



# 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: SMALLER STOCKS, MORE ACRES, AND EARLY WEATHER WORRIES

APRIL 2000

*Darrel Good*

### Summary

March 1, 2000 stocks of soybeans were estimated at 1.397 billion bushels, 60 million less than on the same date last year and about 20 million less than generally expected. U.S. producers have reported intentions to plant a record 74.871 million acres of soybeans in 2000, 1.091 million more than planted last year.

U.S. soybean exports have been larger than expected so far in the 1999-00 marketing year. The pace of shipments will slow as South America harvests and markets another large crop. However, year ending stocks in the U.S. and the world will be smaller than stocks at the beginning of the year.

Dry weather that has persisted in some areas since late last summer raises concerns about the yield potential of the 2000 crop. Beneficial moisture was received in the southern plains, southeastern states and the far eastern corn belt. However, soil moisture deficits remain in key growing areas in the midwest.

Soybean prices have moved steadily higher since mid-December 1999 on the basis of good demand, and production worries in South America and the U.S. Soybean oil prices turned higher in early March 2000 as competing vegetable oil prices, particularly

for palm oil, moved higher. Old crop cash prices remain below the loan rate, while new crop bids have moved up to the loan rate in some areas. For the next several months, prices will reflect U.S. weather and crop prospects, suggesting a volatile price pattern. November 2000 futures would be expected to move to or above the \$6.00 mark on the basis of continued dry weather. Signs of improved moisture conditions, however, would likely propel that contract back to the \$5.20 level, and eventually lower if trend yields materialize.

### Old Crop Consumption

The USDA's *Grain Stocks* report, released on March 31, estimated March 1 stocks of soybeans at 1.397 billion bushels (Table 1). That figure implies soybean disappearance during the second quarter of the marketing year of 785.6 million bushels. The Census Bureau reports that 408.1 million bushels of soybeans were crushed during that period, almost identical to crush in the second quarter last year. Census Bureau export estimates are available for December 1999 and January 2000, but have not yet been released for February 2000. Estimates of exports during February are available from the USDA's weekly export inspection report. For the past 18 months or so, the Census Bureau estimate of soybean exports has been well below that of the USDA. During the 1998-99 marketing year, weekly export

inspection figures totaled 847.4 million bushels, while Census Bureau figures totaled 801.5 million bushels. For the first 5 months of the current marketing year, weekly export inspections totaled 521.5 million bushels and Census Bureau estimates totaled 510.2 million bushels. Based on the Census Bureau export figures for December and January and USDA inspection figures for February, discounted by 2 million bushels, second quarter exports are estimated at 308 million bushels.

Based on the calculations above, seed, feed, and residual use of soybeans during the second quarter of the year totaled 69.5 million bushels. Use in that category for the first half of the year totaled 156.9 million bushels, almost identical to the unusually large use of a year ago. The residual category of use of soybeans has become extremely large in recent years, beginning in 1992-93 and culminating last year (and maybe this year). Part of the problem is related to the discrepancy in export estimates. USDA uses the Census Bureau estimates as the final figure. Since those estimates have fallen below the inspection figures, large quantities are forced into the residual category.

For the current year, the USDA has forecast seed, feed, and residual use at 159 million bushels, down from the enormous 205 million of a year ago. That projection will have to change or more soybeans will have to show up in later stocks estimates. Seed, feed, and residual use has occasionally been negative in the last half of the year (1992-93 and 1996-97) so it could happen this year. For now, the market is assuming that the projection of residual use will have to be increased, leading to smaller stocks at the end of the year. For now, the projection of use in that category is moved up to 175 million bushels (Table 3).

Since March 1, soybean exports have continued on a very rapid pace. Weekly

inspection figures showed March shipments nearly 42 million bushels larger than during the same month last year. The major increase in exports this year compared to last year is in shipments to China (up 85 percent), Mexico (up 19 percent), the European Union (up 16 percent), and Taiwan (up 12 percent). The European Union has accounted for 35.9 percent of U.S. exports through March 30, while China accounted for 15.8 percent.

Competition for U.S. exports will increase from April through September as the South American crop is harvested and marketed. The South American harvest is currently estimated at 1.948 billion bushels, down only slightly from the 1.98 billion harvested last year, and the record 2.021 billion harvested in 1998 (calculated from Table 2). Over the past 10 years, exports during the first half of the year have accounted for 54 to 77 percent of the total for the marketing year. The typical pattern (7 out of 10 years) is for first half exports to account for 62 to 66 percent of the annual total. For the current year, the USDA has projected exports at 910 million bushels. Exports in the first half of the year represented 66.6 percent of that total. With a respectable level of unshipped sales as of March 30 (85 million bushels), minor delays in the South American harvest, and increased domestic demand in South America, the current projection appears a little low. A projection of 925 million bushels is used here (Table 3).

The rate of domestic soybean crush this year has been driven by soybean meal demand since soybean oil is in surplus. The crush during the first half of the year totaled 834.8 million bushels, up from 817.9 million last year and comparable to the record 838.9 million of two year ago. However, the crush slowed significantly in February 2000 as narrow crush margins forced some processors to close plants.

Domestic meal consumption during the first 4 months of the marketing year was about 1 percent above consumption of a year ago. That pace is expected to be at least maintained as the year progresses due to increased livestock feeding profitability and increased poultry production. Demand increases will be limited by prospects for declining hog numbers, although weights will likely increase. A 1 percent increase for the year would result in domestic use of about 31 million tons of soybean meal. The USDA is projecting use at 31.15 million tons. For now, a projection of 31.1 million tons is used (Table 4).

The USDA projects soybean meal exports for the current year at 7 million tons, slightly less than exported last year. Through the first 4 months of the marketing year, the Census Bureau reported meal exports of 2.991 million tons, 9 percent above shipments during the same period last year. The weekly *Export Sales* report through March 30 showed commercial shipments to date 2 percent above shipments of last year. Unshipped sales were 13 percent smaller than on March 30 last year. With the South American crop slightly smaller than that of a year ago and domestic meal consumption on the rise, particularly in Brazil, U.S. exports may reach 7.2 million tons (Table 4).

It appears that total meal consumption for year will total about 38.3 million tons. Allowing for imports of 50 thousand tons and a draw down in year ending stocks of 90 thousand tons, production will need to total about 38.16 million tons. Through the first half of the marketing year, the average yield of meal per bushel of soybeans crushed was 47.66 pounds, higher than last year's average of 47.4 pounds. If that pace continues, crush for the year will need to total 1.601 billion bushels to meet the demand for soybean meal. That is equal to the current USDA projection. If 1.601 billion bushels are crushed, crush during the last half of the year will need to be 766.2 million

bushels, or 47.9 percent of the annual total. Over the last 10 years, crush in last half year has averaged 48.35 percent of the annual total, in a range of 47 to 49.6 percent.

If 1.601 billion bushels of soybeans are crushed this year, soybean oil production will total about 18.155 billion pounds based on an average oil yield of 11.34 pounds (implied by yield during the first half of the year). Apparent domestic soybean oil consumption during the first 4 months of the marketing year was about 8 percent larger than during the same period last year. For the year, the USDA is projecting use at 16 billion pounds, only 2.2 percent above last year's consumption. Use may be near 16.2 billion pounds (Table 5).

The Census Bureau reports soybean oil exports of only 580 million pounds during the first four months of the 1999-00 marketing year. That is 50 percent less than exported in same period last year. As of March 30, commercial oil exports were reported at 559 million pounds, 58 percent less than on the same date a year ago. Declines are widespread lead by a 78 percent decline in shipments to China. Soybean oil is receiving a lot of competition from palm oil and larger foreign oilseed crops (Table 6). For the year, the USDA projects oil exports at 1.55 billion pounds, 35 percent below shipments of a year ago. Even that small projection appears optimistic. A projection of 1.45 billion pounds appears more reasonable. Stocks of oil at the end of the current year are projected to be surplus, at 2.105 billion pounds (Table 5).

The use of soybeans for all purposes during the current marketing year is projected at 2.696 billion bushels, leaving a carryover of 298 million bushels (Table 3).

### **New Crop Prospects**

In the March 31 *Prospective Plantings* report, the USDA revealed producer

intentions to plant 74.871 million acres of soybeans in 2000 (Table 7). Those intentions exceed last year's record acreage by 1.091 million. The increase is coming primarily in the western corn belt, where intentions exceed last year's plantings by 1.45 million acres (Table 8). Acreage is expected to be up 500,000 acres in South Dakota, 400,000 in North Dakota, and 300,000 in both Missouri and Nebraska. The seven western corn belt states account for 49.8 percent of intended acreage, up from 45.1 percent in 1995 and 41.1 percent in 1990. Acreage intentions for 2000 are 16.986 million larger than acreage planted in 1990. Almost 80 percent of the increase has come in the western corn belt. The eastern corn belt states plan to increase soybean acreage by only 70,000 acres in 2000. Intentions in those 5 states account for 32.3 percent of the total, compared to 33.8 percent in 1995 and 32.0 percent in 1990.

The increase in soybean acreage since 1995 has been accommodated by the change in farm policy. The large increase in 1997 was driven by the high price of soybeans relative to other crops. The increase since 1997 has been motivated primarily by the high loan rate for soybeans relative to other crops.

In recent history, actual planted acreage of soybeans has exceeded March intentions (Table 7). That has been the case in 11 of the past 13 years and in each of the past 9 years. In the 12 years from 1975 through 1986, actual acreage exceeded intentions 6 times and fell short of intentions 6 times. The recent one-sided pattern is difficult to explain. In some years, the March *Prospective Plantings* report appears not to account for all the crop acreage. That does not appear to be the case this year. Intentions for all reported crops, including harvested acreage of hay, total 325.531 million acres, compared to 1999 acreage of 325.287 million. With some additional

acreage expected in the Conservation Reserve Program, the March report showed more total acreage intended for planting than had been expected.

The increase in soybean acreage relative to March intentions over the past 9 years has ranged from 25,000 acres (1998) to 2.205 million (1997) and averaged 1.09 million acres. The change, if any, this year is likely to be small. We are inclined to use the intentions figure as a good forecast of actual acreage.

The difference between planted and harvested acreage is typically fairly small. Over the past 10 years, the difference has ranged from 895,000 acres (1997) to 2.778 million acres (1993) and averaged 1.26 million. Excluding the flood year of 1993, the average difference has been about 1.1 million acres. This year's planting intentions point to likely harvested acreage of 73.77 million.

As always, the larger question in regards to the potential size of the 2000 crop is yield potential. The U.S. average annual soybean yield has varied widely over time (Table 9), but with a trend increase. The trend yield projection for 2000 depends on how trend is calculated – which time period, type of trend analysis (linear or curvilinear); and whether the regional shift in acreage is incorporated. Using a simple linear trend of U.S. average yield from 1979 through 1999 produces a trend estimate for 2000 of 39.2 bushels per acre. The same trend value is generated using a shorter time period from 1985 through 1999. The trend calculation is 0.2 bushels lower than the trend calculation for 1999 (based on yields from 1985 through 1998), due to the below trend performance in 1999. A slightly higher trend calculation for 2000 would likely result from incorporating the effects of a continued shift of acreage (percentage wise) from lower yielding to higher yielding areas.

A trend yield of 39.5 bushels per acre in 2000, along with harvested acreage of 73.77 million, would result in a crop of 2.914 billion bushels. Each bushel deviation from the trend would change the crop size by about 74 million bushels. The decision for now is whether there is a compelling reason to assume a non-trend yield for the 2000 crop. Below normal soil moisture levels in critical corn belt states, along with a generally dry 90 day forecast from the National Weather Service, certainly raises concerns about the 2000 yield potential. Yet, history suggests that summer weather conditions are more critical than spring conditions in determining final yield, assuming there is enough moisture to get the crop germinated and to support early growth. Some signs of a weakening La Nina pattern suggest summer weather may be more "normal", but it is clearly too early to know. My tendency is to anticipate a yield near, but slightly below trend. A yield of 38.5 bushels would produce a record crop of about 2.84 billion bushels, resulting in 2000-01 marketing year supplies of 3.14 billion bushels (Table 3).

Some increase in soybean exports might be anticipated in the 2000-01 marketing year due to increasing world demand, particularly from China. The magnitude of exports will be partially influenced by the size of the 2001 South American crop. Argentina has been aggressively increasing soybean plantings since 1992. In 1999 plantings of 20.25 million acres were 67 percent larger than 1992 plantings. Brazil reduced

soybean acreage from 1988 to 1991, but has expanded significantly since then. Plantings in 1999 totaled, 32.4 million acres, 35 percent above acreage planted in 1991. Current economics favor continued expansion of soybean acreage in 2000. Average yields in both Brazil and Argentina have been increasing over time, peaking with the 1998 harvest. Yields were down slightly last year and are expected to be a bit lower again this year due to some dry growing areas, but are still at relatively high levels. With normal weather, a very large harvest can be expected in 2001. A projection of 950 million bushels is used for potential U.S. exports in the 2000-01 marketing year.

The domestic soybean crush is likely to continue to be driven by soybean meal demand. Domestic demand is already fairly mature, with meat production at very high levels. Growth may not be any more than the 1 percent being experienced this year. Export demand for meal is more difficult to forecast. In recent history, exports have ranged from 6 to 9.3 million tons, accounting for 18 to 24 percent of total meal use.

With some growth in meal exports, to 8 million tons, total meal requirements during the 2000-01 marketing year would be near 39.4 million tons, requiring a domestic crush of about 1.655 billion bushels of soybeans. With a continuation of a large residual use of soybeans, total use during the year ahead would reach 2.78 billion bushels. With the modest yield assumption of 38.5 bushels per acre, soybeans would remain in abundance next year, with carryover stocks projected at 361 million bushels. The U.S. average yield would have to decline below 36.3 bushels to reduce stocks below 200 million bushels. A trend yield of 39.5 bushels could result in year ending stocks well over 400 million bushels.

## Price Prospects

Soybean prices have been at extremely low levels since August 1998. The average cash price in central Illinois from August 1998 through March 2000 was \$5.11 per bushel. Daily prices have ranged from \$3.87 to \$5.79. For the 1999-00 marketing year, the monthly price pattern of soybeans and products has been as follows:

Month	Soybeans <sup>a</sup>	Meal <sup>b</sup>	Oil <sup>c</sup>
	\$/bu	\$/t	¢/lb
Sept. 1999	4.67	—	—
Oct.	4.52	147.12	16.08
Nov.	4.49	145.93	15.63
Dec.	4.47	145.39	15.33
Jan. 2000	4.73	154.96	15.53
Feb.	4.87	162.99	15.10
Mar.	4.97	167.00	16.22
Ave.	4.67	153.90	15.65

<sup>a</sup>Central, IL; <sup>b</sup>44% Decatur, IL; <sup>c</sup>Bulk, Decatur, IL

Prices have been trending higher since December on the basis of good demand and various crop concerns (first South America and now the U.S.). The cash price of soybeans in central Illinois has ranged from \$4.35 (October 26) to \$5.175 (April 1). The range of \$.825 is small by historic standards. The marketing year range was \$1.92 last year and \$2.325 in 1997-98. The smallest range was \$.615 in 1985-86, followed by \$.915 in 1991-92.

For the current year, the average price of soybean meal is projected at \$158.50 per ton (44 percent protein), while the average price of soybean oil is projected at 16.3 cents per pound. The average cash price of soybeans is expected to be near \$4.90 per bushel.

The supply and consumption projections developed here would suggest a continuation of very low soybean prices in the 2000-01 marketing year. A build-up in stocks would suggest a average price near \$4.80 (Table 3). The market is currently

offering an average price (delivered from harvest through July 2001) of about \$5.40 per bushel. The “premium” reflects concerns about the potential size of the 2000 crop. November 2000 futures traded to a high of \$5.79 on April 3. The high for that contract has been \$6.31, while the low has been \$4.53. The trading range of \$1.78 is about normal.

Prices are expected to continue to be volatile as prospects for the U.S. crop unfold. Historically, weather and crop concerns have provided good opportunities to finish pricing old crop inventories and forward price part of the new crop. Questions always center around the timing and pace of those sales. For old crop inventories for which the loan deficiency payment has been received, spreading cash sales over the next 2 to 3 months is a prudent approach. For old crop still eligible for loan, the use of the 60-day lock in provision on loan repayment is still an attractive feature, allowing for a more wait-and-see approach on selling those inventories.

New crop prices have approached the loan price in some areas. Aggressive selling of new crop soybeans is not favored until, or if, those prices are more comfortably above the loan rate. November futures near \$6.00 is a reasonable target for the first 15 to 20 percent of the crop. The generally weak new crop basis favors hedging or hedged to arrive contracts.

Issued by Darrel Good  
Extension Economist  
University of Illinois

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
	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
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
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
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
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
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	

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	
	million pounds																		
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	
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	1,860.7	2,514.9	2,174.3	2,380.3	2,688.8	2,741.0	2,642.9	
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	2,159.0	2,730.0	2,514.1	2,572.8	2,825.6	2,943.8	2,994.4	
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	
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	
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	87.4	
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	811.5	
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	
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	
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	308.0	
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	69.5	
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	785.6	
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	1,397.3	
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		



Table 2. 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	541	557	5,808	3,119
1998	2,741	1,139	731	110	551	568	5,840	3,099
1999	2,643	1,121	735	92	514	535	5,640	2,997

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

Table 3. 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 <sup>a</sup>	2000-01 <sup>a</sup>
	million bushels											
Carryin	182	239	329	278	292	209	335	183	132	200	348	298
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>2,643</u>	<u>2,840</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	2,994	3,141
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,601	1,655
Export	623	557	684	770	589	838	851	882	870	801	925	950
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>205</u>	<u>170</u>	<u>175</u>
TOTAL	1,870	1,838	2,041	2,178	1,954	2,394	2,331	2,441	2,626	2,596	2,696	2,780
Carryout	239	329	278	292	209	335	183	132	200	348	298	361
U.S. Average price	\$5.70	\$5.75	\$5.58	\$5.60	\$6.40	\$5.48	\$6.77	\$7.35	\$6.47	\$4.93	\$4.90	\$4.80

<sup>a</sup> Projected

<sup>b</sup> Includes Imports

Table 4. 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 <sup>c</sup>
	thousand tons										
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330
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>38,160</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	38,540
Domestic	22,291	22,934	23,007	24,251	25,283	26,542	26,611	27,320	28,895	30,662	31,100
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>7,117</u>	<u>7,200</u>
TOTAL	27,610	28,403	29,953	30,483	30,639	33,260	32,613	34,314	38,225	37,779	38,300
Ending stocks	318	285	230	204	150	223	212	210	218	330	240
Price <sup>b</sup>	\$173.94	\$170.00	\$176.00	\$181.85	\$180.00	\$151.00	\$225.00	\$260.40	\$175.00	\$131.83	\$158.50

<sup>a</sup> Includes imports

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

<sup>c</sup> Projected

Table 5. 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 <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
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>18,155</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	19,755
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,200
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>1,450</u>
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	28,027	17,650
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	2,105
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¢	16.3¢

<sup>a</sup> Includes imports

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

<sup>c</sup> Projected

Table 6. 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	208.4	292.8	74.60	84.35	158.95
1999-00	82.1	213.7	295.8	71.93	81.58	153.51

<sup>1</sup>WASDE March 10, 2000 and earlier.

Table 7. 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	73.780	72.476
2000		74.871			(73.771)

<sup>a</sup> February 1

<sup>b</sup> May 1

Table 8. Planted Acres of Soybeans by Region

Region	<u>Western Corn Belt<sup>a</sup></u>		<u>Eastern Corn Belt<sup>b</sup></u>		<u>Mid-South<sup>c</sup></u>		<u>Southeast<sup>d</sup></u>		<u>East Coast<sup>e</sup></u>		<u>United States</u>	
	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	9,750	13.2	2,360	3.2	1,770	2.4	73,780	100.0
2000	37,250	49.8	24,170	32.3	9,390	12.5	2,250	3.0	1,811	2.4	74,871	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

Table 9. 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
	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
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
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
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
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
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	