



UNIVERSITY OF ILLINOIS  
EXTENSION



# Grain Price OUTLOOK

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## SOYBEANS: WORLD PRODUCTION CONTINUES TO EXPAND

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### Summary

The USDA's October *Crop Production* report forecast the 2001 U.S. soybean crop at 2.907 billion bushels. That forecast is 149 million bushels larger than the record crop of 2000 and 73 million larger than the September forecast. World soybean production in 2001-02 is projected at 6.638 billion bushels, 275 million larger than the 2000-01 crop. South American production is expected to grow by 132 million bushels, reaching a total of 2.642 billion bushels. Production of oilseeds other than soybeans is expected to grow at a more modest rate, reflecting declines in sunflower and rapeseed production. Palm oil production is forecast to increase again in 2001-02.

U.S. and world consumption of soybeans is expected to continue to grow, led by a 5 percent increase in soybean meal consumption. Stocks of soybeans and soybean oil are projected to remain large, however. Prices are projected to continue at the low level of the past three and one-half years until a supply problem develops. For the 2001-02 marketing year. U.S. soybean prices are forecast at an average of \$4.40. Producer pricing decisions will continue to be tied to the use of the marketing loan program.

### Supply Prospects

Stocks of soybeans at the beginning of the 2001-02 marketing year (September 1, 2001) are estimated at 248 million bushels. Those stocks are well below the level projected a

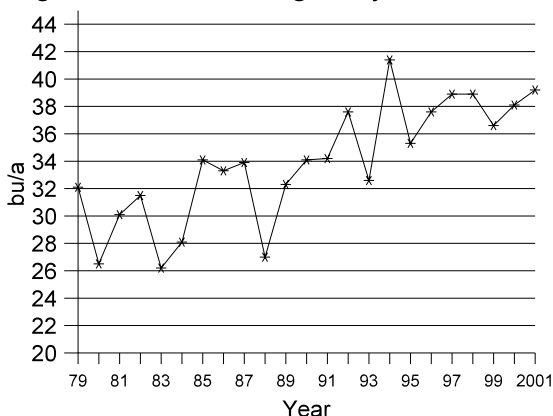
year ago due to higher rates of exports and domestic crush than were anticipated. The domestic soybean crush was particularly large in the last half of the marketing year (Table 1) as soybean meal exports responded to the ban on meat and bone meal feeding in Europe. For the year, crush reached a record 1.641 billion bushels, eclipsing the previous (1997-98) record by 46 million bushels. Exports slowed significantly in the last quarter of the year, due to competition from South America and a slowing of Chinese imports, but still reached a record one billion bushels.

In its October *Crop Production* report, the USDA forecast the 2001 U.S. soybean crop at 2.907 billion bushels (Table 2). That forecast exceeds the September forecast by 73 million bushels, is 149 million bushels larger than the 2000 crop, and is larger than anticipated by the market. The large crop forecast reflects record acreage of soybeans and the highest average yield since the record of 1994. Planted acreage of soybeans in 2001 is estimated at a record 75.4 million, about 1.2 million more than planted last year, but 1.2 million less than indicated in the USDA's March *Prospective Plantings* report (Table 3). The largest increase in acreage continues to be in the western corn belt states (Table 4). Combined acreage in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota account for 50.2 percent of the U.S. acreage, compared to 41 percent when U.S. acreage reached a modern low in 1990. Soybean planting has expanded by more than 14 million acres in

those states since 1990. Acreage outside of the midwest and plains state now accounts for only 16 percent of the U.S. acreage.

The U.S. average soybean yield is now forecast at 39.2 bushels per acre, one bushel above the September forecast and 1.1 bushel above last year's average. The forecast is the second largest average for the U.S., 2.2 bushels below the 1994 record (Table 5). The relatively stable pattern of soybean yields since 1996 is in contrast to the pattern of the 1980s and early 1990s when average yields were trending higher, but were highly variable (Figure 1).

Figure 1. U.S. Average Soybean Yield



Compared to last year's yields, significant increases are expected in the southeast and in Kansas and Nebraska. Yields in Michigan and Minnesota are down from those of a year ago. Indiana is expected to have the highest average yield of 49 bushels per acre, followed by Illinois and Nebraska (44), and Iowa and Ohio (43). Those four states account for almost half of the projected crop.

The pattern of a lower September soybean production forecast followed by a larger October forecast was also experienced in 1987, 1989, 1991, and 1996 (Table 2). The September to October increase in those four years ranged from 9 to 76 bushels (0.05 to 3.3 percent). This year's 2.6 percent increase is within the range of experience. In the four previous years, the November forecast exceeded the October forecast three times, in a range of 11 to 57 bushels (0.05 to 2.4 percent). In the fourth year (1987), the

November forecast was 8 million bushels below the October forecast. The January estimate exceeded the October forecast in 1991 and 1996, was the same as the October forecast in 1989 and was below the October forecast in 1987. The magnitude of change in forecasts so far this year most resemble 1996. Based on previous patterns, it is likely that the final estimate for the 2001 crop will be within 30 million bushels of the October forecast. The October forecast is used in this analysis.

### Consumption Still Rising

Record domestic soybean meal consumption and increasing meal exports resulted in a record large domestic crush of soybeans in the 2000-01 marketing year. Crush was especially large in the last quarter (summer) of the marketing year. Crush during that quarter accounted for 24.2 percent of the marketing year total, the largest percentage in 10 years. For the current year, domestic meal consumption is expected to expand at a slower rate as hog numbers stabilize, the number of cattle on feed decline, and broiler production expands by an expected 2.5 percent. A 2 percent increase in domestic use would bring the total to 32.49 million tons (Table 6).

Export sales of U.S. soybean meal as of October 11 stood at nearly 2.1 million tons, 80 percent larger than on the same date last year. Larger sales to Canada accounted for much of the increase. For the year, the USDA expects meal exports to decline modestly from the level of last year. World consumption of meal is expected to grow, but the U.S. is expected to lose export market share to South America. For the year, meal exports are projected at 7.4 million tons, bringing total use to 39.89 million tons. Allowing for 50,000 tons of meal imports and a 50,000 ton reduction in year ending stocks, about 1.658 billion bushels of U.S. soybeans will have to be crushed during the 2001-02 marketing year to meet expected meal consumption. That projection assumes a yield of 48 pounds of meal per bushel of

soybeans, the same as the yield of the past year.

If 1.658 billion bushels of soybeans are crushed to meet meal consumption, about 18.632 billion pounds of soybean oil will be produced, if the yield remains near the 11.24 pounds per bushel of the past year. A typical 2 percent expansion in domestic oil consumption would project to a 2001-02 marketing year total of 16.68 billion pounds. Prospects for U.S. soybean oil exports have improved due to expanding world vegetable oil consumption and expected reductions in sunflower and rapeseed production. The largest reduction in sunflower production is coming in the former Soviet Union, while rapeseed production is declining in Canada. Larger world palm oil production will continue to present a problem for U.S. soybean oil exports. At 24.61 million tons, palm oil production is expected to be up about 4 percent this year. Production of major vegetable oil crops other than soybeans is expected to increase about 2.3 percent (Table 8). Soybean oil exports from the U.S. might also get a boost from increased food aid.

The USDA currently projects U.S. soybean oil exports during the 2001-02 marketing year at 2.45 billion pounds. That is 1.05 billion more than exported in 2000-01, but 100 million less than projected last month. At this early stage of the marketing year outstanding commercial export sales of soybean oil are a little larger than a year ago. If exports do reach 2.45 billion pounds, total consumption projects to 19.13 billion pounds, leaving year ending stocks at about 2.4 billion pounds. Year ending stocks would be smaller than stocks at the beginning of the year, but still at a burdensome level (Table 9).

World trade of soybeans increased by 17 percent in the 2000-01 marketing year, reaching a record 2 billion bushels. The U.S. accounted for half of the world exports, but South American exports grew by 42 percent during the past year. Both the European Union and China increased imports

significantly; 13 and 31 percent, respectively. The European Union accounted for nearly 33 percent of all imports and China accounted for 24 percent of the world imports.

China has introduced some uncertainty into import prospects for the year ahead by announcing some unspecified requirements for importing GMO soybeans. As of October 11, China had purchased 36 million bushels of U.S. soybeans for delivery during the current marketing year, but had imported only 4 million bushels. Total sales plus accumulated exports of U.S. soybeans as of October 11 (to all destinations) had reached 369 million bushels, 12 percent more than on the same date last year. However, shipments to all destinations during the first six weeks of the marketing year totaled only 63 million bushels, 43 percent less than cumulative shipments of a year ago.

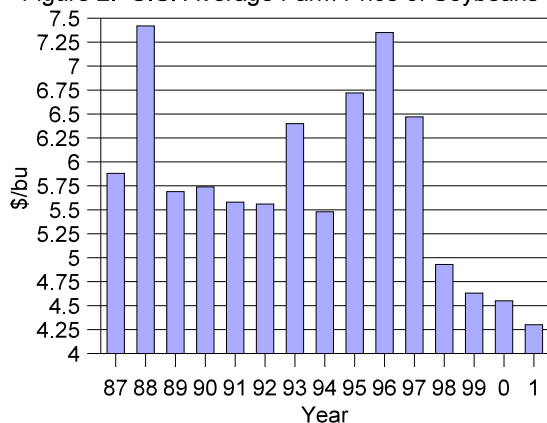
Prospects for another large crop in South America in 2002 means that competition for U.S. exports will remain keen. The USDA currently projects that the crop currently being planted in South America will result in production of 2.642 billion bushels, 5.3 percent larger than the crop harvested in 2001 (Table 10). Soybean acreage is expected to increase by 11 percent in Brazil and 4 percent in Argentina (Table 11). If that crop materializes, it will be difficult for the U.S. to export a billion bushels of soybeans in 2000-01. A projection of 975 million is used here (Table 7).

### **Price Prospects**

Based on the projections developed here, stocks of soybeans in the U.S. will grow to 360 million bushels by the end of the 2001-02 marketing year. That would be the largest level of stocks in 15 years. As a percentage of use (12.9 percent), however, stocks would be the largest in three years. The season's average price is expected to remain well below the loan rate, and below the level of the past three years (Figure 2). A marketing year average of only \$4.40 is projected here. That projection would prove to be too low if the

South American crop runs into difficulty or if the 2002 U.S. growing season is unfavorable. In the near term, however, prospects of abundant supplies are expected to keep prices under pressure.

Figure 2. U.S. Average Farm Price of Soybeans



What about seasonal price prospects? The extremes in the spot cash price of soybeans (central Illinois) tend to occur in the first or the last quarter of the marketing year. Over the past 28 seasons, the highest daily spot price of soybeans during the September through August marketing year occurred in September, October, or November 9 times and in June, July, or August 13 times. The high occurred in January once, April once, and May four times. The lowest spot cash price occurred in September, October, or November 12 times and in June, July, or August 13 times. The low was in December once, March once, and April once. Over the past three seasons, the lowest daily spot cash price for soybeans in central Illinois ranged from \$3.875 to \$4.295. The lowest price to date in the 2001-02 marketing year is \$4.065 reached on October 15.

History would suggest that cash soybean prices are nearing a seasonal, if not marketing year, low. Odds favor a marketing year low, although new lows could come next summer if prospects favor another large crop. If the marketing year low is being established now, the marketing year high would be expected in the period May through August of 2002. Over the past three seasons the range from low cash price to high cash price in central Illinois has been from \$1.05 to \$1.92

per bushel. The range has been less than \$1.00 only twice in the past 28 years (1985-86 and 1991-92). That history suggests that cash prices this year (central Illinois) might be expected to trade between \$3.90 and \$5.00 per bushel.

### Pricing Decisions

Decisions on pricing the remainder of the 2001 crop will be tied closely to the use of the marketing loan program and reflect the soybean price structure. The market is currently offering a spot price well below the loan rate. The premium for January delivery is relatively small (\$.10 in central Illinois) and the premium for June 2002 delivery (assuming a typical basis) is about \$.28. This relatively small carry in the market does not make forward pricing for later delivery very attractive.

One pricing alternative to consider on a portion of the crop is to establish the loan deficiency payment (LDP) at harvest and hold the crop unpriced in anticipation of a post harvest price recovery. This involves risk in that the crop is not protected from further price declines and storage costs are incurred. A second alternative is to place the crop under loan, lock in the repayment rate for a period of 60 days, and store the crop unpriced. The 60-day lock-in provides some protection if prices are lower at the end of the 60 day period.

A third alternative is to establish the LDP at harvest and deliver the soybeans on a basis contract. This strategy has the same risk as establishing the LDP and storing the crop unpriced, except that it does not require storage costs. This may be attractive in a high cost storage situation.

A fourth strategy is to establish the LDP, sell soybeans on the spot market and buy at-the-money call options (or deliver the soybeans on a minimum price contract). This is similar to the effect of a basis contract except that it is more expensive, but it also provides some protection from declining prices. At this

writing, at-the-money call options were priced near \$.20 for March and near \$.25 for July.

A fifth alternative, of course, is to establish the LDP and price the soybeans for delivery at harvest, effectively taking the loan rate as a net price. Some "portfolio" of these five strategies might be considered as well.

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Table 1. 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	
	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	
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	
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	
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	
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	
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	75.8	
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	812.2	
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	2,239.8	
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	
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	
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	79.6	
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	835.9	
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	
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	
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	
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	
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	
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	
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	397.0	
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	125.3	
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	-62.0	
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	460.3	
September 1 stocks Annual	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	247.9	
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	1,641.2	
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	1,000.0	
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	162.9	
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	2,718.80	2,803.10	

Table 2. 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
	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
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
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
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	
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	
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 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	74.226	72.408
2001		76.657	75.416		(74.137)

<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	1,886	2.5	74,226	100.0
2001	37,900	50.2	25,400	33.7	8,020	10.6	2,155	2.9	1,941	2.6	75,416	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. 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
	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
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
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
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	
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	
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		

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
	thousand tons												
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330	293	325
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>37,623</u>	<u>39,409</u>	<u>39,790</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	38,003	39,750	40,163
Domestic	22,291	22,934	23,007	24,251	25,283	26,542	26,611	27,320	28,895	30,657	30,378	31,850	32,490
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>7,331</u>	<u>7,575</u>	<u>7,400</u>
TOTAL	27,610	28,403	29,953	30,483	30,639	33,260	32,613	34,314	38,225	37,779	37,710	39,425	39,890
Ending stocks	318	285	230	204	150	223	212	210	218	330	293	325	275
Price <sup>b</sup>	\$173.94	\$170.00	\$176.00	\$181.85	\$180.00	\$151.00	\$225.00	\$260.40	\$175.00	\$131.83	\$159.55	\$165.00	\$150.00

<sup>a</sup> Includes imports

<sup>b</sup> Bulk, Decatur, Illinois 44%

Table 7. 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 <sup>a</sup>	2001-02 <sup>a</sup>
	million bushels												
Carryin	182	239	329	278	292	209	335	183	132	200	348	290	248
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>2,907</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	3,158
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,579	1,641	1,658
Export	623	557	684	770	589	838	851	882	870	805	973	1,000	975
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>164</u>	<u>163</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	2,798
Carryout	239	329	278	292	209	335	183	132	200	348	290	248	360
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	\$4.55	\$4.40

<sup>a</sup> Projected

<sup>b</sup> Includes Imports

Table 8. 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	220.9	303.2	72.22	87.63	159.85
2000-01	84.9	225.8	310.7	75.06	98.12	173.18
2001-02	96.3	231.0	321.3	79.12	101.55	180.67

<sup>1</sup>WASDE Oct.12, 2001 and earlier.

Table 9. 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 <sup>c</sup>
	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	2,800
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>17,824</u>	<u>18,480</u>	<u>18,632</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	20,550	21,512
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,055	16,350	16,680
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>1,400</u>	<u>2,450</u>
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	18,027	17,432	17,750	19,130
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,800	2,382
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¢	15.60¢	14.2¢	15.5¢

<sup>a</sup> Includes imports

<sup>b</sup> Bulk, Decatur, Illinois 44%

<sup>c</sup> Projected

Table 10. 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	525	5,873	3,219
2000	2,758	1,411	974	125	566	530	6,363	3,605
2001	2,907	1,525	992	125	551	567	6,638	3,731

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

Table 11. 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	13.97	2.75	38.40	10.28	2.58	26.50	1.25	2.72	3.40
2001-02	15.50	2.68	41.50	10.70	2.52	27.00	1.30	2.62	3.40

Source: USDA, FAS