

GRAINS AND OILSEEDS OUTLOOK FOR 2004<sup>1</sup>

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Wheat, Feed Grains, and Oilseeds Interagency Commodity Estimates Committees  
U.S. Department of Agriculture

**Introduction**

This paper provides supply, use, and price projections for 2004/05 for wheat, corn, and soybeans and products. The first official USDA supply and use projections will be published May 12, when the National Agricultural Statistics Service (NASS) publishes the first forecast of winter wheat production. Projections presented in this paper are based on the Winter Wheat Seeding report and analyses by members of the Interagency Commodity Estimates Committees for Wheat, Feed Grains, and Oilseeds. Foreign Agricultural Service personnel in Washington and various foreign offices also provided invaluable assistance in the development of the trade projections.

Expanding area is expected for corn and soybeans but wheat area is expected to decline. Wheat yields are expected to decline from last year's record levels, corn yields about unchanged and soybean yields are expected to improve from last year's disappointing levels. Larger area and steady to higher yields are expected to result in larger 2004/05 production of corn and soybeans while wheat production will be smaller. Lower 2004/05 ending stocks and stable to higher prices are expected for wheat and corn. On the other hand, larger ending stocks and lower prices are expected for soybeans

Larger corn production will be more than offset by expanded industrial use and exports resulting in a decline in ending stocks and a modest increase from the 2003/04 price. Although both domestic use and exports of soybeans are expected to rise, the increase will not be enough to prevent soybean stocks from growing. Consequently, soybean price is expected to drop sharply, down \$1.35 per bushel from the midpoint of the 2003/04 price range. World wheat production will rebound with large gains expected in the crops of the EU and the FSU. Increased competition will reduce U.S. wheat exports and U.S. wheat stocks are expected to grow slightly. However, the 2004/05 wheat price is forecast to be unchanged from this year.

**Planted Acreage Outlook for 2004 (Table 1)**

The outlook for 2004 features larger soybean and corn area, but lower wheat plantings. Combined plantings of these three major field crops are forecast to rise 1.5 to 2 million acres from 2003. Smaller winter wheat plantings are due to unfavorable conditions at planting time last fall and low new crop prices (more than \$.50/bushel less than prices which prevailed at planting time in the Fall of 2002). Strong prices and record net farm income in (calendar year 2003) are expected to stimulate both corn and soybean plantings but wheat will decline. Despite the increase in nitrogen fertilizer prices and the highest soybean prices in over 7 years some producers have been disappointed with soybean yields relative to corn yields in recent years and, as a result, corn area will expand more than soybeans.

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<sup>1</sup>This paper incorporates contributions by analysts from the World Agricultural Outlook Board, the Economic Research Service, the Foreign Agricultural Service, and the Farm Service Agency.

Wheat plantings are forecast at 60.5 million acres, down 1.2 million acres (2 percent) from 2003. Total wheat planted area is expected to be the fourth lowest since 1973. Estimated 2004 winter wheat seedings was released in January and is down 1.48 million acres from last year, with most of the decline in hard red winter (HRW). Although soft red winter (SRW) plantings are up slightly from last year, they were at the low end of expectations. White Winter (WW) seedings are down 7 percent from last year, but make just a minor contribution to the fall in aggregate winter wheat seedings.

Table 1. Wheat, Corn, and Soybean Planted Acreage, 1998-2004F (million acres)

	1998	1999	2000	2001	2002	2003	2004F
Wheat	65.8	62.7	62.6	59.6	60.5	61.7	60.5
Corn	80.2	77.4	79.6	75.8	79.1	78.7	80.5
Soybeans	72.0	73.7	74.3	74.1	73.9	73.4	74.5
Total	218.0	213.8	216.4	209.4	213.4	213.8	215.5

F = Forecast

Totals may not add due to rounding.

Source: National Agriculture Statistics Service

Although alternative crops offer better returns than spring wheat in some areas of the Northern Plains, re-seeding of abandoned winter wheat acres in S. Dakota and Montana to spring wheat is expected to boost other spring wheat area by 2-3 percent in 2004. Durum area is expected to decline by 1-2 percent, offsetting some of the increase in other spring wheat acres.

Corn planted area is forecast at 80.5 million acres in 2004, up around 1.75 million acres from 2003. Some of the gain in corn and soybean area is due to farmers planting slightly more crop land than last year. Also, despite widespread hot, dry conditions late last summer in some areas, national average corn yields were a record and up more than 9 percent from 2002. Given better yield prospects for corn and attempts to reduce disease and pest problems, there are indications that some Corn Belt producers are planting two consecutive years of corn followed by one year of soybeans (or in some cases continuous corn).

With relatively high soybean prices heading into planting season, prospects appear good for increased soybean planting in 2004. Producers are forecast to plant a record 74.5 million acres of soybeans, up just over 1 million acres from last year. Although crop rotations and expected strong corn prices favor increased corn planting in parts of the western Corn Belt, increased soybean plantings are expected in the eastern Corn Belt and in the Northern Plains where relatively high net returns for soybeans indicate likelihood of continued expansion.

### **Wheat Supply, Demand, and Price Outlook for 2004/05 (Table 2)**

Wheat Supplies: Major questions about potential U.S. wheat production center around harvested acres and yields, especially given the current dry conditions in parts of the Plains, as well as cold weather and soggy soils in the Eastern Cornbelt. Table 2 shows a forecast harvested area of 50.8 million, down 2 million from 2003. The ratio of harvested-to-planted acres in 2004 is expected to be 84 percent, slightly

less than the 10-year national average harvested-to-planted ratio. The assumed yield for 2004 was derived from trend yields by State and results in a projected production of 2,120 million bushels, down over 215 million from 2003. Smaller production, although partially offset by larger carryin stocks, leaves 2004/05 supplies down 174 million bushels from a year earlier.

Wheat Domestic Use: Food use will decline slightly. Reductions in per-capita wheat food consumption, due to changes in diets and baking technology that has extended the shelf life of bakery products, will more than offset the effect of population growth. Feed and residual use, at 250 million bushels, is up modestly from the 225 million bushels expected in 2003/04. Lower wheat prices during harvest will promote the use of wheat for feeding. Hog and poultry feeders in the Southeast and Atlantic Coast areas and cattle and hog feeders in the Plains likely will see relatively high prices for corn during the early summer. In the Plains, which saw poor corn and sorghum crops in 2003, livestock operations will have to source corn for feeding from a greater distance than usual.

Wheat Exports: Although world wheat trade is expected to increase in 2004/05, U.S. exports are expected to fall 200 million bushels below the 1,150 million forecast in 2003/04, which are the highest level of exports since the 1,241 million shipped in 1995/96.

Because drought and winter kill sharply reduced production in the EU, Central Europe and the FSU, U.S. wheat exports and world export market share increased in 2003/04. However, in 2004/05, an FAS evaluation of the prospects for the region's winter wheat crop suggests that a substantial recovery is expected in the crops of Europe and the FSU. As a consequence, many importers are expected to source more of their purchases from lower priced wheat from Russia, Ukraine (and other "minor" exporters). In addition, net wheat exports by the EU are expected to rise.

As usual, imports by China are a source of great uncertainty. In the February WASDE China's 2003 wheat crop was lowered to 86 million metric tons (MMT), down nearly 5 percent from last year. Recently, one government backed think tank in China pegged the 2004 crop at 83.4 MMT, the smallest crop since 1983 (when the crop was 81.4 MMT). As of February 5, export commitments of "old" crop U.S. wheat to China were 40 million bushels (the largest since 1997). Even more unusual was the 33 million bushels of wheat sales that had already been booked for "new" crop (2004/05).

Wheat Ending Stocks and Market Prices: Total U.S. wheat disappearance in 2004/05 is expected to decline around 8 percent but supplies are down slightly less (6 percent). Thus, ending stocks, at 541 million bushels, are slightly higher than a year earlier. The ending stocks-to-use ratio of 24.7 percent is slightly larger than the 22.5 percent forecast for 2003/04 but below most levels seen since 1996/97. Prices received by producers are projected to be \$3.35, unchanged from the midpoint of the price range for 2003/04, due primarily to lower exports.

### **Corn Supply, Demand, and Price Outlook for 2004/05 (Table 3)**

Corn Supplies: Corn harvested acreage for grain is forecast at 73.2 million acres based on an average harvested-to-planted ratio. The national average yield is forecast at 142.2 bushels per acre and is based on a trend yield model. The forecast for yield in 2004 is also equal to the record yield set in 2003. Thus, corn production is forecast at 10,410 million bushels. That is a record and up nearly 300 million from 2003. However, reduced carryin stocks will be partially offsetting and total supplies are projected

at 11,321 million bushels, up just 110 million from 2003/04.

Corn Feed and Residual: Feed and residual use of corn in 2004/05 is expected to decline from 2003/04 because the other feed grains are expected to provide additional feed and beef production is expected to decline. With normal weather, grain sorghum production will increase from the drought reduced levels of prior years. With larger supplies, feed and residual of sorghum is expected to increase. Total beef production is expected to decline as more heifers are held back to rebuild the cow herd. In addition, by products from ethanol production will displace feed grains in some rations.

Ethanol Production: Ethanol producers have made a commitment to those States that have banned MTBE that they would have sufficient supplies of ethanol for replacement. California in particular, surveyed the firms producing ethanol twice before they banned MTBE. Ethanol production capacity has expanded rapidly and as of January 2004 is approximately 3.1 billion gallons per year with additional capacity planned or in the process of being built. As a result of the expanded ethanol market, corn used to produce ethanol is expected to increase another 13 percent to 1.3 billion bushels in 2004/05.

Other Corn Food, Seed and Industrial Use: These uses are “mature markets” and while continuing to grow, depend on an increasing population and expanding economic growth. Corn used to make high fructose corn syrup (HFCS) is expected to grow 1 percent, in line with population growth. HFCS is used primarily in soft drinks and this market is being hit from the weight reduction campaigns. Low carb diets are boosting HFCS 42 use, which are used in light beer. Corn used to make starch is expected to increase as the economy grows and consumes more paper and building materials. Corn cereals and other corn products are growing as the population expands.

Corn Exports: U.S. corn exports are projected at 2,100 million bushels, up 100 million from the 2003/04 forecast. The global setting for U.S. feed grain trade in 2003/04 is more favorable than for wheat, as U.S. corn exports will face less competition from corn from China and South Africa. However, “normal” growing conditions for Argentina in 2004/05 should lead to an increase of exports for that country. In addition, feed-quality wheat exportable supplies should return to a more normal level, displacing some corn feed use. The EU, Russia, and Ukraine will all return as major feed-quality wheat exporters.

With more feed-quality wheat available on the world market, corn imports will decline in some countries such as South Korea, the EU, the Philippines, and Israel. Eastern Europe will have more normal feed crops and higher feed exports. With the accession of 10 Eastern European countries to the EU, much of Eastern Europe’s grain exports will go to the rest of the EU, reducing the EU’s external import needs of corn and freeing up more feed-quality wheat for export from the EU.

As usual, China’s corn exports will have a major impact on the U.S.’s share of world’s feed grain trade. Although Chinese domestic corn prices rose sharply in the Fall and Winter of 2003/04, and the government announced a number of measures to increase crop plantings, China’s farmers are expected to continue to switch crop land to soybeans, cotton and other higher value crops. In addition to competition from more profitable crops, corn (and wheat) seedings are imperiled by the conversion of arable land to non-agriculture uses and by the reduced availability of water for irrigation. However, the volume of China’s corn exports will continue to largely depend on the level of China’s

corn stocks and by government export incentives. China's corn stocks are forecast to be just 21.4 MMT at the end of 2003/04, down from the previous year's stocks of 44.4 MMT. In early February 2004, there were reports that China had authorized the export of just 1.6 MMT of corn for the first six months of 2004, far less than the 6.7 MMT exported over the same period in 2003. Also, there were conflicting reports that some of the incentives offered in the past to subsidize corn exports would be reduced or eliminated while other incentives (e.g. the VAT tax rebate) would continue.

U.S. corn exports in 2004/05 could also be affected by the outbreak of avian influenza (AI) in the poultry flocks of at least 10 Asian countries. Most analysts agree that the greatest impact of the disease is the reduction in production due to the loss of export markets and the decline in consumption as consumers react to stories about AI being transmitted to humans. However, from a global perspective, the increase in poultry production (in countries that are unaffected by AI) or pork production, may act to absorb some of the feed ingredients that are no longer consumed by the Asian poultry industry.

Corn Ending Stocks and Market Prices: Ending stocks are projected at 821 million bushels, a drop of 80 million from forecast 2003/04 level. The ending stocks-to-use ratio of 7.8 percent is below the 8.7 forecast for 2003/04 estimate and the lowest since 1995/96 (which was 5 percent). The projected farm price of \$2.60 is up 15 cents from the midpoint of the 2003/04 range.

#### **Soybean Supply, Demand, and Price Outlook for 2004/05 (Table 4)**

Soybean Supplies: Soybean production is projected at a record 2,930 million bushels, up over 20 percent from 2003/04. Increased production is due to higher area and to recovery from 2003 yields which were the lowest since 1993. Soybean harvested area is forecast at 73.2 million acres based on the average planted-to-harvested ratio for 2001-2003. Although disease pressure and dry conditions in key areas have limited yield growth in recent years, a return to more normal late-summer weather patterns and better and more timely pest management is expected to boost yields this year. The 2004 soybean yield is projected at 40.0 bushels per acre, well-above last year's 33.4 bushels per acre, but below the 1994 record of 41.4 bushels per acre. The projected yield is based on regional yield trends for 1978-2002, and reflects expected planting increases in the Plains and the eastern Corn Belt. Soybean supplies for 2004/05 are projected 18 percent above 2003/04. Higher production is partly offset by lower beginning stocks, projected at a 27-year low of 125 million bushels.

Soybean Domestic Use: Domestic disappearance of soybeans is projected at 1,790 million bushels, up sharply from 2003/04. This would be the first annual increase since 2001/02. Soybean crush for 2004/05 is forecast at 1,635 million bushels, up 12 percent from the projected level for 2002/03. Domestic soybean meal demand is projected to increase 8 percent as soybean supplies increase and soybean meal prices become relatively more competitive with other feed ingredients. Increased poultry production is also expected to boost soybean meal consumption. Soybean meal prices are projected at \$195 per ton, down from the \$240-per-ton midpoint of the 2003/04 projected range. Domestic soybean oil use is projected to increase about 6 percent following a 4-percent decline in 2003/04. Although the soybean oil market is expected to remain tight in 2004/05, increased soybean crush and soybean oil production will allow domestic disappearance to recover from last year's downturn. Despite only limited gains for soybean oil exports from very low levels projected for 2003/04, soybean oil ending stocks are projected to recover only modestly to 1.2 billion pounds. Prices are projected at 26 cents per pound, down 3 cents from the midpoint of the 2003/04 price range.

### Soybean Export Demand:

Growth in foreign oilseed and oilseed meal production has more than offset lower U.S. oilseed production over the past two years. Rapidly expanding soybean production in South America has accounted for much of the growth, helping to push world oilseed production to new record levels for eight consecutive years. For 2004/05, the trend toward increasing global oilseed production is expected to continue, led by increased U.S. soybean production. Increased planted area and a return to more normal yields in the U.S. combined with larger South American crops, especially in Brazil, could result in up to a 7 percent increase in global oilseed output in 2004/05. Only moderate growth in production of other oilseeds is expected.

Gains in global soybean imports will depend primarily on increases for China. Modest protein consumption growth for other regions, including the EU and other Asian countries, will slow the rate of growth in overall global import demand from the 2002/03 level. Although South American soybean production is expected to increase again in 2005, better U.S. crop prospects and lower prices may dampen the rate of expansion of South American production and exports, particularly in Argentina.

The 2004/05 outlook for U.S. exports in the soybean complex is considerably brighter than for 2003/04. A much larger and more competitively priced crop will enable U.S. soybean exports to recover to a projected 1,060 million bushels, up 18 percent from the level projected for 2003/04. Similarly, U.S. soybean meal exports for 2004/05 are expected to rebound to 5.6 million short tons, up about 30 percent from 2003/04 projections. After slumping sharply in 2003/04, the U.S. export share is expected to recover to about 41 percent of world soybean exports and 11 percent of global soybean meal trade. Although higher than 2003/04, projected export shares for 2004/05 reflect continuation of the downward trend seen in recent years.

Following 2 years of declining U.S. soybean oil exports, including a sharp downturn projected for 2003/04, the outlook for 2004/05 is only slightly improved. Despite a larger crop and expanded soybean crush, the domestic vegetable oil market is projected to claim the biggest share of increased production. Strong competition from South American soybean oil and from domestic soybean oil buyers leave soybean oil exports projected at 1.1 billion pounds, up modestly from 2003/04, but still only about half of 2002/03 export levels.

Soybean Ending Stocks and Market Prices: Soybean ending stocks for 2004/05 are forecast at 210 million bushels, up 85 million bushels from the projected level for 2003/04. The ending stocks-to-use ratio of 7 percent is above the 2003/04 level of 5 percent, and would be the highest level in 4 years. Market prices are projected to average \$5.90 per bushel in 2004/05. Relatively high soybean prices toward the end of the 2003/04 marketing year and projected strong corn prices for 2004/05 will partly offset the effect of increased U.S. stocks, record large South American soybean crops expected in 2004 and 2005, and limited growth in foreign soybean import demand.

Table 2. Wheat: Supply, Demand, and Price, 2002/03-2004/05

	2002/03	2003/04	2004/05
		1/	2/
Area planted (mil. acres)	60.5	61.7	60.5
Area harvested	45.9	52..8	50.8
Yield (bu./acre)	35.3	44.2	41.7
Production (mil. bushels)	1,619	2,337	2,120
Beginning Stocks	777	491	534
Imports	77	75	75
Supply	2,474	2,903	2,729
Feed and residual	126	225	250
Food, seed, & industrial	1,001	994	988
Total Domestic Use	1,128	1,219	1,238
Exports	854	1,150	950
Total Use	1,982	2,369	2,188
Ending Stocks	491	534	541
Stocks/Use	24.8%	22.5%	24.7%
Farm Price (\$/bushel)	3.56	3.35	3.35

3/

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range

Table 3. Corn: Supply, Demand, and Price, 2002/03-2004/05

	2002/03	2003/04	2004/05
		1/	2/
Area planted (mil. acres)	79.1	78.7	80.5
Area harvested	69.3	71.1	73.2
Yield (bu./acre)	130.0	142.2	142.2
Production (mil. bushels)	9,008	10,114	10,410
Beginning Stocks	1,596	1,087	901
Imports	14	10	10
Supply	10,618	11,211	11,321
Feed and residual	5,593	5,800	5,725
Ethanol industrial use	996	1,150	1,300
Other food, seed & industrial	1,350	1,360	1,375
All food, seed, & industrial	2,346	2,510	2,675
Total Domestic Use	7,939	8,310	8,400
Exports	1,592	2,000	2,100
Total Use	9,531	10,310	10,500
Ending Stocks	1,087	901	821
Stocks/Use	11.4%	8.7%	7.8%
Farm Price (\$/bushel)	2.32	2.45	2.60

3/

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range.



Table 4. Soybeans: Supply, Demand, and Price, 2002/03-2004/05

	2002/03	2003/04	2004/05
		1/	2/
Area planted (mil. acres)	73.9	73.4	74.5
Area harvested	72.4	72.3	73.2
Yield (bu./acre)	38.0	33.4	40.0
Production (mil. bushels)	2,749	2,418	2,930
Beginning Stocks	208	178	125
Imports	5	8	5
Supply	2,962	2,604	3,060
Crush	1,615	1,455	1,635
Seed, & residual	123	123	155
Total Domestic Use	1,739	1,579	1,790
Exports	1,045	900	1,060
Total Use	2,784	2,479	2,850
Ending Stocks	178	125	210
Farm Price (\$/bushel)	5.53	7.25	5.90
		3/	

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range.

Table 5. Soybean Meal: Supply, Demand, and Price, 2002/03-2004/05

	2002/03	2003/04	2004/05
		1/	2/
	Thousand short tons		
Beginning Stocks	240	220	200
Production	38,213	34,755	38,910
Imports	166	475	240
Supply	38,619	35,450	39,350
Domestic Use	32,386	31,000	33,500
Exports	6,013	4,250	5,600
Total Use	38,399	35,250	39,100
Ending Stocks	220	200	250
Avg. Meal Price (\$/ton)	181.57	240.00	195.00
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.

Table 6. Soybean Oil: Supply, Demand, and Price, 2002/03-2004/05

	2002/03	2003/04	2004/05
		1/	2/
	Million pounds		
Beginning Stocks	2,358	1,491	1,006
Production	18,438	16,380	18,445
Imports	46	235	105
Supply	20,843	18,106	19,556
Domestic Use	17,091	16,250	17,300
Exports	2,261	850	1,100
Total Use	19,352	17,100	18,400
Ending Stocks	1,491	1,006	1,156
Avg. Oil Price (\$/lb.)	0.220	0.290	0.260
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.