

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.

Grain Price

## SOYBEANS: SMALLER U.S. CROP, WILL SOUTH AMERICA FILL THE GAP?

**O**CTOBER 2002

Darrel Good

2002 – No. 8

#### Summary

The USDA's October *Crop Production* report projected the 2002 U.S. soybean harvest at 2.654 billion bushels, unchanged from the September forecast and 237 million smaller than the 2001 crop. The U.S. average yield is projected at 37 bushels per acre, down 2.6 bushels from the average of a year ago. The 2002 crop is well below that of a year ago in most eastern growing areas and in far western growing areas. The largest increase occurred in Minnesota.

The smaller U.S. crop will require a significant reduction in use during the 2002-03 marketing year. That reduction is expected to come in the export of U.S. soybeans even at relatively low prices due to an anticipated increase in South American soybean production. The USDA projects that the 2003 harvest from the crop just being planted will be 243 million bushels larger than the 2002 crop. Stocks of U.S. soybeans will be reduced to the lowest level in six years by the end of the current marketing year. If the South American crop is large and soybean prices remain low, U.S. producers will likely reduce soybean acreage in 2003. For the current year, the average farm price of soybeans is expected to be near \$5.45, nearly \$1.00 higher than the annual average of the past three years. If South American production is less than currently projected, or if U.S. average yields do not recover in 2003, prices could moved higher than currently projected.

#### Smaller U.S. Crop Confirmed

At 2.654 billion bushels, the USDA's October projection of the U.S. soybean crop is unchanged from the September projection and 237 million bushels smaller than the record large 2001 crop (Table 1). The projection is identical to the size of the 1999 crop. The U.S. average yield is projected at 37 bushels per acre, 2.6 bushels less than the average of a year ago and 4.4 bushels below the record yield of 1994 (Table 2). For the major soybean producing states, the largest year-over-year declines in average yield are projected for Indiana (9 bushels), Ohio (9 bushels), and Nebraska (8 bushels). Higher average yields are expected in Iowa (2 bushels), Michigan (6 bushels), and Minnesota (7 bushels).

STATE • COUNTY • LOCAL GROUPS • U.S. DEPARTMENT OF AGRICULTURE COOPERATING University of Illinois Extension and Purdue University Cooperative Extension Service provide equal opportunities in programs and employment. The USDA will release another projection of the size of the U.S. crop on November 12 and the final estimate on January 10. In recent years, the November forecast has been reasonably close to the October forecast. The difference over the past five years has ranged from 6 to 46 bushels. The difference between the October forecast and the January estimate has ranged from 5 to 53 million million bushels. The January estimate has been below the October forecast for each of the past four years. For the current year, harvest reports continue to reflect wide variations in average yield, making it difficult to form an expectation about likely changes in subsequent forecasts. For this analysis, we are using the October forecast of total production.

Stocks of soybeans at the end of the 2001-02 marketing year totaled 208 million bushels, about 13 million more than generally expected. The stocks figure validated the estimated size of the 2001 crop, suggesting that seed, feed and residual use of soybeans last year was at a normal level (Table 3).

If the crop is near the October forecast, the supply of U.S. soybeans for the current marketing year will total 2.865 billion bushels, 276 million bushels less than last year's supply and the smallest supply in five years (Table 4). Assuming that year end stocks of soybeans cannot be reduced below about 145 million bushels (5 percent of recent annual consumption), 2.72 billion bushels of soybeans will be available for use during the current marketing year. Use was well above that figure during each of the last two years, reaching a record 2.933 billion bushels in 2001-02.

# Domestic Crush Will Remain Large

With a slow rate of expansion in poultry production during the 2002-03 soybean meal marketing year (projected at 1.4 percent by USDA) and a modest decline in beef production (-2.4 percent) and pork production (-0.8 percent), the domestic requirements for soybean meal should grow at a very slow rate during the current year. Some year-over-year decline in use might be expected in the last half of the marketing year when reductions in beef and pork production accelerate. Domestic soybean meal consumption has grown by 4.3 percent in each of the past two years. A growth of about 2 percent is expected during the current marketing year. At that rate, domestic use would reach 33.66 million tons (Table 5).

The world's growing appetite for soybean meal will be supplied by South America during the year ahead, if that crop is as large as advertised. The USDA projects that consumption of soybean meal in areas other than the U.S. and South America will increase by 5 percent, that South American exports will increase by 10 percent, and that U.S. exports will decline by 13 percent, to 6.6 million tons. U.S. imports of soybean meal are projected to grow from 110,000 tons last year to 240,000 tons during the current year. Based on these projections, the U.S. will need to produce 39.935 million tons of soybean meal during the current marketing year. The required crush to produce that amount of meal depends on the average yield of meal per bushel of soybeans. The average yield has been relatively large the past three years, averaging between 47.6 and 48 pounds. With a yield of 47.6 pounds, crush would need to total 1.678 billion bushels to meet the expected market for soybean meal.

If 1.678 billion bushels of soybeans are crushed, soybean oil production will total 18.458 billion to 18.96 billion pounds, depending on average yield of oil per bushel of soybeans. An estimate of 18.8 billion pounds is used here. Based on the USDA's projection of use of 19.75 billion pounds during the current marketing year, stocks of oil would be reduced to about 1.5 billion pounds by the end of the marketing year (Table 6).

# Exports Will Be Lower

If the U.S. crushes 1.678 billion bushels of soybeans during the current year, and if year ending stocks must be a minimum of about 145 million bushels, then only 877 million bushels will be available for export during the current marketing year. The USDA projects exports at 850 million bushels, 21 percent less than exports during the 2001-02 marketing year. Such a large reduction in use of U.S. soybeans can be accomplished without sharply higher prices only if South America expands production in 2003. The USDA currently projects the 2002-03 South American crop at 3.039 billion bushels, 243 million larger than the 2001-02 harvest (Table 7). That increase is almost identical to the reduction in the U.S. crop this year. Production in China is expected to be 13 million bushels larger this year, as is production in all other countries. The largest increase in South America is expected in Brazil, reflecting a 7 percent increase in area and a 3 percent increase in the average yield (Table 8). Even with a large increase in South American soybean production, total oilseed production outside of the U.S. during the current marketing year is expected to grow by only 1.2 percent (Table 9). Of the major oilseed crops other than soybeans, only sunflower seed production is expected to expand.

Smaller oilseed crops around the world and a slow expansion in palm oil production (2 percent) increases the importance of the size of the 2002-03 South American soybean crop. That crop is being planted with some early reports of adverse weather conditions in some areas of Brazil – dry to the north and wet to the south. Reportedly, this pattern is typical of an El-Nino weather system. If weather adversity continues, the market will likely begin to scale back the expectations of the size of the Brazilian crop. A smaller crop means that higher prices would be required to ration supplies.

Six weeks into the 2002-03 U.S. soybean marketing year finds export inspections running about 18 percent behind the pace of a year ago. Unshipped sales as of October 10 were 13 percent smaller than outstanding sales of a year ago. Almost all of the decline is in sales to the European Union. Sales to China are large, running about 60 percent larger than sales of a year ago. However, the current Chinese policy on importing GMO products is scheduled to expire in December and importers are being told they will have to renew authorization for importing GMO products. This creates some confusion about potential soybean exports to China.

For now, we are using the USDA's export projection of 850 million bushels, but recognize that many key factors impacting total use and the mix of exports and domestic crush are still unfolding. Unless the 2002 U.S. crop is larger than currently projected, the use of U.S. soybeans for all purposes will have to decline during the current marketing year. Whether higher prices will be required to force the decline is still not clear.

## 2003 Production Prospects

With U.S. and world inventories of wheat, feed grains, and soybeans at low levels, there is a need for increased production of all major crops in 2003. A return to trend yields in the U.S. would contribute to that increase, but there may also be a need to expand acreage of the major crops. The USDA is expected to reveal larger acreage of winter wheat in the U.S. in the January 10 report. At current price levels for the 2003 crops of corn and soybeans, U.S. producers might also expand corn acreage in 2003 and reduce soybean acreage for the third consecutive year. It would then be left to South America to continue to expand soybean acreage.

## Price Prospects

Prospects for the 2002-03 marketing year average price are far from settled. The smaller harvest in the U.S. in 2002, the shaky start to the South American planting season, uncertainty about U.S. acreage in 2003, and mixed signals about Chinese demand suggest that soybean prices will remain fairly volatile and could move significantly in either direction over the next 9 months.

November 2002 soybean futures established a contract high of \$5.91 on September 11, 2002, traded to a low of \$5.2225 on October 9, and moved back to near \$5.50 by mid-October. The average spot cash price of soybeans in central Illinois peaked at \$5.94 on August 15, declined to \$5.01 on October 9, and recovered to \$5.32 on October 17. Since harvest started in mid-September, the average cash price has traded in a range of about \$.65 per bushel. At the middle of October, the average cash price was about \$1.15 per bushel higher than on the same date last year. Most all of that increase was accounted for by higher soybean oil prices. At \$.203 per pound, the crude oil price in central Illinois was 40 percent above the price at the same time last year. At \$167 per ton, the price of 48 percent meal in central Illinois (rail basis) was only about 3 percent higher than on the same date last year.

For the 2002-03 marketing year, current expectations for supply and demand fundamentals project to a season's average price of \$175 per ton for soybean meal, \$.21 per pound for soybean oil, and \$5.45 for the farm price of soybeans. In mid-October the markets for all three commodities reflected season's average prices slightly below the projected averages.

Marketing decisions for the 2002 crop are complicated by mixed market signals. On one hand, the lack of carry in the price structure offers little return for storing the crop. On the other hand, the small U.S. crop and uncertainty about the upcoming South American crop suggest that there is potential for higher prices. On the surface, this combination suggests that cash soybeans should be sold on a basis contract or sold in the spot market and replaced with futures (or perhaps call options). However, none of these other "ownership" strategies (other than call options) offer protection from declining prices. Maintaining ownership of cash soybeans provides downside risk protection in the form of a loan deficiency payment or marketing loan gain. With cash prices just a few cents above the loan rate in many areas, placing unpriced soybeans in storage and under loan is an attractive strategy (particularly if on-farm facilities are available) even though there is little carry in the market. If weather problems in South America fail to generate higher prices this winter, a second opportunity could be generated by crop concerns in the U.S. in 2003. If prices do not move higher, the net price will be the loan rate minus storage costs.

The price for the 2003 crop is currently below the loan rate. With so much uncertainty about production and demand over the next year, there seems to be little urgency to price that crop.

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	2000	2001	2002
									I	million b	oushels													
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	
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	
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
									I	million I	oushels	5												
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	
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	
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		

	1982-83	1983-8 <u>4</u>	<u>1984-85</u>	1985-8 <u>6</u>	<u>1986-87</u>	1987- <u>88</u>	1988-8 <u>9</u>	<u> 1989-90</u>	<u>1990-91</u>	<u>1991-92</u>	<u> 1992-93</u>	<u>1993-94</u>	<u>1994-95</u>	<u>1995-96</u>	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
								m	llion bush	nels										
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
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
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
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
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
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
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
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
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	143.9
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	-62.2
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	476.7
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	208.2
Annual	4 4 0 0 0		4 000 1	4 050 0	4 4 7 0 7		4 057 0		4 4 9 9 9	4 050 -	4 070 0	4 075 0	4 405 0	4 0 0 0 1	4 405 -	4 505 -	4 500 5	4 570 0	4 050 0	4 000 0
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	1,065.0
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	168.3	169.2
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 4. 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>2,654</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	2,865
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,578	1,641	1,699	1,678
Export	623	557	684	770	589	838	851	882	870	805	975	1,000	1,065	850
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>163</u>	<u>169</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	2,693
Carryout	239	329	278	292	209	335	183	132	200	348	290	248	208	172
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	\$4.35	\$5.45

<sup>a</sup> Projected <sup>b</sup> Includes Imports

Table 5. Soybean Meal Balance Sheet -- Years Beginning October 1

				g										
	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
					thousar	nd tons								
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330	293	383	225
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>	40,332	<u>39,935</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	40,825	40,400
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	33,000	33,600
Exports	<u>5,319</u>	<u>5,469</u>	<u>6,946</u>	6,232	<u>5,356</u>	<u>6,717</u>	6,002	<u>6,994</u>	<u>9,330</u>	<u>7,122</u>	7,332	7,703	7,600	6,600
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	40,600	40,200
Ending stocks	318	285	230	204	150	223	212	210	218	330	293	383	225	200
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	\$168.00	\$175.00

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

Table 6. 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	2,385
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>18,865</u>	<u>18,800</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	21,785	21,250
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	16,900	17,350
Exports	<u>1,353</u>	<u>779</u>	1,647	<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>	2,500	<u>2,400</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	19,400	19,750
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	2,385	1,500
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¢	21.0¢

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

Year	United States	Brazil <sup>a</sup>	Argentina <sup>a</sup>	Paraguay <sup>a</sup>		Other	World	All Foreign
_			m	illion bushel	S			
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	1,084	114	566	500	6,753	3,862
2002	2,654	1,764	1,139	136	573	513	6,779	4,125
a	a a ta a i a tha a a		<i>.</i>					

Table 7. Soybean Production by Country

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

		Brazil			Argentina			Paraguay	
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
Year	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	11.30	2.61	29.50	1.42	2.18	3.10
2002-03	17.50	2.74	48.00	12.00	2.58	31.00	1.45	2.55	3.70

Table 8. South American Soybean Area, Yield and, Production, 1988 to Date

Source: USDA, FAS

	N	lajor Oilseeds			Soybeans	
Year	United States	Ex-United Stated	Total	United States	<b>Ex-United States</b>	Total
		r		etric tons		
1977-78	56.5	93.7	150.20	47.95	23.98	71.93
1978-79	58.6	92.0	150.60	50.86	26.62	77.48
1979-80	72.4	98.1	170.50	61.72	31.79	93.51
1980-81	55.8	99.8	155.60	48.77	32.20	80.97
1981-82	64.0	105.5	169.50	54.13	31.93	86.06
1982-83	68.2	110.1	178.30	59.61	33.96	93.57
1983-84	50.4	115.1	165.50	44.52	38.64	84.16
1984-85	59.2	131.7	191.10	50.64	42.50	93.14
1985-86	65.4	130.8	196.20	57.13	39.92	97.05
1986-87	59.4	135.0	194.40	52.87	45.21	98.08
1987-88	60.6	150.0	210.60	52.75	51.06	103.81
1988-89	50.3	153.9	204.20	42.15	53.49	95.64
1989-90	59.3	153.1	212.40	52.35	55.02	107.37
1990-91	60.6	155.1	215.70	52.42	51.57	103.99
1991-92	64.3	160.0	224.30	54.07	53.31	107.38
1992-93	68.4	158.9	227.40	59.61	57.69	117.30
1993-94	59.5	168.4	227.90	50.92	66.58	117.50
1994-95	79.7	181.2	260.90	68.49	69.14	137.63
1995-96	69.1	190.6	259.70	59.24	65.72	124.96
1996-97	74.8	187.0	261.80	64.78	67.40	132.18
1997-98	83.1	203.9	287.00	73.18	84.90	158.07
1998-99	84.4	210.3	294.70	74.60	85.21	159.81
1999-00	82.3	221.1	303.40	72.22	87.68	159.90
2000-01	84.9	228.5	313.40	75.06	100.04	175.10
2001-02	89.8	233.3	323.10	78.67	105.11	183.78
2002-03	81.9	236.0	317.90	72.23	112.26	184.49

Table 9. World Oilseed and Soybean Production

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

	January	Mar./April	June/July		Harvested
Year	Intentions	Intentions	Intentions	Actual	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	74.105	72.975
2002		72.966	72.993		71.799

Table 10. Soybean Planting Intentions, Actual Plantings, and Acres Harvested

<sup>a</sup> February 1 <sup>b</sup> May 1

Region000 acres%000 acres%000 acres%000 acres%000 acres%000 acres%197616,14532.114,53028.913,63027.14,7999.61,1222.350,226100.0197923,37032.719,62027.518,47025.98,36011.71,5912.271,411100.0198624,87541.218,30030.310,99518.24,6807.81,5352.560,385100.0198724,12041.518,58031.910,33017.83,6756.31,4752.558,180100.0198824,31041.318,68031.710,46017.83,8106.51,5802.758,840100.0198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085 </th
197923,37032.719,62027.518,47025.98,36011.71,5912.271,411100.0198624,87541.218,30030.310,99518.24,6807.81,5352.560,385100.0198724,12041.518,58031.910,33017.83,6756.31,4752.558,180100.0198824,31041.318,68031.710,46017.83,8106.51,5802.758,840100.0198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
198624,87541.218,30030.310,99518.24,6807.81,5352.560,385100.0198724,12041.518,58031.910,33017.83,6756.31,4752.558,180100.0198824,31041.318,68031.710,46017.83,8106.51,5802.758,840100.0198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
198724,12041.518,58031.910,33017.83,6756.31,4752.558,180100.0198824,31041.318,68031.710,46017.83,8106.51,5802.758,840100.0198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
198824,31041.318,68031.710,46017.83,8106.51,5802.758,840100.0198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
198924,79040.819,02031.310,75017.74,4607.31,8002.960,820100.0199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
199023,75041.118,49032.010,27017.23,6506.31,6352.857,795100.0199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
199126,03544.019,42032.88,99015.23,0055.11,7302.959,180100.0199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
199225,40042.920,00033.88,98015.22,9155.21,7152.959,180100.0199325,30042.120,41034.09,69016.12,9154.91,7702.960,085100.0
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 7,695 10.4 2,145 2.9 1,915 2.5 74,105 100.0
2002 36,750 50.3 24,150 33.1 8,170 11.2 2,140 2.9 1,833 2.5 73,043 100.0

Table 11. Planted Acres of Soybeans by Region

<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

e Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia