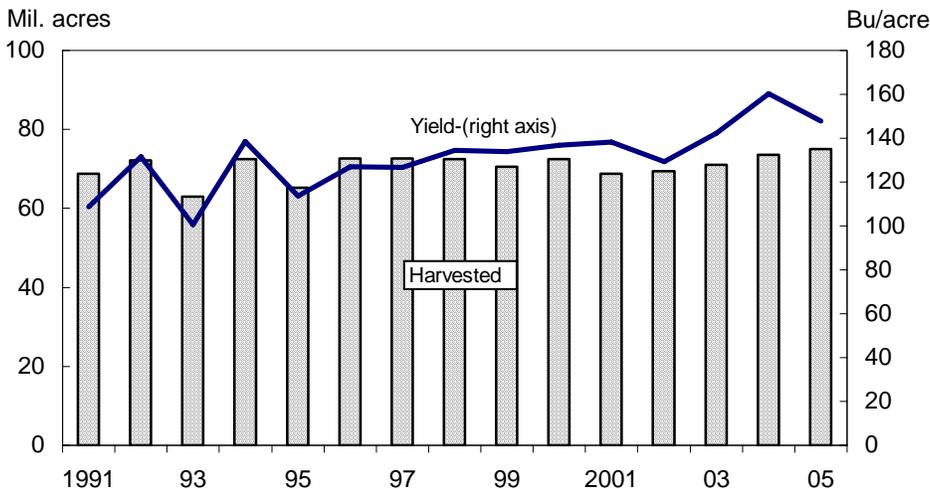
Corn production in 2005/06 was 11,112 million bushels, down from last year's record crop of 11,807 million bushels, but still the second largest crop. The year-to-year decrease stems from a 12.5-bushel-per-acre decrease in yield. The 2005/06 corn harvested area and yield are 75.1 million acres and 147.9 bushels per acre, respectively. Beginning 2005/06 corn stocks were 2,114 million bushels, up from 958 million the previous year. Projected total 2005/06 corn supply is 13,236 million bushels, up 460 million bushels from the previous year.

The 2005 production and yield are the second largest on record, behind 2004. Record yields were realized across the northern tier of States including Idaho, Michigan, Minnesota, Montana, New York, North Dakota, Washington, and Wisconsin, while yields in the central and southern Corn Belt and the southern Great Plains were down from last year's record highs.

Planted area totaled 81.8 million acres, up 1 percent from last year. With the exceptions of Minnesota and South Dakota, planted area was up in the Corn Belt and central and southern Great Plains. Area harvested for grain, at 75.1 million acres, is up 2 percent from 2004. Farmers harvested 5.92 million acres for silage, a 3-percent decrease from last year. However, the number of acres abandoned this

Figure 4

Corn harvested acres and yields

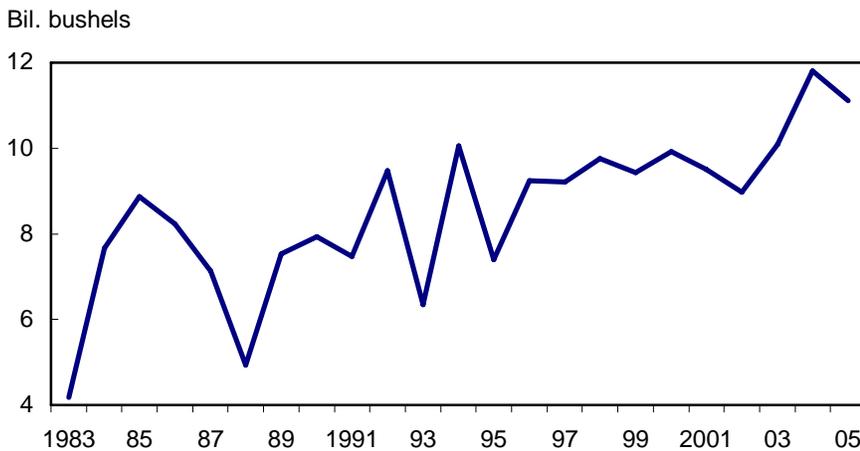


Source: USDA, National Agricultural Statistics Service, Quick Stats.

year decreased to 732,000 acres, down 39 percent from the 1.20 million acres abandoned in 2004.

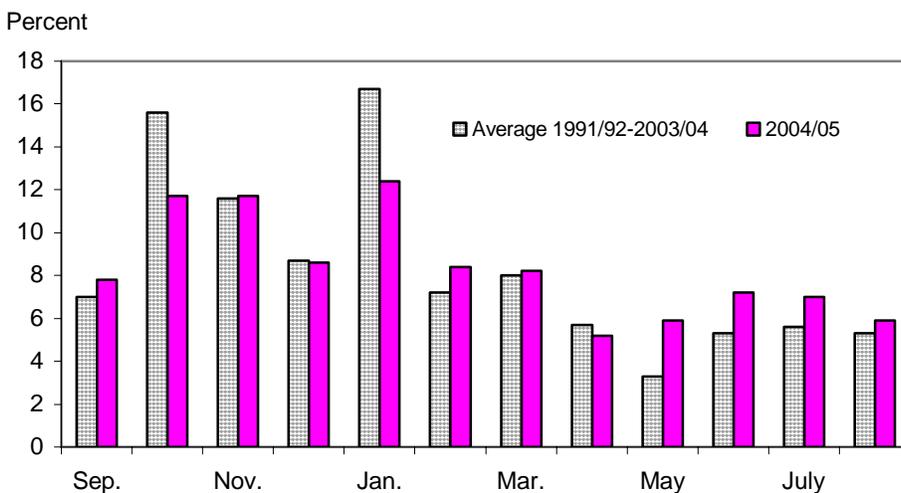
The 2005 corn objective yield data showed 3 percent lower ear count per acre than last year for the combined 10 objective yield States (Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin). South Dakota was the only State among the 10 objective yield States where the ear count was higher than last year.

Figure 5
Corn production



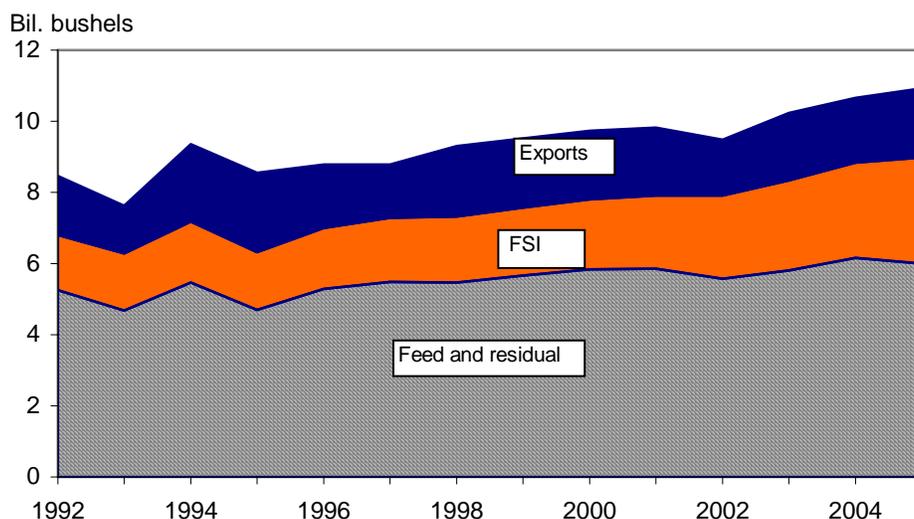
Source: USDA, National Agricultural Statistics Service, *Quick Stats*.

Figure 6
Percent of corn marketed by month



Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 7
Corn disappearance by type of use



Source: USDA, World Agricultural Outlook Board, WASDE.

Total Utilization Rises 273 Million Bushels to Record

Total corn utilization in 2005/06 is projected at a record 10,935 million bushels, up from 10,662 million bushels in 2004/05. This year-to-year increase stems from increases in food, seed, and industrial (FSI) use and exports. Food, seed, and industrial use is projected at a record 2,985 million bushels, up from 2,685 million bushels in 2004/05. Record ethanol production is behind this year-to-year increase. Feed and residual use is projected at 6,000 million bushels, down from 6,162 million a year earlier. Feed and residual use during the first half of 2005/06 is estimated at 3,877 million bushels, up 2 percent from 2004/05. Corn exports are projected to increase from last year to 1,950 million bushels in 2005/06. This is the highest level of U.S. corn exports since 1998/99. Decreased competition in global markets, notably from Argentina, is behind this year-to-year change in exports.

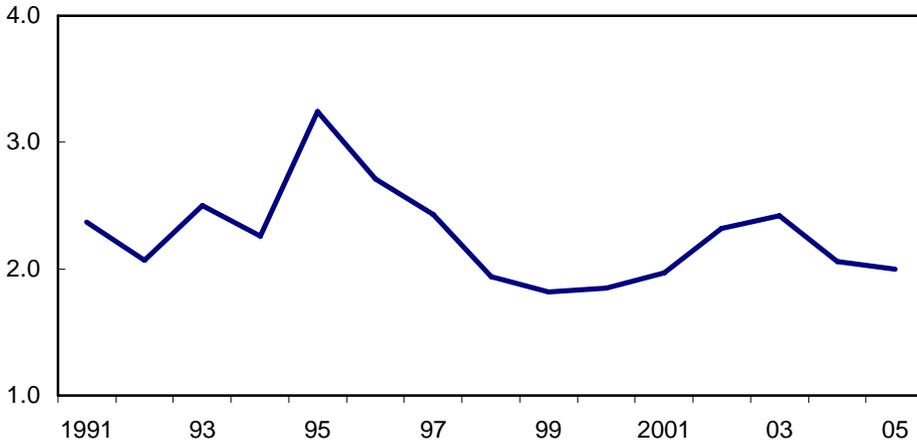
Corn Prices To Decline With Large Supplies

With utilization rising less than supply, ending stocks are projected to increase 187 million bushels to 2,301 million. These are the largest ending stocks since 1987/88. These large stocks have led to lower prices. The 2005/06 season average farm price is projected at \$1.95-\$2.05 per bushel, down from \$2.06 the previous year.

Figure 8

Season-average corn prices received by farmers

\$/bushel

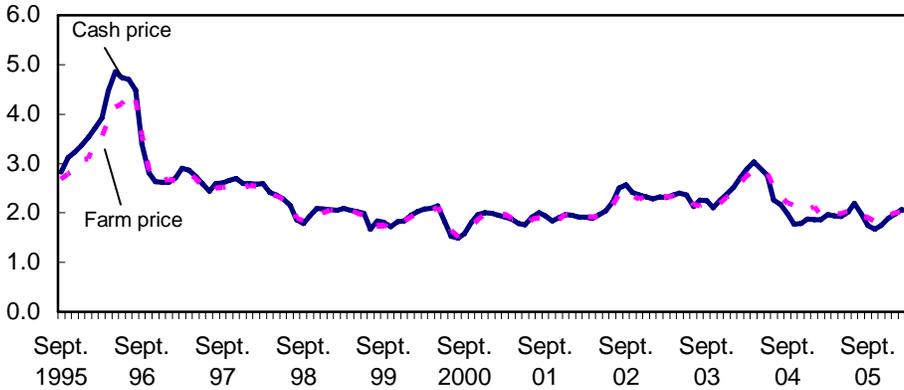


Source: USDA, World Agricultural Outlook Board, WASDE.

Figure 9

U.S. corn: Central Illinois cash and average farm price, September 1995-March 2006

\$/bushel



Sources: USDA, Agricultural Marketing Service, *Weekly Grain Market News Summary*, and Economic Research Service, *The Feed Grains Data Delivery System*.

The benchmark Central Illinois cash corn price was \$2.04 per bushel in March 2006, down slightly from \$2.07 in February and 7 cents above the previous March. Year-to-date corn prices have averaged \$1.88 per bushel from September 2005 to March 2006, down from \$1.87 per bushel for the same period a year earlier.

Prospective Corn Plantings Down 5 Percent in 2006

In March, producers indicated that they intended to plant 78 million corn acres in 2006, down 5 percent from 2005 and the lowest since 2001. Producers in the 10 major corn producing States intend to decrease their plantings 4 percent from last

year. High prices for fuel and fertilizer have caused farmers to reduce intentions to plant corn and to shift to soybeans, which require less fertilizer. Dry conditions also contributed to lower planting intentions in the southern Great Plains. Illinois has the largest intended decrease of 700,000 acres below their record plantings last year, but it was still very dry when the survey was taken.

Sorghum Production Decreases 13 Percent in 2005/06

Sorghum production in 2005/06 declined from last year and was the lowest since 2002/03. Total use is expected to decline because of the smaller production and supplies. Given large feed grain supplies, sorghum prices are forecast to be the lowest since 1999/2000.

2005/06 Sorghum Production Declines

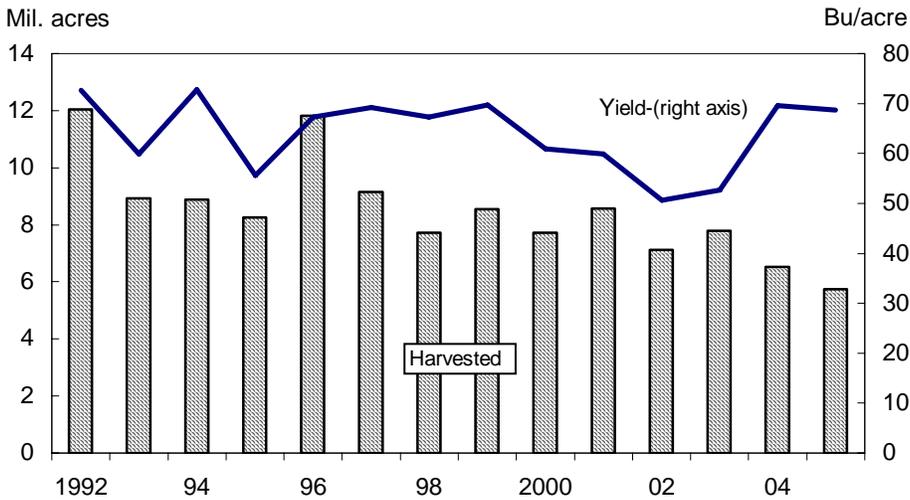
The 2005/06 sorghum crop was 394 million bushels, down from 454 million the previous year. Lower plantings are responsible for this year-to-year change. The number of acres planted in 2005 was 6.5 million, down from 7.5 million in 2004. Sorghum yields were down 0.9 bushel per acre to 68.7 bushels per acre, from 69.6 bushels in 2004/05. Harvested area in 2005/06 was 5.7 million acres, down from 6.5 million the previous year. However, the number of acres abandoned this year decreased to 407,000 acres, down 34 percent from the 617,000 acres abandoned in 2004. Beginning stocks were 57 million bushels, and total 2005/06 supply is 451 million bushels, down from 487 million in 2004/05.

Kansas and Texas are the largest sorghum producing States. Nine of the 21 sorghum producing States followed by the National Agricultural Statistics Service had higher yields in 2005/06 than in 2004/05. Sorghum tends to be grown in drier areas because it can handle heat and drought stress better than corn. However, corn has expanded outside of the traditional Corn Belt. Improved corn hybrids, increased corn yields relative to sorghum yields, and increased planting flexibility stemming from changes in farm legislation are behind this production shift.

Total Use Projected at 390 Million Bushels

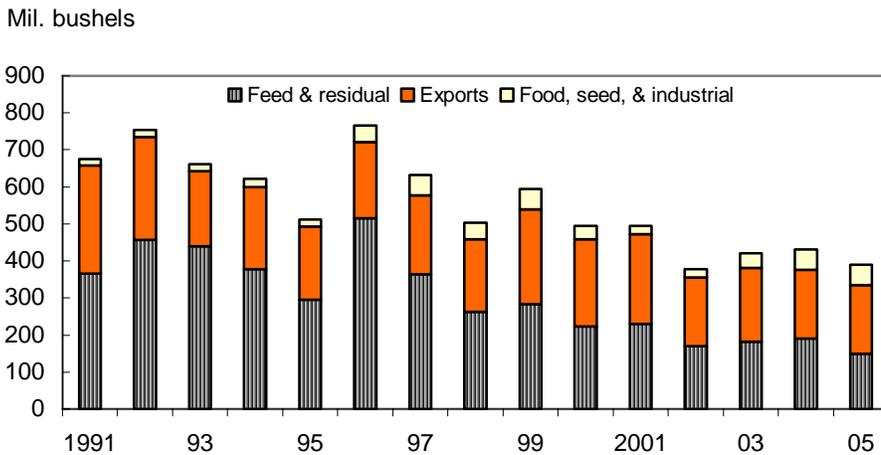
Total sorghum utilization is projected at 390 million bushels, down from 430 million last year. Feed and residual use is forecast at 150 million bushels, down from 191 million in 2004/05. Forecast food, seed, and industrial use in 2005/06 is 55 million bushels, essentially unchanged from 2004/05. Ethanol is the primary FSI category for sorghum. Corn is the dominant starch source used in U.S. ethanol plants, but sorghum is the primary grain used in some plants, particularly in sorghum-production regions. Some plants use either corn or sorghum depending on price and availability of each.

Figure 10
Sorghum harvested acres and yields



Source: USDA, National Agricultural Statistics Service, *Quick Stats*.

Figure 11
Sorghum disappearance by use



Source: USDA, World Agricultural Outlook Board, *WASDE*.

Forecasted sorghum exports are 185 million bushels in 2005/06, up from 184 million bushels in 2004/05. Mexico is by far the most important destination for U.S. sorghum, followed by Japan. From September through February (the last month for which Census has export data), total sorghum exports were 2.5 million tons; Mexico and Japan accounted for 63 percent and 25 percent of this total. Ending stocks in 2005/06 are expected to be 61 million bushels, up from 57 million bushels a year earlier.

Sorghum Prices Weaker

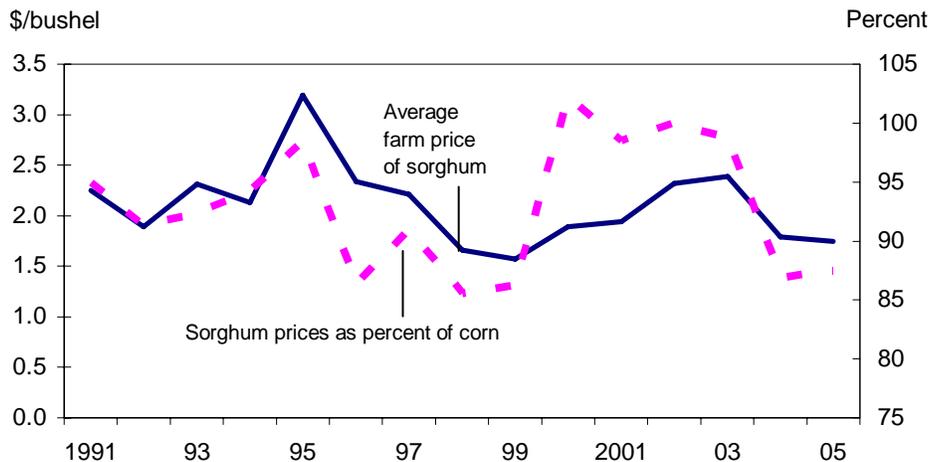
The season average sorghum price for 2005/06 is forecast at \$1.70-\$1.80 per bushel, compared with \$1.79 a year earlier. Traditionally sorghum prices average 92-93 percent of the corn price, but this is an unsteady relationship. The 2003/04 season average sorghum price was nearly the same as the 2003/04 season average corn price. Larger supplies and weak exports have lowered sorghum prices relative to corn prices.

Sorghum Acres Projected Nearly Unchanged in 2006

According to the 2005 *Prospective Plantings report*, growers intend to plant 6.5 million acres, up 29,000 acres from last year. Sorghum acres are expected to increase from last year in eight States, but decrease in nine States. The largest increase is expected in Colorado where growers intend to plant 70,000 acres more than the previous year. Kansas continues to have the largest area of sorghum planted at 2.80 million acres, up 2 percent from last year. In Kansas, conditions during the winter were mostly dry, and temperatures were above normal. As of April 23th, topsoil moisture was rated as 70 percent short to very short, compared with 20 percent last year. As a result, producers in Kansas intend to plant more sorghum since it is very resistant to drought conditions. The largest acreage decline is expected in Texas, where the intended sorghum area is 1.90 million acres, down 150,000 acres from 2005. Conditions have been so dry and warm this winter in Texas that approximately half the State was in extreme or severe drought. Precipitation during the winter was the third lowest on record.

Figure 12

Sorghum prices received by farmers and percent of corn price

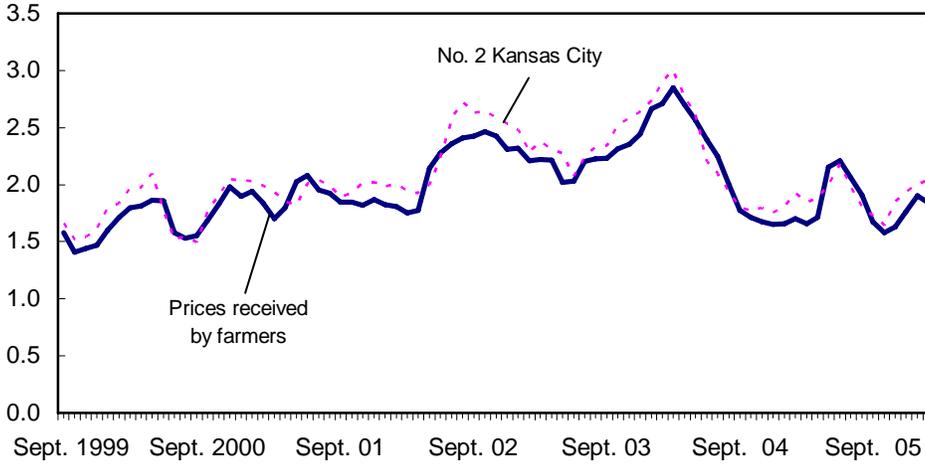


Sources: USDA, Economic Research Service, *The Feed Grains Data Delivery System*, and World Agricultural Outlook Board, *WASDE*.

Figure 13

U.S. sorghum prices: Kansas City cash and average farm price, September 1999-March 2006

\$/bushel



Sources: USDA, Agricultural Marketing Service, *Weekly Grain Market News Summary* and National Agricultural Statistics Service, *Agricultural Prices*.

Barley Production Declines in 2005/06

Barley production in 2005/06 is down sharply from last year's level. Forecast utilization is down due to a 50-million-bushel decrease in feed and residual. With a larger share of barley being used as malt, the all-barley price is expected to average \$2.45 to \$2.50 per bushel in 2005/06.

Barley production in 2005/06 was 212 million bushels, down from 280 million in 2004/05. Harvested area in 2005/06 is 3.3 million acres, down from 4.0 million in the previous year. Yield decreased from 69.6 bushels per acre in 2004/05 to 64.8 bushels per acre, further adding to the decline in production. The ratio of harvested to planted area is 84 percent, down from 89 percent in 2004/05.

Beginning 2005/06 stocks are 128 million bushels, up from 120 million bushels in 2004/05. Imports in 2005/06 are forecast at 5 million bushels, down from 12 million a year earlier and the lowest since 1983/84. Total forecast 2005/06 barley supply is 345 million bushels, down from 412 million the previous year.

Total Utilization Expected To Decline

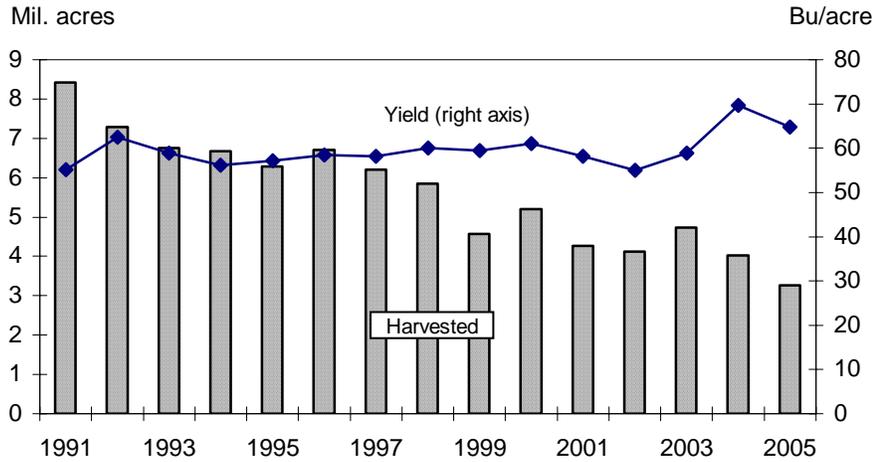
Total use is forecast at 240 million bushels, down from 284 million bushels in 2004/05. The bulk of this year-to-year change stems from an expected 50-million-bushel decrease in feed and residual, which is now forecast to be 55 million bushels. Feed and residual at this level would be the lowest since supply and use have been calculated under the current procedure in 1975. Exports are forecast at 30 million bushels in 2005/06, up from 23 million the previous year. Food, seed, and industrial use is forecast at 155 million bushels in 2005/06, about the same as in 2004/05. Barley used for malt production is the main element of FSI. Barley ending stocks for 2005/06 are forecasted at 105 million bushels, down from 128 million bushels a year earlier.

Barley Prices About Steady in 2005/06

The 2005/06 season average barley price is forecast at \$2.45 to \$2.50 per bushel, compared with \$2.48 the previous year. From June 2005 through March 2006, the simple average of feed barley was \$1.86, compared with \$1.78 for the same period a year earlier; the simple average price for malting barley was \$2.77 per bushel in 2005/06 compared with \$2.78 in 2004/05. The spread between malting and feed barley has averaged \$0.91 per bushel so far this year, down from \$1.00 in 2004/05.

Figure 14

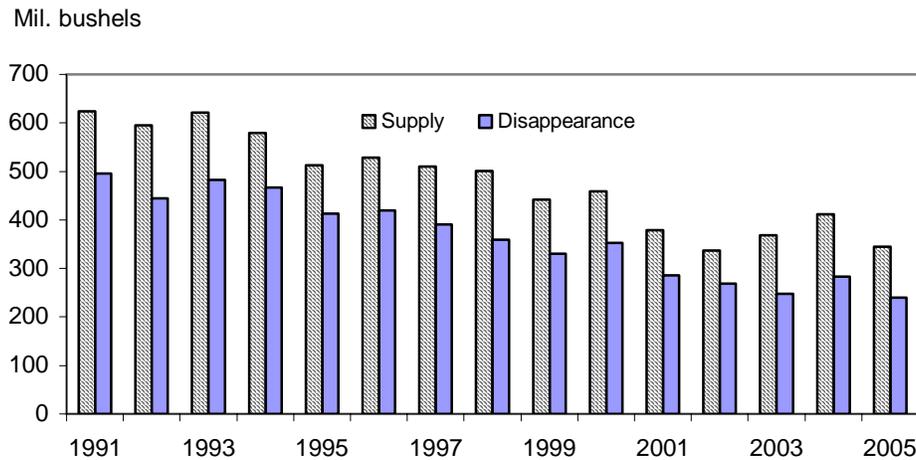
Barley harvested acres and yields



Source: USDA, National Agricultural Statistics Service, *Quick Stats*.

Figure 15

Barley total supply and disappearance



Source: USDA, World Agricultural Outlook Board, *WASDE*.

Record-Low Barley Plantings Expected in 2006

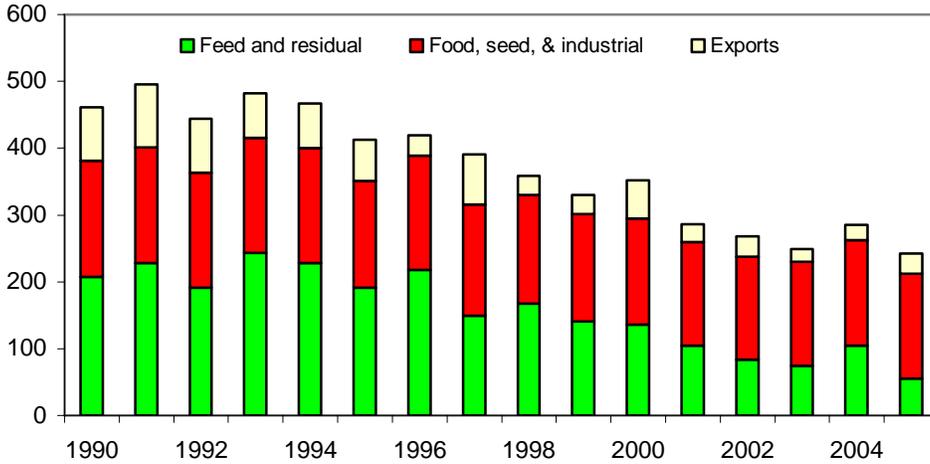
According to the 2006 *Prospective Plantings* report, barley growers intend to plant 3.7 million acres for 2006, down 5 percent from a year earlier. If realized, this will be the lowest barley planted acreage on record. In North Dakota, expected area planted was 1.20 million acres, unchanged from 2005's record-low area. Meanwhile, Montana's expected area decreased 11 percent to 800,000 acres, and Idaho's and Washington's prospective plantings were both down 5 percent from last year, to 600,000 and 205,000 acres, respectively. If realized, Idaho's expected

acreage will be the lowest since 1968, while Montana and Washington growers will plant the smallest area since 1953. Growers in California, Kansas, Kentucky, Maryland, and Michigan expected to plant more acres than in 2005.

Figure 16

Barley disappearance by type of use

Mil. bushels

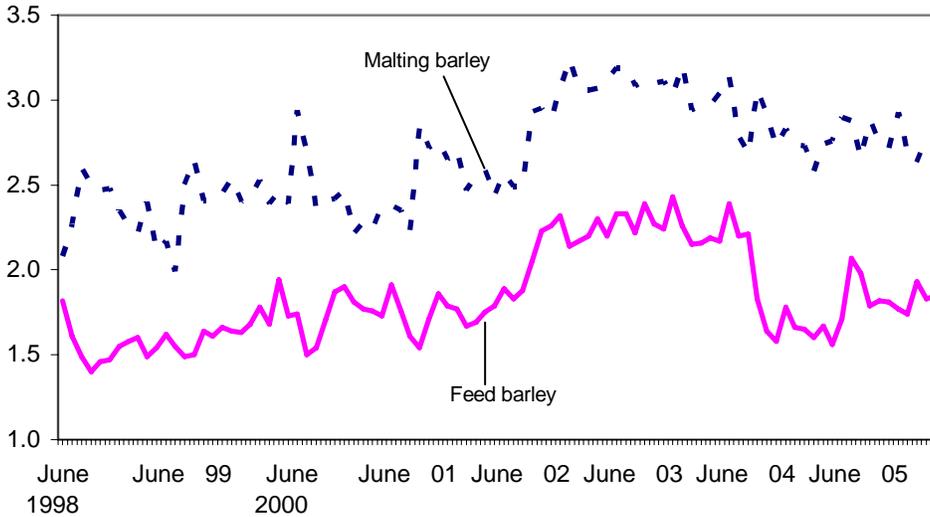


Source: USDA, World Agricultural Outlook Board, WASDE.

Figure 17

Monthly prices received by farmers, June 1998-March 2006

\$/bushel



Sources: USDA, Agricultural Marketing Service, *Weekly Grain Market News Summary*, and Economic Research Service, *The Feed Grains Data Delivery System*.

Total Oats Supply Down in 2005/06

In 2005/06 oats production was down from last year, and utilization is down slightly. Ending stocks are forecast to decline, and prices are down.

Total oats supply is forecast at 258 million bushels, down from 268 million bushels in 2004/05. Harvested area in 2005/06 was up 36,000 acres from the prior year, to 1.8 million acres. Oat yields were down 1.7 bushels per acre in 2005/06 from the 64.7 bushels per acre in 2004/05.

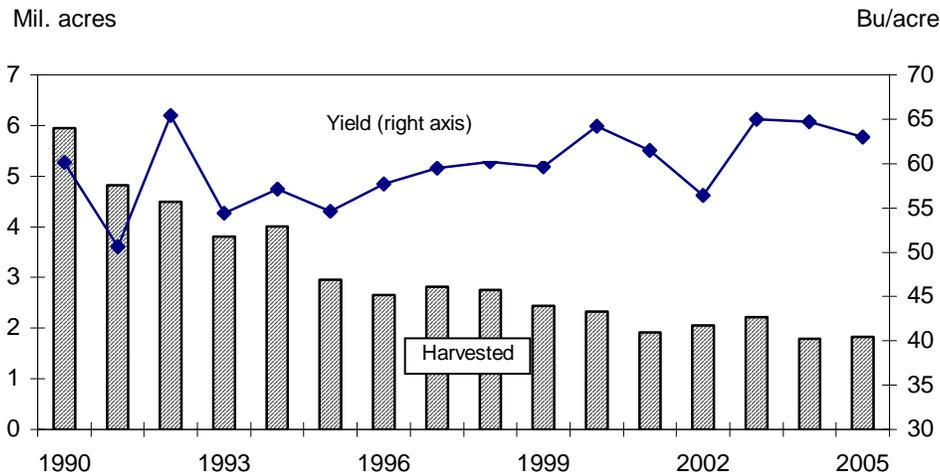
Beginning oats stocks were 58 million bushels in 2005/06, down from 65 million bushels a year earlier. Imports in 2005/06 were forecast at 85 million bushels, down from 88 million bushels in 2004/05 and the lowest since 1995/96.

Total Utilization Projected at 206 Million Bushels

Total 2005/06 oats utilization is projected at 206 million bushels, down 4 million bushels from the previous year and the lowest on record. The year-to-year decline stems from a drop in feed and residual use from 134 million bushels in 2003/04 to a forecast of 130 million bushels. Exports are about unchanged in 2005/06 and are currently forecast at 2 million bushels. Food, seed, and industrial use is forecast at 74 million bushels. Ending 2005/06 stocks are forecast to be 52 million bushels, down from 58 million bushels the previous year.

Figure 18

Oats harvested acres and yields

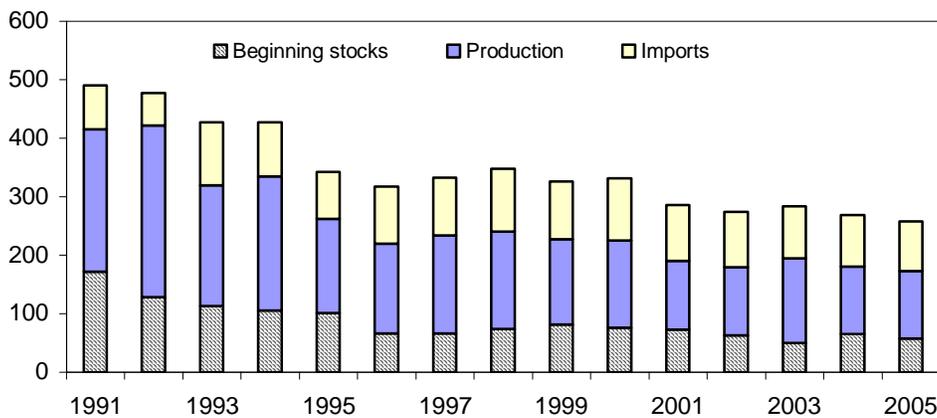


Source: USDA, National Agricultural Statistics Service, *Quick Stats*.

Figure 19

Oats supply

Mil. bushels

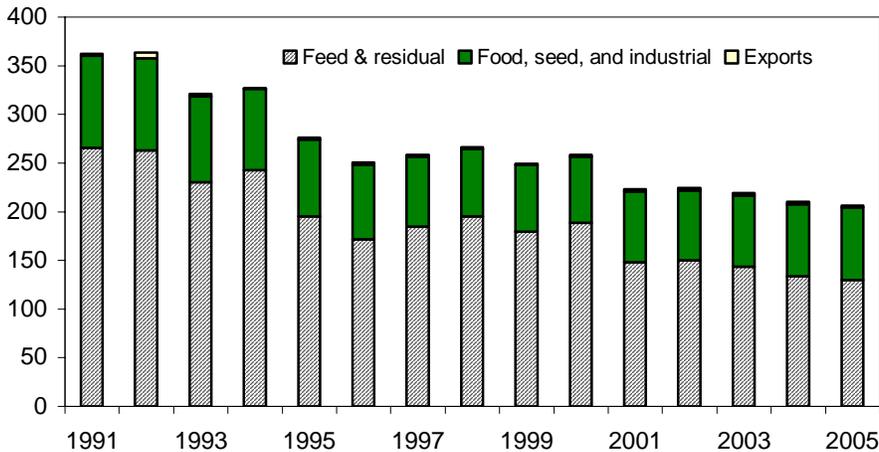


Sources: USDA, Economic Research Service, *The Feed Grains Data Delivery System* and World Agricultural Outlook Board, *WASDE*.

Figure 20

Total use of oats decline over time

Mil. bushels



Source: USDA, World Agricultural Outlook Board, *WASDE*.

Prices To Increase in 2005/06

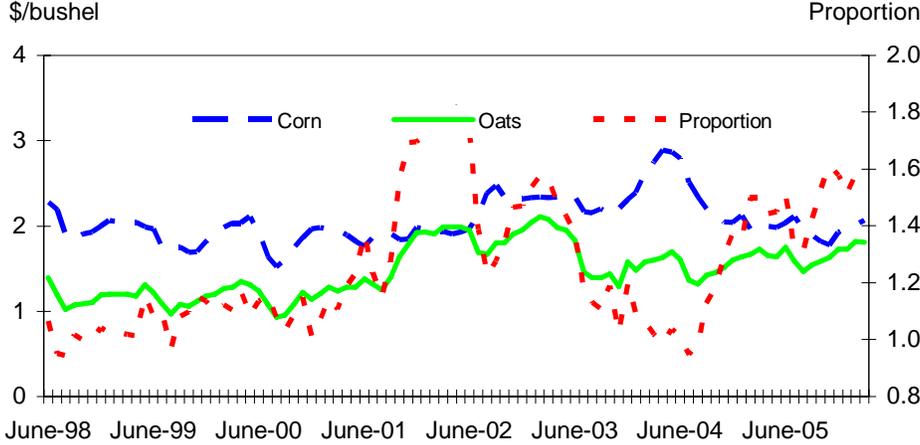
Average oats prices received by farmers in 2005/06 are expected to be \$1.60 per bushel, up from \$1.48 a year earlier. Projected prices are also above the 5-year average of \$1.49 per bushel.

Prospective Plantings Up in 2006

On March 1, 2006, farmers indicated that they intend to plant 4.3 million oats acres, up 78,000 acres from a year earlier. Area planted to oats is expected to increase or

remain unchanged in 18 States, including most States across the central Corn Belt and Great Plains. North Dakota, the leading State in terms of oat area planted, is expecting 560,000 acres of oats to be planted in 2006, up 70,000 acres from 2005. Large increases are also expected in South Dakota and Texas, with both States expecting increases of 30,000 acres from last year. Compared with 2005, the largest declines in planted acreage are expected in California and Minnesota, both down 20,000 acres from last year.

Figure 21
U.S. average prices of oats and corn plus proportion, June 1998-March 2006



Source: USDA, Economic Research Service, *The Feed Grains Data Delivery System*.

Hay Situation and Outlook

Hay Production Decreases in 2005

Hay production in 2005 and hay stocks (as of December 1, 2005) are both down. Prices for all hay are stronger in 2005/06, led by a 6-percent increase in alfalfa hay prices.

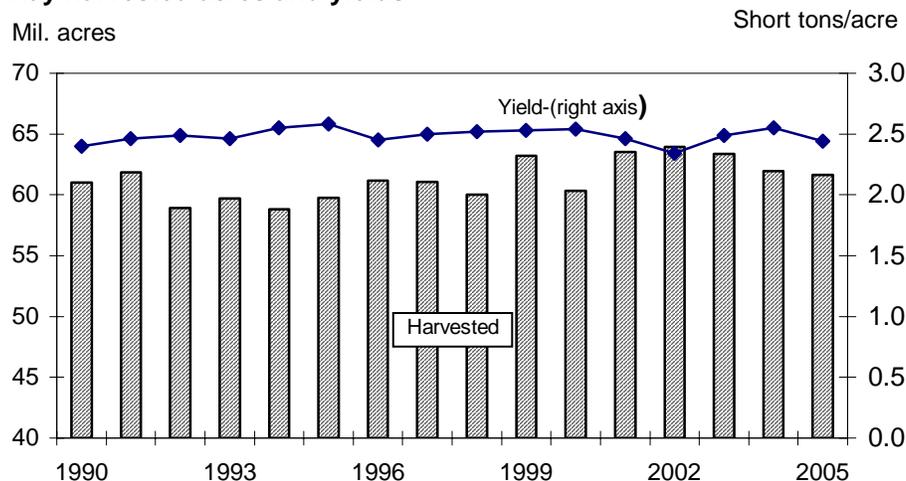
Stocks of all hay on farms totaled 105 million tons on December 1, 2005, down 8 percent from the previous year. Disappearance of hay from May 2005-December 2005 totaled 73.3 million tons, compared with 69.7 million tons for the same period a year ago.

Compared with December 1, 2004, hay stocks decreased in most of the Corn Belt and southern Great Plains States. In many of these States, drought conditions during the summer months resulted in increased supplemental feeding of hay. Meanwhile, stocks increased compared with last year in most of the northern Great Plains States as above-average rainfall and warm temperatures allowed farmers to get multiple cuttings of hay and provided good pasture and grazing conditions.

Roughage consuming animal units (RCAU) in 2005/06 are estimated at 72.3 million, up from 71.3 million a year earlier. Hay stocks on farms per RCAU on December 1, 2005, were 1.45 tons, compared with 1.61 tons per RCAU a year earlier.

Figure 22

Hay harvested acres and yields

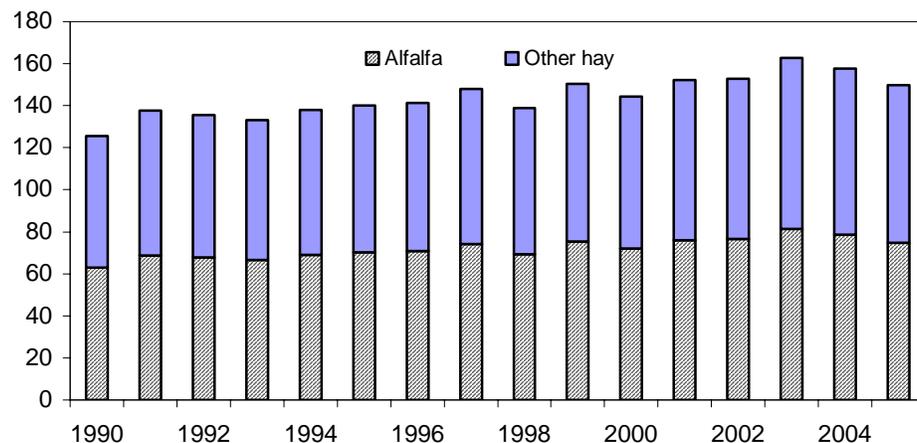


Sources: USDA, National Agricultural Statistics Service, *Crop Production Summary* and *Quick Stats*.

Figure 23

Hay production

Mil. tons



Sources: USDA, National Agricultural Statistics Service, *Crop Production Summary* and *Quick Stats*.

Hay production for 2005 is estimated at 151 million tons, down from 158 million tons in 2004. Acreage harvested in 2005/06 is 61.7 million acres, down from 61.9 million acres a year earlier. Average 2005/06 yield is 2.44 tons per acre, down 0.11 ton from the previous year. Texas is by far the largest producer of all hay in 2005 with production of 9 million tons, down 3.2 million tons from a year earlier. California, South Dakota, and Missouri are the second, third, and fourth largest hay producers in 2005/06.

Alfalfa hay production in 2005 totaled 75.8 million tons, up slightly from 2004. Harvested area, at 22.4 million acres, is 3 percent above the previous year. Area harvested is still the second lowest since 1952. Yields averaged 3.38 tons per acre, down 0.05 ton from the October forecast and down 0.10 ton from the 2004 yield. California continues to be the largest alfalfa producing State, followed by South Dakota, Iowa, and Idaho.

Compared with 2004, States in the northern Great Plains showed the largest increases in harvested acreage from last year. Montana and North Dakota both harvested 350,000 acres more than last year as a result of improved soil moisture conditions from above-average rainfall which allowed growers to make multiple cuttings of alfalfa. Meanwhile, the Pacific Coast States all showed a decline in harvested acreage, with Oregon showing the greatest decline, down 80,000 acres from last year. Yields decreased from last year across most of the southern Great Plains and Corn Belt as weather conditions throughout much of the growing season were less favorable than last year. In several of these States, drought conditions throughout much of the growing season limited the number of cuttings and reduced yields. The largest decreases in yields from 2004 occurred in Arkansas and Missouri where yields are down 1.2 tons and 1.1 tons, respectively.

Growers seeded 3.3 million acres of alfalfa and alfalfa mixtures during 2005, up from 2.8 million acres a year earlier. Newly seeded acres of alfalfa and alfalfa

mixtures will normally be harvested for dry hay for the first time in the year following the initial planting.

Production of all other hay in 2005 totaled 74.8 million tons, down 10 percent from the 2004 total. Area for harvest, at 39.3 million acres, is down 2 percent below last year. The average yield is estimated at 1.91 tons per acre, down 0.15 ton from last year's record-high yield.

With the exceptions of Florida and Mississippi, harvested acreage decreased across the southern Great Plains States and the Southeast. Large acreage decreases occurred in Missouri, Kansas, and Texas, with harvested area down 400,000 acres, 350,000 acres, and 300,000 acres, respectively. Drier conditions than last year contributed to decreased yields across much of the Corn Belt and southern Great Plains. Yields in Arkansas and Louisiana are down 0.8 ton and 0.7 ton, respectively, as drought conditions for most of the growing season resulted in fewer cuttings and reduced yields. With the exception of Wyoming, yields across the northern Great Plains increased from last year as timely precipitation allowed for multiple cuttings and good yields of other hay. Record-high yields were established in California, Mississippi, Nebraska, Nevada, and South Carolina.

Corn silage production is estimated at 106 million tons, down 1 percent from 2004. The U.S. silage yield is estimated at a record high 18.0 tons per acre in 2005, up 0.4 ton from last year. However, area harvested for silage, at 5.92 million acres, is down 3 percent from a year ago. Sorghum silage production is estimated at 4.22 million tons, down 12 percent from 2004. Area cut for silage is 311,000 acres, 12 percent lower than the previous year. Silage yields averaged 13.6 tons per acre, unchanged from last year.

All hay prices received by farmers during May-March 2005/06 averaged \$97.47 per ton, up from \$91.77 per ton in the same period a year earlier. The season average farm price for all hay in the May-April 2004/05 marketing year was \$92.00 per ton, up from \$85.50 in the previous marketing year.

Alfalfa hay prices received by farmers averaged \$104.45 per ton during the period from May to March, up from \$98.17 for the same period in 2004/05. The 2004/05 season average alfalfa farm price was \$98.60 per ton, compared with \$90.80 per ton in the previous marketing year.

Hay-other-than-alfalfa had a weighted season average price in 2004/05 of \$74.60 per ton compared with \$70.90 per ton in the previous marketing year. In the first 11 months of the 2005/06 marketing year, the simple average was \$77.65 per ton, compared with \$74.69 in the first 11 months of the previous marketing year.

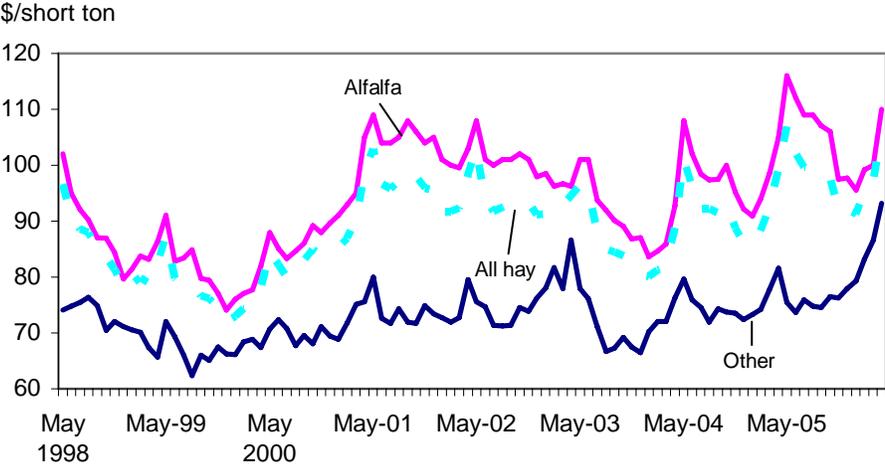
Prospective Harvested Acreage Down in 2006

The March *Prospective Plantings* report indicated that producers expect to harvest 61.5 million acres of all hay in 2006, down 171,000 acres from a year earlier. With the exception of Oklahoma, harvested acres are expected to decline or remain unchanged from last year throughout the Great Plains and adjacent areas of the Corn Belt. The State with the largest expected increase is Oklahoma, up 180,000 acres from last year. Wildfires and drought conditions during last fall and winter in

Oklahoma combined to limit available pasture and increase supplemental feeding. With hay supplies low, farmers in Oklahoma are expecting to harvest more hay acres this year. The States with the largest decrease in harvested area are North Dakota and Texas, with expected declines of 430,000 and 350,000 acres, respectively, from 2005. Drought conditions have been so severe in Texas that farmers have low expectations about the amount of hay acreage they will be able to harvest this year, despite the current low hay supplies in the State.

Figure 24

Hay prices received by farmers, May 1998-April 2006



Source: USDA, Economic Research Service, *The Feed Grain Data Delivery System*.

Feed and Residual Use

Feed and Residual Use To Decrease

Feed and residual use is expected to be down from last year in spite of increases in animal numbers. Strong livestock and meat prices have encouraged producers to increase livestock and poultry numbers, increasing feed needs.

Feed and residual use of the four feed grains plus wheat in September-August 2005/06 is expected to be down 3.5 percent from the 170 million tons used in September-August 2004/05. Corn is expected to represent 93 percent of feed and residual use in 2005/06, down 1 percent from 2004/05.

The index of grain consuming animal units (GCAUs) for 2005/06 is estimated to be up 2 percent from 2004/05's 90 million. In the index components, GCAUs for dairy, cattle on feed, hogs, broilers, turkeys, and layers are up from the previous year. However, the grain used per GCAU in 2005/06 is 1.79 tons, compared with 2004/05's 1.89 tons.

Dairy cows on January 1, 2006, totaled 9.1 million head, up 53,000 head from 2005. Dairy cow numbers are expected to decline slightly as the year progresses. Dairy replacement heifers totaled 4 million on January 1, up 4 percent from a year earlier. With growth in output per cow, milk production in 2006 is expected to be about 182 billion pounds, up from 177 billion in 2005. Thus, feed use by the dairy industry will strengthen.

Feed needs by the cattle on feed sector are expected to be fairly strong, as beef production in 2006 is forecast up 5 percent from 2005. The number of cattle on feed on January 1, 2006, totaled 14.1 million head, up 3 percent from the previous year. Numbers of fed cattle slaughtered are expected to be up, and weights are up.

Broiler production in 2006 is expected to increase 810 million pounds from 2005, as producers increase production. Broiler prices were down 3.3 cents per pound in 2005 compared with 2004 and are expected to be down again in 2006. Egg producers are expected to produce 7.65 billion dozen eggs in 2006, up 2 percent from 2005. Egg prices in 2006 are expected to be up 4.5 to 7.5 cents from 2005's 65.5 cents per dozen. In 2006, turkey production is forecast at 5.6 billion pounds, up 71 million from 2005. Overall, feed demand by the poultry sector is expected to remain strong.

Pork production in 2006 is expected to be up 3 percent from the 21-billion-pounds produced in 2005. Hog farmers responding to the March 1 survey of hog producers indicated that they intended to increase the number of sows farrowing by 1 percent from the year earlier in both March-May 2006 and June-August 2006. Pig crops were up relative to the year earlier in September-November 2005 and in December 2005-February 2006 and are expected to boost pork production in 2006. The forecast increase in pork production suggests feed needs for the pork sector will be strong in 2005/06.

Food, Seed, and Industrial Use of Corn

Food, Seed, and Industrial Uses of Corn To Increase in 2005/06

Food, seed, and industrial (FSI) use of corn is expected to rise 11 percent from a year earlier in 2005/06. Corn used for ethanol will post the largest increase.

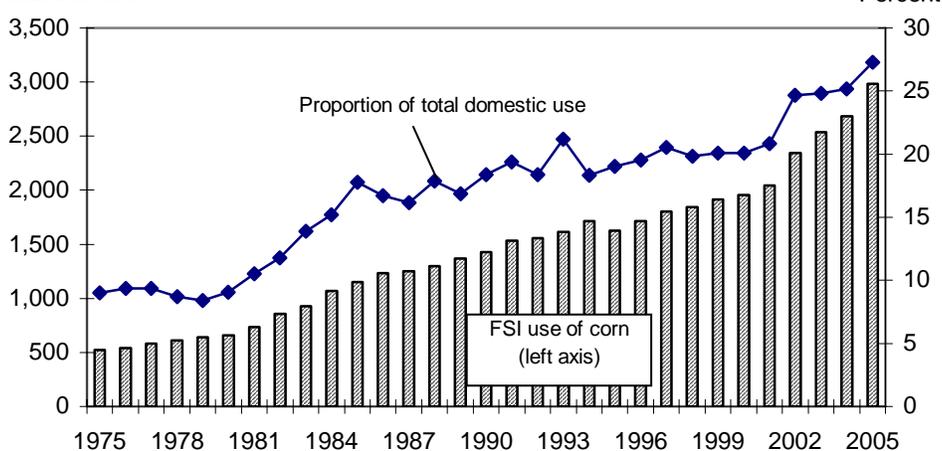
Corn FSI use in 2005/06 is expected to total 2,985 million bushels, up from 2,686 million in 2004/05. FSI use would represent 27 percent of total corn use, up from 25 percent in both 2004/05 and 2003/04. Corn use in 2005/06 is expected to be up for all use categories, except seed use, if farmers stick to their intended acreage.

Corn used to make ethanol for all of 2005/06 is forecast at 1,600 million bushels, up 21 percent from 2004/05. In February (latest data available), ethanol production reported by the Department of Energy (DOE) was 302,000 barrels per day, up from 245,000 in February 2005 as new plants have come on stream. This ethanol production reflects higher use of capacity and the new plants that have been added to meet production required by the ethanol mandate. Stocks in February of ethanol also reported by DOE were record high at 310 million gallons. The passage of the Energy Policy Act of 2005 has resulted in gasoline producers shifting from MTBE to ethanol in May 2006 and is resulting in strong demand for ethanol. To further complicate matters, questions about future availability of crude oil from politically sensitive areas have sharply boosted prices. In 2004, ethanol prices were high enough to result in imports of ethyl alcohol for fuel use, but the Census data do not have a separate category for fuel use. Imports for fuel use must pay 54 cents per gallon to offset the blender credit for domestic alcohol unless the alcohol is produced in countries that can ship duty free such as the Caribbean Basin. Almost all of the ethanol produced in the Caribbean Basin is further processed ethanol from Brazil. With a short Brazilian sugarcane crop last year, Brazil is struggling to produce enough ethanol to supply their needs, and exports have been limited.

Figure 25

FSI use of corn

Mil. bushels

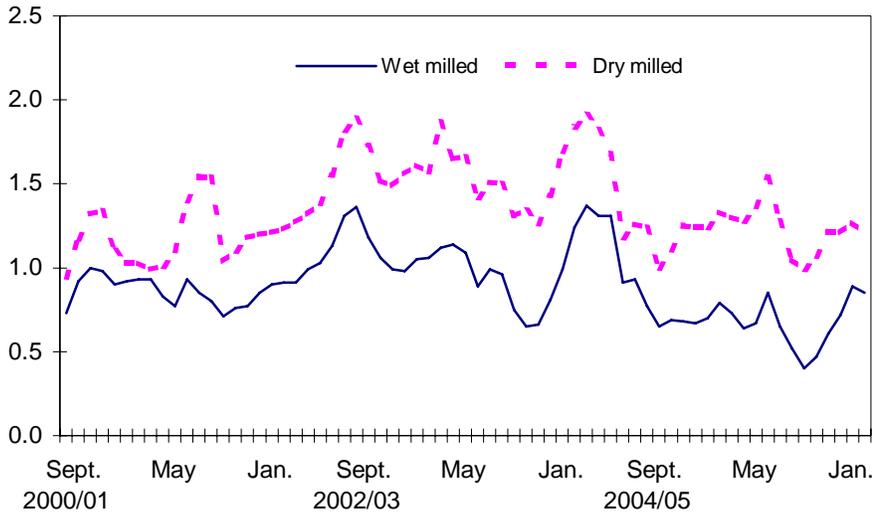


Sources: USDA, Economic Research Service, *The Feed Grains Data Delivery System*, and World Agricultural Outlook Board, *WASDE*.

Figure 26

Net corn costs for wet and dry milling

Dollars per bushel

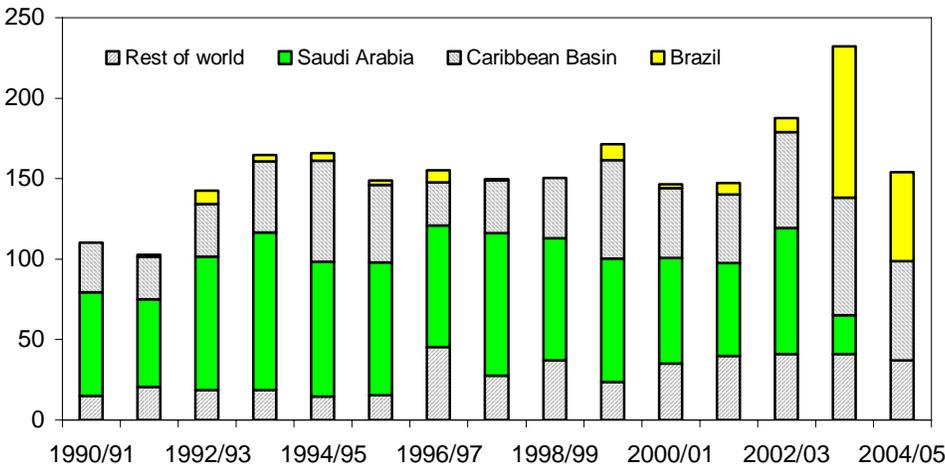


Sources: USDA, Economic Research Service Calculations from various series available from Agricultural Marketing Service.

Figure 27

U.S. ethyl alcohol imports

Mil. gallons



Source: Bureau of the Census, USDC, at <http://www.usatradeonline.gov/>

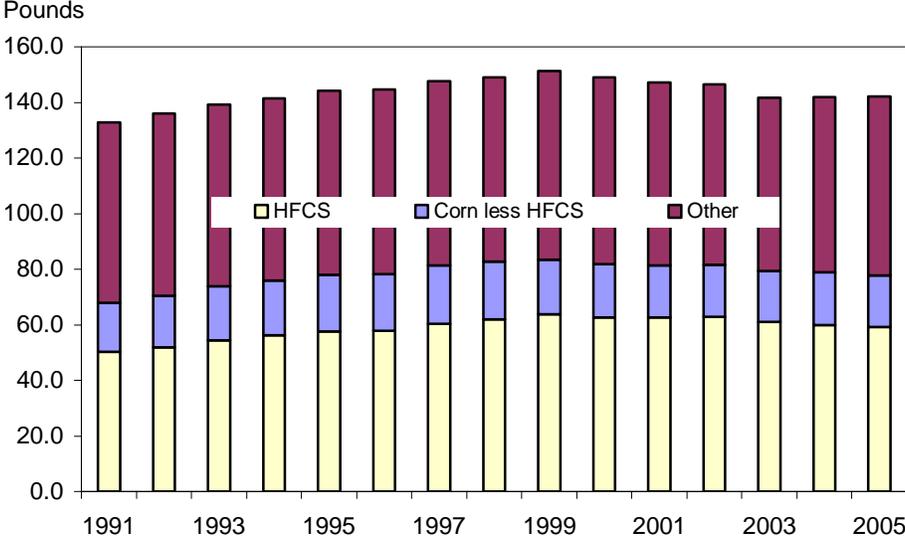
Corn used for high fructose corn syrup (HFCS) in 2005/06 is projected at 535 million bushels, up 3 percent from 2004/05. HFCS is primarily used in soft drinks. Although sales have expanded as companies add soft drink machines, the rate of growth has slowed recently as consumers use more bottled water and other beverage alternatives. Currently, efforts are being made to encourage U.S. consumers to exercise more and limit calories to reduce obesity. New popular diets stress low carbohydrates and sugars. However, due to additional sugar imports

allowed from Mexico, Mexico has allowed additional HFCS imports which may strengthen corn use. Estimated corn used for HFCS exports were up 81 percent in September 2005-February 2006 relative to the similar period a year earlier. In September 2005-February 2006, exports to Mexico were up 552 percent, and Canada was up 10 percent from the same period a year earlier. In September 2004-August 2005, shipments to Mexico were up 222 percent from 2003/04.

In 2005/06, corn used to make glucose and dextrose is forecast to increase from the 222 million bushels used in 2004/05, which was up from the year before. In the first 6 months of the marketing year, corn used to produce glucose and dextrose was up fractionally from last year.

In 2005/06, corn used in starch production is expected to be up nearly 1 percent from the 277 million bushels used in 2004/05. Use was up fractionally in the first half of the marketing year. Starch use normally increases when the economy strengthens because starch is used in a myriad of products. Beverage and manufacturing alcohol production in 2005/06 is expected to use 135 million bushels of corn, up 2.2 million from 2004/05.

Figure 28
Per capita sweetener consumption

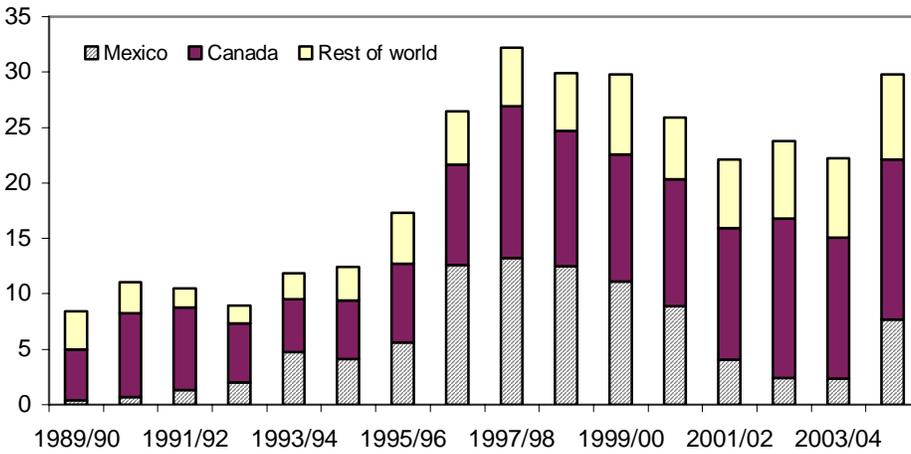


Source: USDA, Economic Research Service, *Sugar and Sweeteners Yearbook*.

Figure 29

U.S. corn sweetener exports in bushel equivalents

Mil. bushels

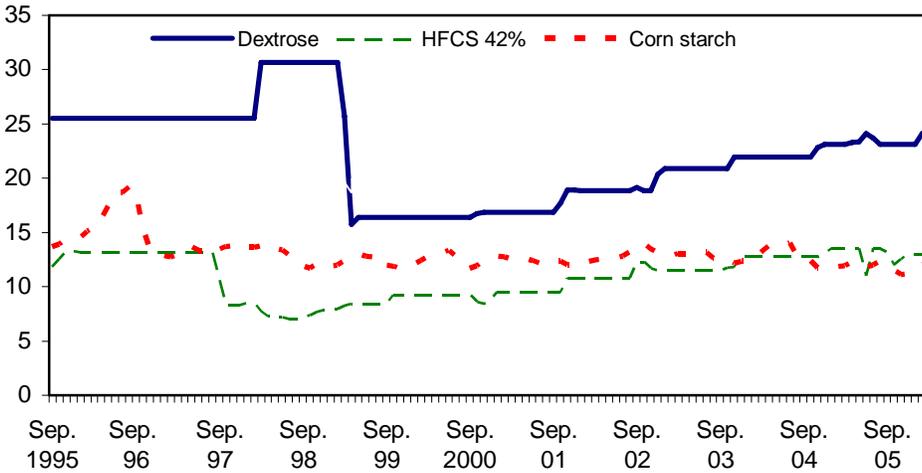


Source: Bureau of the Census, USDC, at <http://www.usatradeonline.gov/>

Figure 30

Wet mill product prices, September 1995-March 2006

Cents/bushel



Sources: "Milling and Baking News", Sosland Companies, and USDA, Economic Research Service, *The Feed Grains Data Delivery System*.

World Coarse Grain Outlook

Global Coarse Grain Production Declines 5 Percent in 2005/06

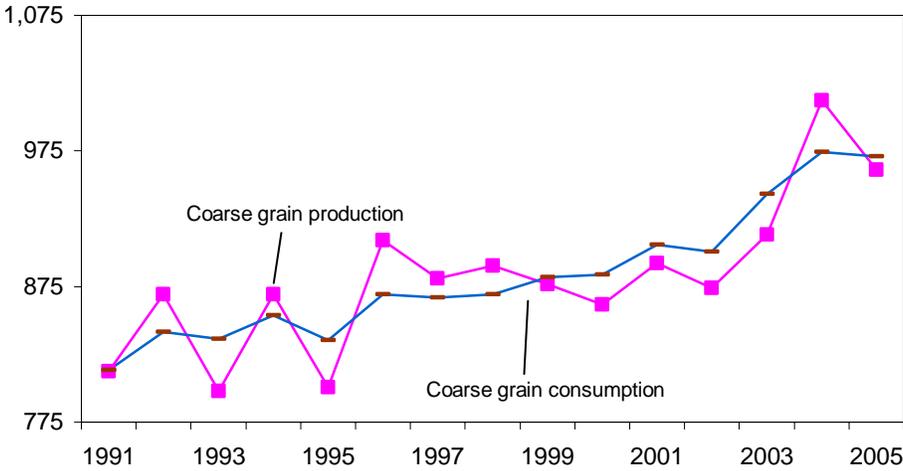
World coarse grain production is expected to drop 5 percent in 2005/06 compared with the previous year. Foreign coarse grain production is forecast down 4 percent as the European Union (EU-25) dropped 13 percent and the former Soviet Union (FSU-12) fell 12 percent, more than offsetting a record crop in China. Global coarse grain beginning stocks are up 28 percent compared with the previous year, following record 2004/05 production, and the increased 2005/06 beginning stocks offset most of the production decline, leaving 2005/06 global supplies down only slightly year-to-year. World coarse grain consumption is expected to decline slightly in 2005/06 due to the smaller production and outbreaks of animal diseases, especially avian influenza. Even though global consumption is expected to decline slightly, it will be near record levels, trimming world ending stocks an expected 10 million tons to 168 million, the third lowest in the last 20 years.

Foreign Coarse Grain Production Declines in 2005/06

Foreign (world less the United States) coarse grain production, 663 million tons in 2005/06, is forecast down 4 percent from a year earlier. Foreign corn production is expected to decline 2 percent, to 402 million tons, second only to the previous year's record.

Foreign corn area declined slightly, but corn prices were attractive enough relative to other crops in most countries to maintain area. However, by the time Southern

Figure 31
World feed grain production and consumption
Mil. metric tons



Sources: USDA, Foreign Agricultural Service, *Production, Supply & Distribution (PS&D)*, and Grain: World Markets and Trade (*Grain Circular*).

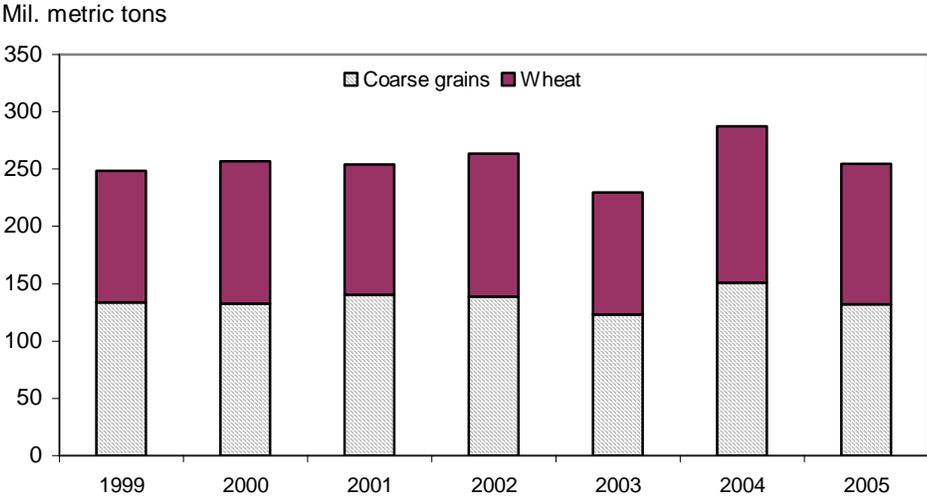
Hemisphere producers planted, corn prices were less attractive. Excessive dryness during seeding in Argentina also impacted area planted. In South Africa, low prices and worries about land reform contributed to farmers' decision to cut corn area 32 percent. Drought in Southern Europe reduced EU-25 corn production 10 percent. However, corn area and production increased in 2005/06 in China and Brazil, partly offsetting declines elsewhere.

Foreign production of barley is estimated to decline 10 percent to 133 million tons, as a 3-percent drop in area combined with an 8-percent decline in average yields from the previous year's record. Projected foreign sorghum production increased 2 percent to 47 million tons, and oats slipped 10 percent to 22 million tons, mostly due to reduced yields in the EU-25 and FSU. Foreign rye production plummeted 15 percent with lower area and yield in the EU-25.

China's coarse grain production (mostly corn) in 2005/06 increased 4 million tons to 142 million. Corn area is estimated up 3 percent as government incentive payments and tax policy favored grains. Growing conditions were mostly favorable, but there were dry, hot spells in some regions at critical times, and yields nearly matched the previous year's record levels. China's barley and sorghum production is small compared with corn, and while barley area increased, boosting production 6 percent to 3.4 million tons, sorghum area and production declined slightly to 2.3 million.

The EU-25 coarse grain production is estimated down 19 million tons to 132 million. Prolonged drought devastated coarse grains production in Spain and reduced corn yields in Southern France. There were some parts of the EU-25 where growing conditions were favorable, and Hungary had record corn yields, but yields for coarse grains in several other EU-25 countries declined.

Figure 32
Wheat and coarse grain production in the EU-25



Source: USDA, Foreign Agricultural Service, *Production, Supply & Distribution (PS&D)*.

Coarse grain production in the former Soviet Union (FSU-12, excluding the Baltics) is estimated down 8 million tons to 55 million in 2005/06. In Russia and Ukraine, area planted to barley and corn declined, with increases for oilseeds and wheat. Russia's barley yield matched the previous year's level, and Ukraine had record corn yields, but with reduced area, production declined.

Other Europe's coarse grain production declined 2 million tons in 2005/06 to 27 million. Reduced yields for corn and barley in Romania account for most of the decline.

South America's coarse grain production in 2005/06 is expected to decline 2 million tons to 71 million. Corn production in Brazil increased 6 million tons to 41 million, as corn prices provided an incentive to increase area, and yields were not as low as last year despite a second year of drought. In Argentina corn area was reduced by poor returns for corn relative to soybeans and dryness at planting. Moreover, hot dry conditions in some regions during reproduction contributed to lower corn yields. Argentina's corn production dropped 6.5 million tons to only 14 million. Sorghum production in Argentina also declined.

Rains were mostly favorable across much of the Middle East, boosting coarse grain production nearly 1 million tons to 17.5 million tons. Turkey is expanding the production of irrigated corn, producing a record coarse grain crop.

Australia's 2005/06 coarse grain production is forecast up 2 million tons to 14 million. Barley area expanded to record levels because in some regions returns were attractive compared with wheat. Average yields are reportedly rebounded from last year's low level, but did not reach the 2003/04 record.

Mexico's coarse grain production in 2005/06 is expected to decline 2 million tons to 27 million. Corn prices were not considered attractive, and area is forecast down 12 percent. Despite forecast record yields, corn production is projected down 2 million tons.

Canada's coarse grain production of 26 million tons in 2005/06 is slightly lower than the previous crop. Barley area declined, dropping production 0.7 million tons. However, record corn yields boosted its production 0.6 million tons. Oats yields declined due to excessive rains in some regions, dropping production 0.3 million tons.

South African local corn prices at planting were low, and ongoing land reform threatened some corn producers. Area is forecast down 32 percent to the lowest level in the USDA data base going back to 1960. However, weather for South Africa's corn crop has been mostly favorable, generally wetter, and cooler than normal. Production is projected down 4 million tons to 7.5 million. Elsewhere in Sub-Saharan Africa, growing conditions have been generally good in West Africa but drought-plagued in East Africa. On balance, sorghum and millet production are up enough to offset most of the decline in South Africa's corn, leaving Sub-Saharan Africa's total coarse grain production down 1.5 million tons to 76.3 million.

North Africa, especially western portions, suffered from some of the same drought that afflicted Spain, and coarse grains production dropped 3 million tons to 9

million. Barley production fell to less than half the previous year's level. In Egypt, where agriculture is irrigated, coarse grain production was steady.

India expanded corn planting, and area and production reached record levels, but millet yields dropped, leaving total coarse grains production down slightly at 34 million tons.

2005/06 Beginning Stocks Increased in the United States, Decreased in China

Global coarse grain beginning stocks in 2005/06 are estimated at 177 million tons, up 38 million from the previous year, but U.S. stocks are up 30 million, while foreign coarse grain stocks are only up 8 million tons, an increase of 7 percent. Over half of estimated global coarse grain stocks are corn stocks in China and the United States. U.S. corn beginning stocks are larger than those estimated for China for the first time in 17 years. Moreover, since China's stocks declined during 2004/05, U.S. coarse grain stocks are over 50 percent larger than those estimated for China.

Coarse grain 2005/06 beginning stocks for the rest of the world (world minus China and the United States) are estimated at 82 million tons, up 17 million from a year earlier, and are record large. EU-25 coarse grain beginning stocks nearly doubled in one year to 24 million tons. Canada's coarse grain beginning stocks increased over 50 percent to 6 million tons.

Foreign Coarse Grain Use To Decline Slightly in 2005/06

World coarse grain consumption in 2005/06 is forecast down 3 million tons to 971 million tons, only the fourth time that global coarse grain use has declined in the last 15 years. Foreign coarse grain consumption is projected down 4 million tons, a decline of less than 1 percent. Foreign wheat feed use is forecast up 6 million tons, with wheat replacing feed grains in some animal rations in the EU-25 and FSU-12. World coarse grain consumption in 2005/06 will be limited by outbreaks of animal diseases, especially avian influenza.

EU-25 coarse grain use is expected to drop 6 million tons to 133 million. Coarse grain production dropped more sharply than wheat production, so wheat feed use is projected up 4 million tons. Import restrictions also limit coarse grain use. In Other Europe, feed grain consumption is expected to decline slightly to 25 million because of reduced production.

In China, economic growth remains robust, and meat production is growing. However, coarse grain use is expected to grow less than 2 percent (2 million tons to 143 million). The very dramatic rise in soybean meal use may be moderating the increases in corn use, as feed rations become more balanced and efficient. Moreover, avian influenza problems have limited expansion of poultry production.

Much of East Asia (excluding China) is expected to have slowly declining consumption of feed grains in 2005/06. In South Korea, feed grains use is expected to decrease slowly because of increased imports of feed-quality wheat. However, a small reduction is expected in Japan as domestic meat production declines as meat imports increase.

Southeast Asia is expected to increase coarse grain use nearly 1 million tons to 24 million as production and consumption have adjusted to chronic problems with avian influenza, and have begun to expand.

India's coarse grain consumption in 2005/06 is forecast down slightly at 34 million tons. Food, seed, and industrial use is expected to grow slightly, but feed and residual use is expected to be reduced. Corn feed use is forecast down in 2005/06 because of avian influenza.

Consumption of coarse grain in the FSU-12 is expected to decline nearly 5 million tons in 2005/06 as more feed-quality wheat is used in animal rations. A decline in barley production is expected to lead to reduced feeding, but the export market is expected to remain relatively strong and stable. Increased wheat production helps support wheat feed use.

In the Middle East, coarse grain use in 2005/06 is expected to increase 1 million tons to 34 million, mostly because of continued large barley imports by Saudi Arabia. Two winters of worse-than-normal rains have stressed pastures for sheep and camels, increasing the need to import and feed barley. Iran is also expected to increase barley feeding.

Coarse grain consumption in Sub-Saharan Africa is forecast up slightly to 79 million tons in 2005/06. In this region most of the coarse grain consumption is for human food use, but imports are expected to be little changed even though production is forecast down. Instead, South Africa is expected to reduce corn stocks.

Coarse grain consumption in Latin America (excluding Mexico) is expected to increase 2 million tons to 75 million in 2005/06. Most of the growth is in Brazil, where the poultry and pork sectors continue to expand.

In Mexico, coarse grain consumption is forecast up 1 million tons to 39 million tons. This does not include U.S. shipments of cracked/kibbled corn. As permits to import corn (cupos) are limited, and sorghum prices at the border are not low enough relative to corn to account for the feed value, feed compounders in Mexico are importing cracked corn. Imports of cracked corn are classified as a product instead of as grain, thus do not count against the corn quota, and do not require cupos. They do not appear in the USDA corn supply and demand balance for Mexico, but do appear as U.S. feed and residual use in the U.S. corn supply and demand. In 2002/03 U.S. shipments of cracked corn to Mexico nearly tripled compared with the previous year, and exceeded 2.5 million tons corn equivalent. In 2003/04 growth continued, but at a slower pace, with cracked corn imports reaching 2.6 million tons of corn equivalent. For 2004/05 cracked corn imports were 3.5

million tons, and for September through February 2005/06 cracked corn shipments to Mexico are up 8 percent.

In North Africa, feed grain consumption in 2005/06 is expected to decline slightly to 21 million tons due to reduced grains production in Western countries and because of avian influenza in Egypt.

In Canada and Australia, coarse grain consumption is expected to increase slightly. Increased production in Australia is expected to boost use to 7.3 million tons. In Canada, increased domestic supplies of corn and barley, as well as restrictions on corn imports, are expected to boost use 0.8 million tons to 24.5 million despite very large supplies of feed-quality wheat.

Global Coarse Grain Ending Stocks To Decline in 2005/06

World coarse grain stocks are projected to decline 10 million tons in 2005/06 to 168 million tons. With U.S. stocks increasing, foreign coarse grain stocks are forecast down 14 million tons, to 105 million. China's coarse grain stocks (mostly corn) are forecast down 4 million tons to 33 million. Coarse grain stocks in the rest of the world are expected to decline 10 million tons to 72 million.

China has been reducing corn stocks for several years. Eventually, China's corn supplies are expected to become tight enough so that China emerges as much less of an exporter, and possibly a major corn importer, but the timing of this switch has been uncertain. As long as corn stocks are perceived as burdensomely large, the incentive to export to support producer prices will remain. China stopped subsidizing additional corn export sales in the spring of 2006, and 2005/06 exports are projected down 34 percent. The reduced exports and firm corn prices in China are indicators that the long process of liquidating excess corn stocks may be mostly complete.

EU-25 coarse grain ending stocks, mostly barley, corn, and rye, are expected to decline 3 million tons to 21 million during 2005/06. Program reforms have eliminated price supports for rye, and rye intervention stocks are being gradually liquidated. With reduced production, barley stocks are expected to drop. An increase in wheat feed use is limiting the decline in EU-25 coarse grain stocks. Feed wheat is not eligible for government intervention programs and it bids its way into feed rations, leaving more barley to move into government stocks. Some new-member countries like Hungary have increased ending stocks of corn.

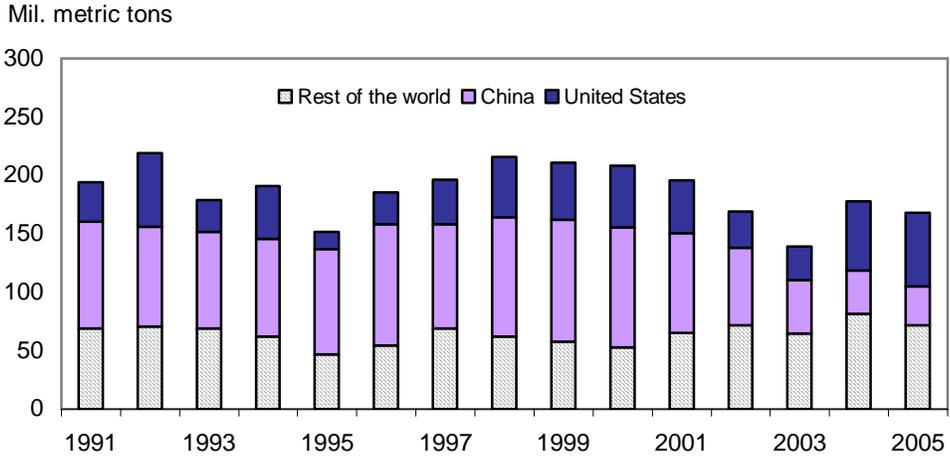
In the FSU-12, North Africa, and South Africa, coarse grain stocks are expected to decline because of reduced production. The reduction in coarse grain stocks is expected to be significant but modest in the FSU-12, down 2 million tons to 5 million; down 2 million to 6 million for North Africa; and down 1 million to 2 million in South Africa. In 2005/06 Canada is also expected to reduce coarse grain stocks (down 1 million tons to 5 million) but increased exports and reduced imports are key drivers.

Foreign corn stocks are expected to decline 6 million tons to 71 million by the end of 2005/06 with two-thirds of the decline in China. Mexico's corn stocks are

projected down 2 million tons to 3 million due to reduced production and firm demand. South Africa is expected to reduce corn stocks 1 million tons as area planted has dropped dramatically. On the other hand, EU-25 corn stocks are expected to increase, especially in new member states.

World barley stocks are projected down 6 million tons to 27 million, with the largest declines in the EU-25, FSU-12, North Africa, and Canada. Global oats stocks are expected to decline 3 million tons, with small decreases in both the EU-25 and Canada. Global rye stocks are also expected to decline to 3 million tons as the EU-25 liquidates government stocks. World sorghum stocks are expected to increase to nearly 5 million tons in 2005/06, dominated by the United States.

Figure 33
Coarse grain ending stocks



Source: USDA, World Agricultural Outlook Board, WASDE, and Foreign Agricultural Service, *Production, Supply and Distribution (PS&D)*.

World Coarse Grain Trade Outlook

U.S. Corn Exports To Slump in 2005/06 as Global Trade Declines and Argentine Competition Increases

U.S. corn exports for the October-September 2005/06 trade year are forecast at 50.5 million tons, up 12 percent from the previous year. Competition from Argentina is down due to a smaller corn crop. Moreover, corn exports from China, Brazil, and South Africa are expected to decline. However, large foreign supplies of competitively priced wheat for feeding are displacing U.S. corn. Also, avian influenza is expected to slightly reduce world corn trade in 2005/06.

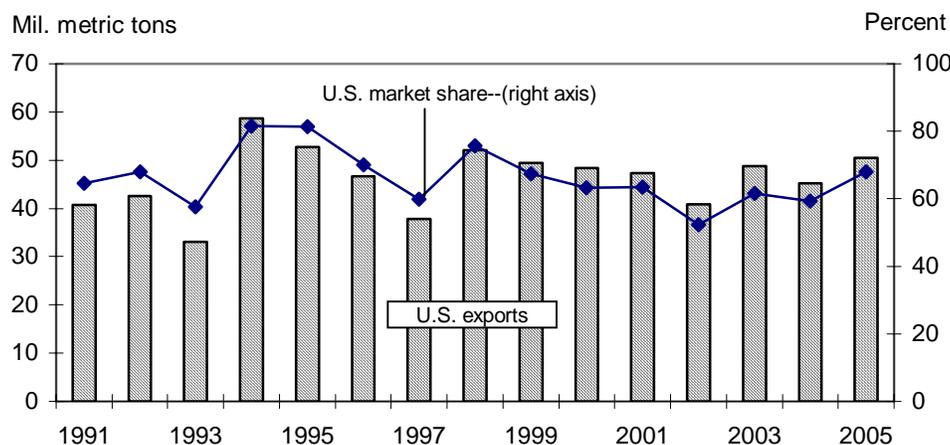
Global Coarse Grain Trade Forecast Down 2 Percent in 2005/06

World coarse grain trade in 2005/06 is projected at 100 million tons, down 2 million tons from a year earlier. Global corn trade is forecast down 2 million tons to 74 million tons. Barley trade is projected up nearly 1 million tons to 18 million. World sorghum trade is expected to increase slightly to 6 million tons. World oats trade is expected to decline slightly to 2 million. Global rye trade is expected to nearly disappear, cut in half compared with the previous year at less than 0.5 million tons and the lowest level in the USDA data base going back to 1960.

The country with the largest reduction in coarse grain imports forecast in 2005/06 is Egypt, forecast down 1.1 million tons to 4.3 million, due to reduced demand for poultry caused by avian influenza. Canada is expected to cut imports 0.8 million tons to 1.6 million because of large domestic grain supplies and duties on U.S. corn which were in place until April 18, 2006.

Figure 34

U.S. corn exports and market share



Sources: USDA, Foreign Agricultural Service, *Production, Supply and Distribution (PS&D)*, and Economic Research Service, *The Feed Grains Data Delivery System*.

Coarse grain imports by the Middle East are projected down 1 million tons to 17 million. Turkey is expected to reduce corn imports to very low levels and begin to export corn because of the expansion of irrigated corn production. Israel's coarse grain imports are forecast down 0.4 million tons to 1.3 million due to increased imports of wheat for feeding. Iran is expected to reduce corn imports slightly because political considerations preclude purchases from the United States or Argentina, and other sources are limited. Saudi Arabia's 2005/06 coarse grain imports are forecast up slightly at 7.9 million tons as grazing for sheep and camels has been limited by below-normal winter rains.

South Korea's coarse grain imports (mostly corn) are forecast down slightly to 8.5 million tons because of continued competition with feed-quality wheat.

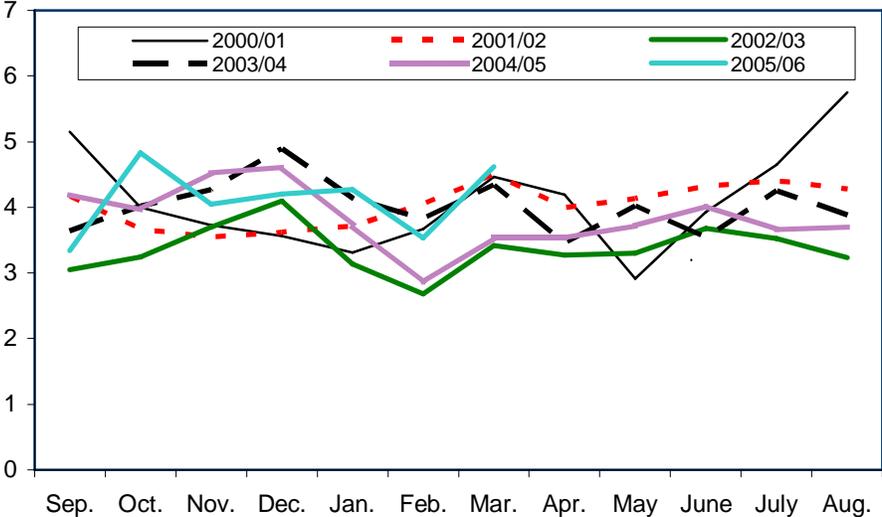
Mexico is expected to increase coarse grain imports 1.4 million tons to 10.3 million. Reduced production of both corn and sorghum combined with growing feed demand are boosting imports. Latin American (excluding Mexico) imports of coarse grain are forecast up slightly to 11 million tons, with slow growth in meat production expected in several countries.

Japan is projected to import 19.5 million tons of coarse grain in 2005/06, down slightly from the previous year. Japan remains by far the world's largest importer.

Competition Declining for Corn Exports in 2005/06

Argentina is expected to be the world's second largest corn exporter in 2005/06, despite a nearly 4-million-ton drop in projected exports to 10.5 million tons for the October-September trade year. Corn production for the crop currently being

Figure 35
Monthly U.S. corn exports
 Mil. metric tons

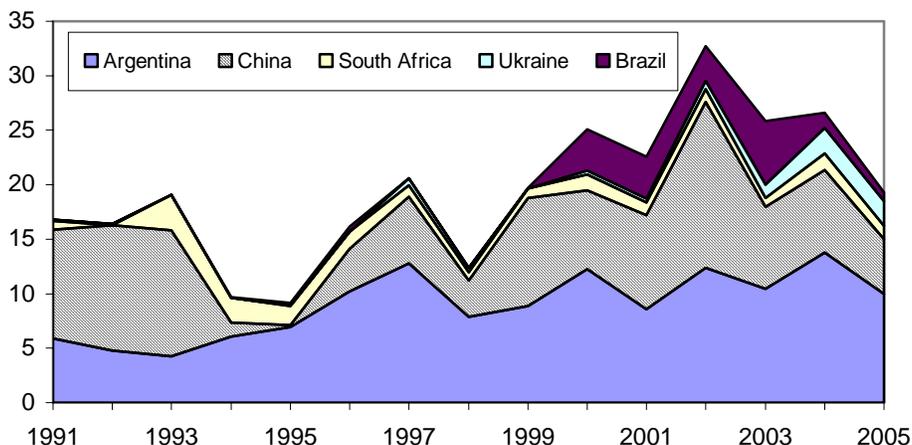


Sources: Bureau of the Census USDC, at <http://www.usatradeonline.gov/> and USDA, Economic Research Service, *The Feed Grains Data Delivery System*.

Figure 36

Corn exports for major competitors

Mil. metric tons



Source: USDA, Foreign Agricultural Service, *Production, Supply and Distribution (PS&D)*.

harvested is forecast down 30 percent. However, the previous year's large crop sustained shipments early in the 2005/06 October-September trade year. With a much smaller crop and a small increase in domestic use, shipments during the second half of 2005/06 are expected to be much lower than a year earlier.

China's corn exports started quickly in 2005/06, as harvest pressure on prices and subsidy programs at the end of calendar year 2005 encouraged a strong pace of exports. However, as corn prices in China increased, in early 2006, the government stopped authorizing export subsidies. However, more export subsidy quotas could be made available later depending on new-crop developments and prices. The pace of China's corn export shipments is expected to drop significantly in the second half of 2005/06. Corn exports in 2005/06 are forecast down 2.6 million tons to 5.0 million.

Brazil emerged as a leading corn exporter in 2003/04, but with strong internal demand, Brazil's corn exports are projected to remain low in 2005/06, dropping 0.6 million tons to 0.8 million, the lowest in 6 years. Thailand is also expected to reduce corn exports from 0.4 million tons to 0.2 million in 2005/06 as internal demand rebounds from problems caused by avian influenza. South Africa (down 0.3 million tons to 1.2 million) is expected to reduce corn exports due to a much smaller crop and increased internal prices.

Ukraine (2.3 million tons) is expected to maintain corn exports despite reduced production as export prices are relatively attractive. European Union-25 (EU-25) corn exports are forecast up slightly to 0.3 million tons, mostly food aid. The EU-25 has been moving Hungarian corn to drought-stricken Spain instead of subsidizing exports outside of the EU-25.

World barley trade is forecast up 4 percent to 18 million tons in 2005/06 (October-September trade year). Australia is expected to be the world's largest barley exporter for the third year in a row, increasing exports 1.0 million tons to 5.5

million because of increased production. EU-25 barley exports are forecast down 0.6 million tons to 3.3 million, as reduced production has made it less urgent for the Commission to subsidize exports, which remain low by historical standards. Exports by the Former Soviet Union-12 are forecast little changed at 5.5 million tons in 2005/06. Production is down, but export prices are generally stronger than internal prices, maintaining exports. In Canada, 2005/06 barley production is estimated up slightly, and export prices are attractive, boosting forecast exports 0.8 million tons to 2.3 million.

Global sorghum trade is expected to increase 4 percent to 5.6 million in 2005/06. Mexico and Japan will remain the largest sorghum importers in 2004/05. Mexico is expected to increase imports 0.6 million tons to 3.5 million. EU-25 imports are projected to continue to decline in 2005/06 as the EU-25 is not importing all the grain authorized by the "abatamiento" reduced import tariff regime. The United States is expected to remain the dominant exporter, at 4.8 million tons, up 0.3 million from the previous year. Australia, with increased domestic use, is expected to reduce sorghum exports slightly to 0.3 million tons. Sorghum exports by other countries are expected to be small in 2004/05.

Global oats trade is forecast down 7 percent to 1.8 million tons in 2005/06 because of reduced production in Canada and the EU-25, the major exporters. U.S. imports are expected to decline slightly to 1.5 million tons (October-September).

World rye trade is expected to plummet in 2005/06, falling to less than 0.5 million tons and the lowest level in the USDA data base going back to 1960. EU-25 rye is not eligible for intervention stocks, so prices in the EU-25 have fallen enough to discourage production. The Commission has been very slow to subsidize exports, especially as large volumes of intervention rye have been transferred to Spain this year. Without subsidies, import demand is weak. Japan is expected to remain the largest importer at 0.15 million tons, down 43 percent.

U.S. Corn Exports in 2005/06 Forecast Up 12 Percent

U.S. October-September 2005/06 corn exports are forecast at 50.5 million tons, up 5.3 million tons from a year earlier. The U.S. share of world corn trade in 2004/05 is forecast at 68 percent, up from 59 percent the previous year. However, this is still less than 7 years ago, when the U.S. share of global corn trade was above 75 percent. Shipments during the first months of 2005/06 are ahead of the previous year's pace, and outstanding sales are up significantly.

According to the Bureau of Census, exports of corn during the first 5 months (October-February) totaled 20.9 million tons, up from 19.7 million a year ago. *Grain Inspections* export data for March 2005 were 4.7 million tons, up dramatically from 2.0 million a year earlier. Corn shipments for the first-half of the 2005/06 trade year are up nearly 4 million tons. *U.S. Export Sales*, as of April 6, 2006, reports outstanding export sales of 8.7 million tons, up 1.1 million tons from a year ago. Competition from both Argentina and China is expected to be reduced in the second half of 2005/06.

The most important increase in commitments (shipments plus outstanding sales) is to South Korea, up nearly 2 million tons to 3.1 million. Even the largest market,

Japan, is up 2 percent, an increase of 250,000 tons. Mexico, Taiwan, and Colombia also show large increases.

U.S. sorghum exports in 2004/05 are forecast at 4.8 million tons, up 0.3 million from the previous year. Commitments to Mexico are up, but Japan is down slightly. U.S. barley exports are forecast down 47 percent at 0.4 million tons (October-September). U.S. barley prices are relatively high. U.S. barley exports are expected to be mainly routine shipments of barley to Mexico and Japan. Total U.S. coarse grain exports in 2005/06 are forecast up 5.2 million tons to 55.7 million tons.

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