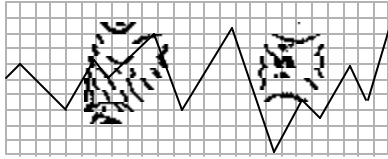




UNIVERSITY OF ILLINOIS  
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# Grain Price OUTLOOK

A joint publication of the Department of Agricultural Economics, College of Agriculture, Purdue University, West Lafayette, Indiana, and the Department of Agricultural and Consumer Economics, College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana-Champaign.

## SOYBEANS: EXPORTS AND ACREAGE WILL DIRECT PRICES

JANUARY 2003

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2003 – No. 1

### Summary

At 2.73 billion bushels, the USDA's January estimate of the 2002 U.S. soybean crop was 40 million larger than generally expected. The 2003 South American crop is now expected to total 3.2 billion bushels, 353 million larger than the 2002 harvest and more than enough to offset the 160 million bushel decline in U.S. production.

Year-ending stocks of U.S. soybeans are expected to be modestly smaller than stocks at the beginning of the year, even with a 180 million bushel reduction in use. A small decline in U.S. soybean acreage is also expected in 2003 as acreage of winter wheat and feed grains expands.

The marketing year average price is expected to be sharply higher than that of the previous four years, but the increase will be mostly offset by the lack of loan deficiency payments.

### Production, Stocks Exceed Expectations

The USDA's January 10 *Crop Production* report estimated the 2002 U.S. soybean crop at 2.73 billion bushels, 40 million larger than the November forecast and only 161 million smaller than the 2001 crop (Table 1). The U.S. average yield was estimated at 37.8 bushels per acre, 0.3 bushels above the November forecast and only 1.8 bushels below the 2001 average. The 2002 average was the sixth largest in the U.S. in spite of a less than favorable growing season in many areas (Table 2). Average yields were sub-par in the eastern corn belt, in the southeast, and parts of the western corn belt. High average yields were experienced in Iowa, Michigan, Minnesota, and Wisconsin.

The biggest surprise in the January report involved the adjustments in the estimates of planted and harvested acreage. Planted acreage totaled 73.758 million acres, 765,000 larger than previously estimated and only 317,000 fewer acres than planted in 2001 (Table 3). Harvested acreage, at 72.16 million exceeded the previous estimate by 361,000 and was 815,000 acres less than harvested in 2001. Unharvested acreage in 2003, at 1.598 million, exceeded the normal amount of unharvested acreage by 300,000 to 400,000 acres, reflecting drought conditions in some areas.

Planted acreage in 2002 was down in the western corn belt and the far east; unchanged in the southeast; and up slightly in the eastern corn belt and the mid-south (Table 4). The western corn belt had a smaller percentage of the total acreage for the first time since 1996, but still accounted for about one-half of the acreage.

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Stocks of soybeans in the U.S. were estimated at 2.1145 billion bushels on December 1, 2002. Stocks were 161 million less than on the same date last year and at the lowest level in five years. The stocks figure implies that use of soybeans totaled 825 million bushels during the first quarter of the marketing year, 40.5 million less than used in the same quarter last year, but still very nearly the second largest use for the quarter (Table 5).

Domestic processing use of soybeans during the first quarter of the year totaled 417.4 million bushels, 10.3 million less than during the same quarter last year. The Census Bureau reported that only 297.6 million bushels of U.S. soybeans were exported during the first quarter of the marketing year. This report is in sharp contrast to the USDA's export inspection report that showed about 336 million bushels exported during the quarter and the USDA *Export Sales* report which showed 317 million bushels exported in the quarter. It is not unusual for these reports to show fairly large differences in soybean exports, but the differences are very large this year. The small export estimate by the Census Bureau results in a large seed, feed, and residual use of soybeans during the first quarter of the year. At 110.2 million bushels, that estimate is 20.5 million larger than use during the same quarter last year and 11.3 million larger than the previous record use in 1999. Typically, the large residual use in the first quarter of the year is offset by a large negative use in the fourth quarter. There have been a few years, however, when that did not happen. The most recent was in 1998-99, another year when the difference between the export estimates from the Census Bureau and the USDA was very large (46 million bushels for the year).

The large unexplained use of soybeans during the first quarter of this year may be resolved by subsequent stocks estimates, may mean that a large difference in USDA and Census export estimates will persist, or may indicate the 2002 crop was slightly over estimated. Right now, it appears that the most likely outcome will be an unresolved difference in USDA and Census Bureau export estimates, resulting in an inflated residual use for the year.

#### **Rate of Consumption Declining**

The lower level of domestic processing of soybeans during the first quarter of the year was followed by another year-over-year decline in December. The slower rate of processing is being driven primarily by a slower rate of soybean meal exports. Based on the USDA's *Export Sales* report, commercial exports for the period October 1, 2002 through January 9, 2003 were 12.4 percent smaller than during the same period last year. Unshipped sales as of January 9 were off 16.8 percent compared to the same date last year. Census Bureau estimates for October and November 2002 showed a 29 percent decline in U.S. meal exports compared to the same two months last year. Most of that decline was in October, with November shipments only 5.6 percent smaller than shipments during November 2001. For the year, the USDA projects a 20 percent reduction in exports for the year.

The decline in U.S. soybean meal exports to date are broad based by destination. Increased shipments to Canada and Mexico have been more than offset by declines to Europe and Asia. The large 2003 South American crop is expected to provide stiff competition for U.S. meal during the last quarter of the marketing year. For the period October 2002 through September 2003, the USDA expects a 14 percent increase in combined exports from Argentina and Brazil. The 20 percent projected decline in U.S. meal exports seems a little severe based on performance to date, but is likely accurate if the South American crop is as large as advertised. We are inclined to use the USDA projection of 6 million tons (Table 6).

Domestic soybean meal use has generally increased over time as domestic livestock and poultry production expanded. Use was up 4.5 percent in 2001-02, stimulated by low prices and heavier livestock slaughter weights. A much slower rate of increase is expected for 2002-03 due to declining livestock production and a modest expansion in poultry production. To date, soybean meal prices during the 2002-03 marketing year (beginning October 1, 2002) have been near the same price as a year earlier, averaging a modest \$165 per ton (central Illinois, 48 percent protein) during the first quarter of the year. As a result, meal prices have been relatively low compared to grain prices, encouraging some substitution of protein for grain. We project domestic meal use at 33.2 million tons for the year, only about 0.4 percent more than consumed in 2001-02.

Through the first quarter of the marketing year, meal production per bushel of soybeans processed has averaged 47.13 pounds, about .36 pounds less than during the same period last year. If that difference persists for the remainder of the year, the average yield of meal per bushel will be 47.26 pounds for the entire year. If meal imports reach 240,000 tons, as projected by the USDA and year ending stocks are maintained at a normal 250,000 tons, it will be necessary to produce 38.97 million tons of meal in 2002-03. That would require a crush of 1.649 billion bushels, at the current rate of meal yield per bushel.

The yield of oil per bushel of soybeans processed was near record large during the September through November period in 2002, averaging about 11.35 pounds per bushel. The yield during the same quarter last year was 11.14 pounds and the average for all of last year was 11.15 pounds. If the average yield this year remains at 11.35 pounds, a crush of 1.649 billion bushels of soybeans will produce 18.716 billion pounds of oil (Table 7). With beginning stocks of 2.36 billion pounds and imports of 65 million pounds, supplies for the 2002-03 marketing year will total 21.141 billion pounds.

The Census Bureau estimates that 308 million pounds of U.S. soybean oil were exported in October and November 2002, 18 percent less than during the same two months last year. Shipments, however, were small in October and large in November. The USDA's *Export Sales* report showed commercial shipments through January 9 about equal to those of a year ago, although unshipped sales were down 18 percent. For the year, the USDA projects an 8.7 percent reduction in U.S. oil exports from the very high level of a year ago. That projection stands at 2.3 billion pounds.

Domestic use of soybean oil is expected to continue the trend increase of the last several years. The average annual increase over the past four years has been 2.65 percent. At that rate, use would total 17.39 billion pounds in 2002-03, bringing total use to 19.69 billion pounds and leaving year-end stocks at 1.451 billion pounds (Table 7).

The export picture is clouded by the discrepancies in the estimates of export totals to date. So far this year, shipments and sales to the European Union are reportedly down 27 percent, but commitments to China are up 81 percent. Large unshipped sales, 99 million bushels as of January 9, suggest that shipments will remain large, assuming those sales are honored. The large soybean crop expected in South America (Table 9) should provide an alternative source of soybeans for western Europe, so U.S. sales will likely continue to lag the level of a year ago. The USDA expects combined exports from Argentina and Brazil to grow from 850 million bushels in 2001-02 to 1.2 billion during the current year. The increase in South American production reflects a 9 percent increase in area and an expected rebound in average yields (Table 10).

The USDA now projects U.S. exports for the current marketing year at 930 million bushels and residual use at 78 million bushels. That compares to exports of 1.063 billion and residual use of 83 million during the 2001-02 marketing year. As long as the South American crop makes good progress, the export projection appears realistic. Consumption of U.S. soybeans is projected at 2.744 billion bushels, leaving year end stocks at 196 million bushels, only 12 million less than the level of stocks at the beginning of the year (Table 8).

## **Will U.S. Acreage Decline in 2003?**

U.S. soybean acreage declined in 2001 for the first time in 11 years and declined further in 2002. Still, acreage in 2002 was only 508,000 acres below the record of 2000. The declines were the result of economic incentives, as other crops appears to be more profitable than soybeans. Currently, new crop soybean prices are below the loan rate while the prices of wheat and feed grains are above the loan rate, suggesting potentially higher returns for these crops in relationship to soybeans. If that price pattern persists, and normal spring weather conditions are encountered, U.S. soybean acreage may decline modestly in 2003.

One widely followed private analyst has projected a 1.1 million acreage reduction in U.S. soybean acreage in 2003. That seems like a modest decline in light of the large increase in winter wheat seedings, higher cotton prices, and a likely sizeable increase in feed grain acreage. We would expect to see 2003 soybean acreage near 72 million acres, with harvested acreage of 71 million.

On a national basis, the U.S. average soybean yield has flattened since the spike in 1994. Since 1996 the U.S. average yield has varied from 36.6 to 39.6 bushels per acre (Table 2). It is difficult to anticipate the average yield in 2003, but it is most likely to be between 36.5 and 40 bushels per acre. At the low end of that range, the 2003 crop would reach only 2.6 billion bushels, requiring a further reduction in the consumption of U.S. soybeans to maintain year ending stocks above 150 million bushels. A crop of that size would likely stimulate another increase in acreage in South America. At the upper end of the yield range, the 2003 crop would total 2.84 billion bushels and would allow consumption of U.S. soybeans to grow by 140 million bushels, or 5 percent, and still maintain year ending stocks above 150 million bushels.

## **Price Prospects**

The average cash price of soybeans in central Illinois was relatively high in early September due to a later than usual start to the harvest and ideas the 2002 crop was much smaller. The price peaked at \$5.895 on September 11, declined to \$5.265 by the end of September, bottomed at \$5.01 on October 9, rebounded to \$5.755 on January 9, and dropped to \$5.41 on January 16. The average price during September through December 2002 was \$5.51, about \$1.20 (30 percent) higher than during the same four months in 2001. During that same period, the average price of soybean meal in central Illinois (bulk, 48 percent protein) was about \$170 per ton, or 3.5 percent higher than during the same period in 2001. The average price of soybean oil was 21.7 cents per pound, up 44 percent over the price of the previous year.

For the year, the USDA projects the average farm price in a range of \$5.10 to \$5.80. The average price (unweighed) during the first four months of the marketing year was about \$5.38. Prices during the remainder of the 2002-03 marketing year will be influenced by a number of fundamental factors – pace of exports, progress of the South American crop, U.S. acreage, and U.S. weather conditions. The relatively narrow trading range of cash prices in central Illinois so far this year (\$.885) suggests that volatile prices are likely over the next 6 or 7 months. History would suggest that if the October 9, 2002 cash price in central Illinois was the low for the year, that the cash price should trade to \$6.00 or higher sometime before the marketing year is over. The most likely time for the cash market to establish the highest level of the year is in the May through July period. On the other hand, if a new low price is to be established this year, it would most likely occur in July or August. The most important price factor over the next few months will be the prospective size of the 2003 U.S. crop.

Given the likely decline in U.S. acreage and the markets early concern about dry weather conditions, additional pricing opportunities for old and new crop soybeans may well emerge this spring.

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Table 1. United States Soybean Production Estimates

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	million bushels																							
August 1	2,130	1,880	2,017	2,293	1,843	2,035	1,959	1,979	2,000	1,474	1,905	1,836	1,869	2,079	1,902	2,282	2,246	2,300	2,744	2,727	2,870	2,989	2,867	2,628
September 1	2,174	1,831	2,089	2,314	1,535	2,028	2,063	1,980	1,957	1,472	1,889	1,835	1,817	2,085	1,909	2,316	2,285	2,270	2,746	2,909	2,778	2,900	2,834	2,656
October 1	2,213	1,757	2,107	2,300	1,517	1,972	2,108	1,992	1,968	1,501	1,926	1,823	1,934	2,108	1,891	2,458	2,190	2,346	2,722	2,769	2,696	2,823	2,907	2,654
November 1	2,236	1,775	2,077	2,300	1,535	1,902	2,129	2,009	1,960	1,512	1,937	1,904	1,962	2,167	1,834	2,523	2,183	2,403	2,736	2,763	2,673	2,777	2,923	2,690
January 1	2,268	1,817	2,030	2,277	1,595	1,861	2,099	2,007	1,905	1,539	1,927	1,922	1,986	2,197	1,809	2,558	2,152	2,382	2,727	2,757	2,643	2,770	2,891	2,730
FINAL	2,261	1,798	1,989	2,190	1,636	1,861	2,099	1,943	1,938	1,549	1,924	1,926	1,987	2,190	1,870	2,515	2,174	2,380	2,689	2,741	2,654	2,758		

Table 2. United States Soybean Yield Estimates

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	million bushels																							
August 1	30.3	27.4	30.2	32.3	29.7	30.5	31.5	32.9	34.7	26.0	32.3	32.5	31.8	35.8	33.8	37.6	36.4	36.3	39.5	39.5	39.2	40.7	38.7	36.5
September 1	30.9	27.0	31.2	32.6	24.9	30.3	33.2	33.1	34.0	25.9	32.0	32.4	31.0	35.9	34.0	38.2	37.0	35.8	39.3	40.6	37.9	39.5	38.2	37.0
October 1	31.5	26.0	31.5	32.4	24.7	29.5	33.9	33.3	34.2	26.4	32.6	32.3	33.0	36.3	33.7	40.5	35.5	37.0	39.0	38.7	37.0	38.7	39.2	37.0
November 1	31.8	26.5	31.0	32.4	25.0	28.5	34.2	33.8	34.1	26.6	32.8	33.7	33.5	37.3	32.7	41.5	35.4	37.9	39.2	38.6	36.7	38.0	39.4	37.5
January 1	32.2	26.8	30.4	32.2	25.7	28.2	34.1	33.8	33.7	26.8	32.4	34.0	34.3	37.6	32.0	41.9	34.9	37.6	39.0	38.9	36.5	38.1	39.6	37.8
FINAL	32.1	26.5	30.1	31.5	26.2	28.1	34.1	33.3	33.9	27.0	32.3	34.1	34.2	37.6	32.6	41.4	35.3	37.6	38.9	38.9	36.6	38.1		

Table 3. Soybean Planting Intentions, Actual Plantings, and Acres Harvested

Year	January Intentions	Mar./April Intentions	June/July Intentions	Actual	Harvested Acreage
			million acres		
1975	57.5	56.6	54.6	54.6	53.8
1976	50.9	49.3	49.0	50.3	49.4
1977	53.1	55.7	59.0	59.0	57.6
1978	63.9	63.7	64.0	64.7	63.3
1979	66.3	68.8	71.6	71.4	70.3
1980	71.6	71.3	70.3	69.9	67.8
1981	----	69.8	68.5	67.5	66.2
1982	69.5 <sup>a</sup>	---	72.2	70.9	69.4
1983	68.8 <sup>a</sup>	65.8 <sup>b</sup>	63.3	63.8	62.5
1984	65.2 <sup>a</sup>	---	68.0	67.8	66.1
1985	64.4 <sup>a</sup>	---	63.3	63.1	61.6
1986	---	62.0	61.8	60.4	58.3
1987	---	56.9	58.7	58.180	57.172
1988	---	58.0	58.5	58.840	57.373
1989	---	61.7	61.3	60.820	59.282
1990		59.42	58.05	57.795	56.283
1991	58.5	57.12	59.78	59.180	58.169
1992		57.42	59.03	59.180	58.233
1993		59.30	61.58	60.085	57.307
1994		61.12	61.78	61.620	60.809
1995		61.45	63.105	62.495	61.544
1996		62.478	63.895	64.195	63.349
1997		68.800	70.850	70.005	69.110
1998		72.000	72.720	72.025	70.441
1999		73.105	74.205	73.730	72.446
2000		74.871	74.501	74.266	72.408
2001		76.657	75.416	74.075	72.975
2002		72.966	72.993	73.758	72.160

<sup>a</sup> February 1

<sup>b</sup> May 1

Table 4. Planted Acres of Soybeans by Region

Region	Western Corn Belt <sup>a</sup>		Eastern Corn Belt <sup>b</sup>		Mid-South <sup>c</sup>		Southeast <sup>d</sup>		East Coast <sup>e</sup>		United States	
	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%
1976	16,145	32.1	14,530	28.9	13,630	27.1	4,799	9.6	1,122	2.3	50,226	100.0
1979	23,370	32.7	19,620	27.5	18,470	25.9	8,360	11.7	1,591	2.2	71,411	100.0
1986	24,875	41.2	18,300	30.3	10,995	18.2	4,680	7.8	1,535	2.5	60,385	100.0
1987	24,120	41.5	18,580	31.9	10,330	17.8	3,675	6.3	1,475	2.5	58,180	100.0
1988	24,310	41.3	18,680	31.7	10,460	17.8	3,810	6.5	1,580	2.7	58,840	100.0
1989	24,790	40.8	19,020	31.3	10,750	17.7	4,460	7.3	1,800	2.9	60,820	100.0
1990	23,750	41.1	18,490	32.0	10,270	17.2	3,650	6.3	1,635	2.8	57,795	100.0
1991	26,035	44.0	19,420	32.8	8,990	15.2	3,005	5.1	1,730	2.9	59,180	100.0
1992	25,400	42.9	20,000	33.8	8,980	15.2	2,915	5.2	1,715	2.9	59,180	100.0
1993	25,300	42.1	20,410	34.0	9,690	16.1	2,915	4.9	1,770	2.9	60,085	100.0
1994	27,220	44.1	20,510	33.3	9,220	15.0	2,875	4.7	1,795	2.9	61,620	100.0
1995	28,210	45.1	21,130	33.8	9,130	14.7	2,290	3.6	1,735	2.8	62,495	100.0
1996	28,250	44.0	22,370	34.8	9,390	14.6	2,565	4.0	1,620	2.5	64,195	100.0
1997	32,450	46.4	22,610	32.3	10,390	14.8	2,777	4.0	1,778	2.5	70,005	100.0
1998	33,700	46.8	23,650	32.8	10,180	14.1	2,690	3.8	1,805	2.5	72,025	100.0
1999	35,800	48.5	24,100	32.7	9,700	13.2	2,360	3.2	1,770	2.4	73,730	100.0
2000	37,050	49.9	24,050	32.4	9,070	12.2	2,230	3.0	1,926	2.6	74,266	100.0
2001	37,700	50.9	24,650	33.3	7,685	10.4	2,135	2.9	1,905	2.5	74,075	100.0
2002	37,020	50.2	24,690	33.2	8,130	11.0	2,135	2.9	1,783	2.4	73,758	100.0

<sup>a</sup> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

<sup>b</sup> Illinois, Indiana, Michigan, Ohio, Wisconsin

<sup>c</sup> Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas

<sup>d</sup> Alabama, Florida, Georgia, North Carolina, South Carolina

<sup>e</sup> Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia



Table 5. Soybean Quarterly Balance Sheet

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	million bushels																				
September 1 stocks	254.5	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0
Production	2,190.3	1,635.8	1,860.9	2,099.1	1,942.6	1,937.7	1,548.8	1,923.8	1,925.9	1,986.6	2,190.4	1,869.7	2,514.9	2,174.3	2,380.3	2,688.8	2,741.0	2,653.8	2,757.8	2,890.6	2,729.7
TOTAL	2,444.8	1,980.4	2,036.6	2,415.2	2,479.0	2,374.1	1,855.3	2,108.8	2,167.0	2,319.6	2,470.8	2,167.0	2,730.0	2,514.1	2,572.8	2,825.6	2,943.8	3,006.3	3,052.0	3,143.3	2,939.7
September-November																					
Crush	284.2	269.6	253.7	267.5	295.8	293.4	275.4	273.0	304.1	322.0	328.2	329.6	346.2	351.4	360.6	395.8	409.3	426.7	420.9	427.7	417.4
Export	245.9	190.6	153.4	166.5	216.5	260.8	138.3	168.5	120.1	167.1	235.9	176.0	230.9	233.6	289.7	365.3	268.5	297.8	315.5	348.3	297.6
Seed, residual	-36.2	48.5	14.8	21.5	10.1	64.6	74.8	56.6	58.8	51.5	70.7	79.8	50.9	95.7	97.4	66.9	78.5	98.9	75.6	89.7	110.2
TOTAL	493.9	508.7	421.9	455.4	522.4	618.8	488.5	498.1	483.0	540.6	634.8	585.4	628.0	681.7	747.7	826.2	758.8	823.4	812.0	865.7	825.2
December 1 stocks	1,950.9	1,471.7	1,614.7	1,959.8	1,956.6	1,755.3	1,366.8	1,610.7	1,684.0	1,779.0	1,836.0	1,573.6	2,102.0	1,833.4	1,825.1	1,999.4	2,186.0	2,182.9	2,240.0	2,275.6	2,114.5
Crush	314.9	262.5	276.4	281.9	320.1	317.3	286.3	304.3	301.4	323.1	335.2	327.2	371.8	359.0	400.7	443.1	408.6	408.1	417.9	446.6	
Export	263.6	234.6	230.2	270.9	233.7	258.9	197.0	217.0	179.7	259.6	255.9	212.7	283.5	278.7	333.1	306.4	243.1	315.4	338.4	422.8	
Seed, residual	26.6	18.8	47.0	35.7	63.8	33.0	-6.7	33.9	12.8	19.6	29.3	12.1	76.5	5.3	35.5	46.9	77.0	63.2	79.8	70.2	
TOTAL	605.1	515.9	553.6	588.5	617.6	609.2	476.6	555.2	493.9	602.3	620.4	552.0	731.8	643.0	769.3	796.5	728.7	786.7	836.1	939.6	
March 1 stocks	1,345.8	955.8	1,061.1	1,371.3	1,339.0	1,146.1	890.2	1,055.5	1,190.1	1,177.3	1,215.6	1,021.6	1,370.2	1,190.4	1,055.8	1,202.9	1,457.3	1,396.0	1,403.9	1,336.0	
Crush	260.1	240.0	258.2	262.3	297.2	308.3	270.1	290.7	295.5	304.0	325.4	320.4	361.7	334.0	355.7	404.9	396.4	373.9	405.4	429.6	
Export	216.2	204.2	153.4	226.4	159.3	185.0	135.5	153.2	146.9	148.2	186.7	120.6	216.6	188.5	165.9	120.0	161.9	205.8	220.8	150.0	
Seed, residual	78.9	39.9	41.1	33.7	45.7	-2.5	20.1	15.7	24.2	29.4	20.1	25.3	0.0	44.9	34.3	84.4	50.4	58.9	69.5	71.5	
TOTAL	555.2	484.1	452.7	522.4	502.2	490.8	425.7	459.6	466.6	481.6	532.2	466.3	578.3	567.4	555.9	609.2	608.7	621.8	695.7	651.1	
June 1 stocks	790.6	471.7	608.4	848.9	836.8	655.3	464.5	595.9	723.5	695.7	683.4	555.3	791.9	622.8	499.9	593.7	848.6	774.4	708.2	684.9	
Crush	248.8	210.6	242.1	241.1	265.5	255.5	225.8	278.4	285.9	304.6	290.0	298.4	325.5	324.9	318.7	353.2	375.4	370.1	395.8	395.0	
Export	179.5	113.6	61.1	76.3	147.4	97.6	56.2	84.2	110.4	109.0	91.0	79.7	107.0	150.5	93.0	78.7	127.5	171.6	121.3	141.9	
Seed, residual	17.7	-28.2	-10.9	-4.9	-12.5	0.3	0.5	-5.8	-1.8	3.1	10.1	-31.9	24.6	-35.2	-43.6	-37.9	-1.3	-55.0	-56.6	-60.0	
TOTAL	446.0	296.0	292.3	312.5	400.4	352.8	282.5	356.8	394.5	416.7	391.1	346.2	457.1	439.6	368.1	393.9	501.6	486.7	460.5		
September 1 stocks	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0	
Annual																					
Crush	1,108.0	982.7	1,030.4	1,052.8	1,178.7	1,174.5	1,057.6	1,146.4	1,186.9	1,253.7	1,278.8	1,275.6	1,405.2	1,369.4	1,435.7	1,595.1	1,589.7	1,578.8	1,650.0	1,698.9	
Export	905.2	743.0	598.1	740.1	756.9	801.7	527.0	622.9	557.1	683.9	769.5	589.0	838.0	851.2	881.7	870.4	801.0	973.8	996.0	1,063.3	
Seed, residual	87.0	79.0	92.0	85.9	107.0	95.4	88.7	100.4	94.0	103.6	130.2	85.3	152.0	110.4	123.6	160.3	204.6	166.2	168.3	171.4	
TOTAL	2,100.2	1,804.7	1,720.5	1,878.8	2,042.6	2,071.6	1,673.3	1,869.7	1,838.0	2,041.2	2,178.5	1,949.9	2,397.0	2,330.9	2,441.0	2,625.8	2,595.3	2,718.8	2,803.10	2933.1	

Table 6. Soybean Meal Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	thousand tons													
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330	293	383	240
Production	<u>27,719</u>	<u>28,325</u>	<u>29,831</u>	<u>30,364</u>	<u>30,514</u>	<u>33,270</u>	<u>32,527</u>	<u>34,210</u>	<u>38,176</u>	<u>37,792</u>	<u>37,591</u>	<u>39,385</u>	<u>40,292</u>	<u>38,970</u>
TOTAL <sup>a</sup>	27,982	28,688	30,183	30,687	30,788	33,483	32,825	34,524	38,443	38,109	37,970	39,729	40,818	39,450
Domestic	22,291	22,934	23,007	24,251	25,283	26,542	26,611	27,320	28,895	30,657	30,345	31,643	33,077	33,200
Exports	<u>5,319</u>	<u>5,469</u>	<u>6,946</u>	<u>6,232</u>	<u>5,356</u>	<u>6,717</u>	<u>6,002</u>	<u>6,994</u>	<u>9,330</u>	<u>7,122</u>	<u>7,332</u>	<u>7,703</u>	<u>7,502</u>	<u>6,000</u>
TOTAL	27,610	28,403	29,953	30,483	30,639	33,260	32,613	34,314	38,225	37,779	37,678	39,346	40,578	39,200
Ending stocks	318	285	230	204	150	223	212	210	218	330	293	383	240	250
Price <sup>b</sup>	\$186.48	\$181.38	\$189.21	\$193.75	\$192.86	\$162.55	\$235.92	\$270.90	\$185.28	\$138.55	\$167.70	\$173.60	\$167.73	\$170.00

<sup>a</sup> Includes imports<sup>b</sup> Bulk, Decatur, Illinois 48%

Table 7. Soybean Oil Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	million pounds													
Beginning stocks	1,715	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,877	2,360
Production	<u>13,003</u>	<u>13,406</u>	<u>14,346</u>	<u>13,778</u>	<u>13,951</u>	<u>15,613</u>	<u>15,240</u>	<u>15,752</u>	<u>18,143</u>	<u>18,081</u>	<u>17,825</u>	<u>18,420</u>	<u>18,898</u>	<u>18,716</u>
TOTAL <sup>a</sup>	14,740	14,728	16,132	16,027	15,574	16,733	16,472	17,821	19,723	19,546	19,427	20,488	21,821	21,141
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,056	16,210	16,924	17,390
Exports	<u>1,353</u>	<u>779</u>	<u>1,647</u>	<u>1,419</u>	<u>1,529</u>	<u>2,680</u>	<u>992</u>	<u>2,037</u>	<u>3,079</u>	<u>2,372</u>	<u>1,376</u>	<u>1,401</u>	<u>2,520</u>	<u>2,300</u>
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	18,027	17,432	17,611	19,461	19,690
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,877	2,360	1,451
Average Price <sup>b</sup>	22.3¢	21.0¢	19.1¢	21.4¢	27.1¢	27.6¢	24.75¢	22.5¢	25.8¢	19.9¢	15.6¢	14.2¢	16.5¢	21.8¢

<sup>a</sup> Includes imports<sup>b</sup> Bulk, Decatur, Illinois 44%<sup>c</sup> Projected

Table 8. Soybean Balance Sheet -- Years Beginning September 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03 <sup>a</sup>
	million bushels													
Carryin	182	239	329	278	292	209	335	183	132	200	348	290	248	208
Production	<u>1,924</u>	<u>1,926</u>	<u>1,987</u>	<u>2,190</u>	<u>1,870</u>	<u>2,515</u>	<u>2,174</u>	<u>2,380</u>	<u>2,689</u>	<u>2,741</u>	<u>2,654</u>	<u>2,758</u>	<u>2,891</u>	<u>2,730</u>
TOTAL <sup>b</sup>	2,109	2,167	2,320	2,470	2,168	2,729	2,514	2,573	2,826	2,944	3,006	3,052	3,141	2,940
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,578	1,640	1,700	1,649
Export	623	557	684	770	589	838	851	882	870	805	975	1,996	1,063	930
Seed, feed, residual	<u>101</u>	<u>94</u>	<u>103</u>	<u>129</u>	<u>94</u>	<u>151</u>	<u>111</u>	<u>123</u>	<u>159</u>	<u>201</u>	<u>163</u>	<u>169</u>	<u>171</u>	<u>165</u>
TOTAL	1,870	1,838	2,041	2,178	1,954	2,394	2,331	2,441	2,626	2,596	2,716	2,804	2,933	2,744
Carryout	239	329	278	292	209	335	183	132	200	348	290	248	208	196
U.S. Average price	\$5.70	\$5.75	\$5.58	\$5.60	\$6.40	\$5.48	\$6.77	\$7.35	\$6.47	\$4.93	\$4.63	\$4.54	\$4.38	\$5.45

<sup>a</sup> Projected

<sup>b</sup> Includes Imports

Table 9. Soybean Production by Country

Year	United States	Brazil <sup>a</sup>	Argentina <sup>a</sup>	Paraguay <sup>a</sup>	China	Other	World	All Foreign
	million bushels							
1970	1,127	76	2	3	254	165	1,627	500
1971	1,176	135	3	4	290	126	1,734	558
1972	1,283	184	10	4	320	66	1,867	584
1973	1,547	289	18	7	367	64	2,292	745
1974	1,215	363	18	8	349	54	2,007	792
1975	1,547	413	26	10	367	46	2,409	862
1976	1,288	460	51	14	242	128	2,183	895
1977	1,762	350	99	12	266	154	2,643	881
1978	1,870	557	136	20	278	167	2,847	977
1979	2,261	376	132	21	274	191	3,255	994
1980	1,798	558	129	22	292	176	2,975	1,177
1981	1,989	471	152	22	342	186	3,162	1,173
1982	2,190	542	154	19	332	200	3,437	1,247
1983	1,636	571	257	20	359	213	3,056	1,420
1984	1,861	672	248	35	356	248	3,421	1,561
1985	2,099	518	268	22	386	272	3,565	1,466
1986	1,943	636	257	35	427	303	3,601	1,658
1987	1,938	662	356	40	457	359	3,812	1,874
1988	1,549	852	235	60	428	387	3,506	1,957
1989	1,924	747	395	58	376	445	3,945	2,020
1990	1,926	579	423	48	404	446	3,826	1,900
1991	1,987	709	410	48	357	435	3,946	1,959
1992	2,188	827	417	64	378	434	4,308	2,120
1993	1,871	908	456	66	563	454	4,318	2,447
1994	2,517	952	459	81	588	460	5,057	2,540
1995	2,177	887	457	88	496	487	4,591	2,415
1996	2,380	1,003	412	102	486	474	4,857	2,477
1997	2,689	1,194	717	110	551	545	5,806	3,117
1998	2,741	1,150	735	112	557	577	5,872	3,131
1999	2,654	1,257	779	107	525	527	5,875	3,221
2000	2,758	1,433	1,021	129	566	527	6,434	3,676
2001	2,891	1,598	1,102	114	566	501	6,772	3,881
2002	2,730	1,800	1,231	136	603	514	7,014	4,284

<sup>a</sup> Harvested in the spring of the following year.

Table 10. South American Soybean Area, Yield and, Production, 1988 to Date

Year	Brazil			Argentina			Paraguay		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
	mil. ha.	t/ha.	mil.t	mil. ha.	t/ha.	mil. t.	mil. ha.	t/ha.	mil. t.
1988-89	12.15	1.94	23.60	4.00	1.63	6.50	0.85	1.90	1.62
1989-90	11.55	1.76	20.34	4.95	2.17	10.75	0.98	1.61	1.58
1990-91	9.75	1.62	15.75	4.75	2.42	11.50	0.89	1.46	1.30
1991-92	9.70	1.99	19.30	4.80	2.32	11.15	0.90	1.44	1.30
1992-93	10.63	2.12	22.50	4.90	2.32	11.35	0.98	1.79	1.75
1993-94	11.44	2.16	24.70	5.40	2.30	12.40	1.05	1.71	1.80
1994-95	11.68	2.22	25.90	5.70	2.19	12.50	1.10	2.00	2.20
1995-96	10.95	2.21	24.15	5.98	2.08	12.43	1.10	2.18	2.40
1996-97	11.80	2.27	26.80	6.26	1.81	11.20	1.20	2.31	2.77
1997-98	13.00	2.50	32.50	6.95	2.80	19.50	1.20	2.49	2.99
1998-99	12.90	2.43	31.30	8.17	2.45	20.00	1.20	2.54	3.05
1999-00	13.60	2.51	34.20	8.58	2.47	21.20	1.15	2.52	2.90
2000-01	13.93	2.80	39.00	10.40	2.67	27.80	1.35	2.61	3.52
2001-02	16.35	2.66	43.50	11.40	2.63	30.00	1.42	2.18	3.10
2002-03	18.00	2.72	49.00	12.50	2.68	33.50	1.45	2.55	3.70

Source: USDA, FAS

Table 11. World Oilseed and Soybean Production

Year	Major Oilseeds			Soybeans		
	United States	Ex-United States	Total	United States	Ex-United States	Total
	million metric tons					
1977-78	56.5	93.7	150.2	47.95	23.98	71.93
1978-79	58.6	92.0	150.6	50.86	26.62	77.48
1979-80	72.4	98.1	170.5	61.72	31.79	93.51
1980-81	55.8	99.8	155.6	48.77	32.20	80.97
1981-82	64.0	105.5	169.5	54.13	31.93	86.06
1982-83	68.2	110.1	178.3	59.61	33.96	93.57
1983-84	50.4	115.1	165.5	44.52	38.64	84.16
1984-85	59.2	131.7	191.1	50.64	42.50	93.14
1985-86	65.4	130.8	196.2	57.13	39.92	97.05
1986-87	59.4	135.0	194.4	52.87	45.21	98.08
1987-88	60.6	150.0	210.6	52.75	51.06	103.81
1988-89	50.3	153.9	204.2	42.15	53.49	95.64
1989-90	59.3	153.1	212.4	52.35	55.02	107.37
1990-91	60.6	155.1	215.7	52.42	51.57	103.99
1991-92	64.3	160.0	224.3	54.07	53.31	107.38
1992-93	68.4	158.9	227.4	59.61	57.69	117.30
1993-94	59.5	168.4	227.9	50.92	66.58	117.50
1994-95	79.7	181.2	260.9	68.49	69.14	137.63
1995-96	69.1	190.6	259.7	59.24	65.72	124.96
1996-97	74.8	187.0	261.8	64.78	67.40	132.18
1997-98	83.1	203.9	287.0	73.18	84.90	158.07
1998-99	84.4	210.3	294.7	74.60	85.21	159.81
1999-00	82.3	221.1	303.4	72.22	87.68	159.90
2000-01	84.9	228.5	313.4	75.06	100.04	175.10
2001-02	89.8	233.7	323.5	78.67	105.63	184.30
2002-03	83.5	240.5	324.0	74.29	116.60	190.89

<sup>1</sup>WASDE Oct. 2002 and earlier.