

## Briefs

Field Crops

## Large U.S. Soybean & Corn Plantings Expected in 1998

U.S. farmers face a much-changed environment for spring plantings from last year. Both the U.S. and the rest of the world harvested large grain and oilseeds crops in 1997/98, resulting in significantly lower prices for some crops; the East Asian economic crisis shook up the world financial and commodity markets, dampening commodity demand; and El Niño is expected to continue to create uncertain weather patterns in many States.

Total area for the eight major U.S. field crops is 257 million acres in 1998, down 1.5 percent from last year's planted acreage. Lower crop prices and returns caused some farmers to reduce intended planting area, despite additional land made available from a decline in area enrolled in the Conservation Reserve Program. Farmers intend to plant a record 72 million acres of soybeans in 1998 and the most corn acreage since 1985, while reducing wheat plantings to the lowest in 10 years. These planting intentions and trend yields suggest large U.S. soybean and corn crops in 1998, while wheat output will decline.

These estimates are based on farmer surveys conducted during the first two weeks of March. USDA's *Prospective Plantings* report for 1998, released on March 31,

provides the first indication of farmers' spring planting intentions for major field crops. Actual plantings could vary from intentions with adverse weather or significant changes in prices of competing crops. For example, last year's cotton planted acreage was below its intended level because a cool, wet spring reduced plantings and more favorable economic returns boosted competing crops. USDA will release acreage estimates (in contrast to preplanting intentions) in its June 30 *Acreage* report, after crops have been planted or when planting intentions are more definite.

Both corn and soybean plantings have increased each year since implementation of the 1996 Farm Act, which allows farmers more planting flexibility to respond to market changes. Unlike earlier U.S. farm legislation, producers participating in farm programs are no longer tied to base requirements for a specific program crop or restricted by acreage reduction programs. As a result, corn and soybean acreage has continued to expand into the wheat-dominated Central and Northern Plains because of relatively higher net returns for these crops and, during the past 2 years, has also expanded into cotton producing regions in the Southeast.

Intended soybean acreage is 2 percent higher than last year, continuing a trend of greater U.S. soybean acreage since 1992, although the expansion in plantings is not as widely dispersed as last year when almost all reporting States indicated higher soybean acres. Soybean prices at planting are significantly lower than 1997 because the record South American soybean crop (to be harvested this spring) is weighing down prices. Despite the expectation of lower soybean prices this season, intended soybean plantings increased in the Corn Belt, where the growth in soybean yield has outpaced corn, due in part to increased narrow-row plantings. (Other factors that have encouraged soybean plantings include the widespread adoption of genetically modified herbicide-tolerant soybeans, which reduces input costs; higher soybean prices relative to competing crops; and farm program changes.)

In addition, acreage shows a strong shift toward soybeans at the expense of wheat in North Dakota and of wheat and corn in Nebraska. But farmers in the Southeast and Mid-Atlantic States decreased their intended plantings of soybeans after last year's spike.

Corn growers intend to plant 80.8 million acres in 1998, up 1 percent from last year's planted acreage. Despite abundant competitor supplies and lower demand from East Asia reducing U.S. corn exports, corn prices in early spring were relatively unchanged from a year ago as expanding domestic demand for feeding and industrial use in 1997/98 more than offset the reduction in exports. Most Corn Belt States—with the exception of Iowa, Missouri, and Minnesota—show a decrease in planting intentions as farmers switch to soybeans. However, intended corn plantings are higher in almost all of the Southeastern and Delta States for 1998, as acreage shifts from cotton. In the Dakotas, corn planting intentions are greater this year because of unfavorable agronomic and market conditions for wheat. Wheat prices are considerably lower in 1998 than last year because of large U.S. and world supplies.

Planting intentions for sorghum are down most among other feed grains—11 percent from last year's planted acreage. Intended sorghum plantings are lower in most major

**Soybean and Corn Planting Intentions Rise, Wheat Falls in 1998**

	1997			1998
	Intended acreage	Planted acreage	Harvested acreage	Intended acreage
<i>Million acres</i>				
Corn	81.5	80.2	73.7	80.8
Soybeans	68.8	70.9	69.9	72.0
Wheat	69.2	71.0	63.6	67.0
Sorghum	10.9	10.1	9.4	9.0
Barley	7.0	6.9	6.4	6.8
Oats	5.3	5.2	2.9	5.2
Rice	2.9	3.1	3.0	3.1
Cotton	14.5	13.8	13.3	13.2
Total	260.1	261.2	242.2	257.1

Economic Research Service, USDA

## Rethinking the Soybean-to-Corn Price Ratio

Analysts have long compared the soybean-corn price ratio at planting time with the break-even price ratio (BEPR)—the ratio of soybean and corn prices that equates the expected net returns of the two crops—to determine whether producers would switch from one crop to the other. But differences in yield gains, expansion of corn and soybean acreage outside the Corn Belt, and policy changes—particularly increased planting flexibility under the 1996 Farm Act—have affected the relationship and, to a certain extent, made this old rule of thumb less complete in capturing the competition for cropland use among major field crops.

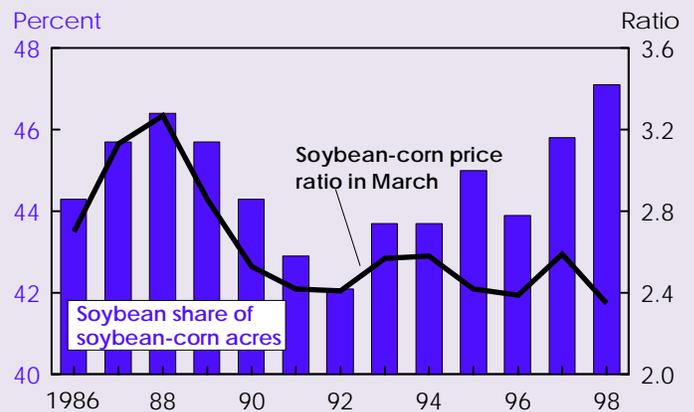
The soybean-to-corn price ratio as used here is a simple measure of relative returns for soybeans and corn. If producers expect the soybean-to-corn price ratio to exceed the BEPR, there would be a tendency to switch from corn to soybean plantings. Conversely, if the expected soybean-to-corn price ratio is below the BEPR, the reverse would be true. The soybean-to-corn price ratio is calculated by dividing November soybean futures prices by December corn futures prices in mid-March—when most corn planting decisions are made by producers. (Futures prices are first adjusted to a U.S. farm-level equivalent.) Based on new crop futures prices in mid-March 1998, the ratio was 2.35, down from 2.4-2.6 during the last few years.

The BEPR is calculated using expected yields of corn and soybeans, the expected price of corn, the variable costs of corn and soybean production, the expected program payments (used in the calculation prior to 1996 when they impacted planting decisions), and expenses associated with maintaining conserving-use of Acreage Reduction Program acres (also used prior to 1996). The BEPR currently hovers around 2.5 at the national level (e.g., \$6.50 per bushel of soybeans divided by \$2.60 per bushel of corn). This is down from 2.6 in the early 1990's and about 3 in the late 1980's. A lower BEPR offers producers a greater incentive to switch from corn to soybean plantings.

The BEPR has declined in the last decade for two reasons. First, average yield growth, which boosts net returns per acre, has been faster for soybeans in the 1990's than for corn (and increased relative to soybean yield growth in the 1980's). Second, farm program payments (which were received for corn production but not for soybeans) have had a diminishing influence on the break-even calculation due to changes in farm legislation such as declining deficiency payment rates and maximum payment acres. Deficiency payments for corn production were high in some years during 1986-90, which was a strong deterrent to switching to soybeans. Moreover, protecting corn base acreage to qualify for future payment was an institutional barrier not reflected in the estimated soybean-to-corn price ratio. Under the 1996 Farm Act, farm payments are not relevant in a break-even analysis because they are not associated with production of any particular crop (i.e., deficiency payments were discontinued).

The soybean-to-corn price ratio will only partly explain producers' acreage choices between corn and soybeans in the future. Producers will pay closer attention to other price ratios now that plantings are more flexible under the 1996 Farm Act, and as corn and soybean production expands outside the Corn Belt.

### Planting Intentions No Longer Track Soybean-Corn Price Movements



Economic Research Service, USDA

Thus, analysts who forecast corn and soybean plantings must be mindful of other crops competing for cropland use outside the Corn Belt. In the Great Plains, the prices of soybeans and corn relative to winter wheat are likely becoming more important, as are the prices of soybeans and other oilseeds relative to spring wheat. In the Delta and Southeast regions, soybean and corn prices relative to cotton are becoming important.

The recent introduction and fast adoption of new crop technologies could also add uncertainty to the soybean-to-corn price ratio. At this point, these crop technologies tend to achieve more cost savings in input use for soybeans than for corn. For example, Roundup Ready varieties of soybeans reportedly achieve a cost saving of \$15 to \$20 per acre in herbicide use. If these varieties account for 25 percent of all soybean acreage in 1998, adoption lowers the break-even price ratio by about 0.03 (excluding any changes in yield expectations). Quicker adoption of the crop technology could lower it even more, assuming no dramatic changes in corn costs.

Similarly, the adoption of narrow-row plantings has promoted a faster yield gain for soybeans since the early 1990's, relative to the historic yield trend. Yield gains in soybeans have been astounding in recent years, while the yield pattern for corn has been more erratic and, for the last 3 years, at or below trend. Over the last 5 years, soybeans' higher yield gain resulted in an annual average decline of 0.04 in the break-even price ratio (holding costs of production constant).

Corn and soybean plantings will still be affected by weather conditions even if farmers consider all relevant price relationships. Persistent wet conditions in spring can delay corn plantings, for example, and cause a switch from corn to soybeans regardless of the price ratio. Also, persistent plant disease (e.g., for Northern Plains spring wheat) can alter crop choices.  
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producing States, with a large drop in Texas as acreage shifts toward corn and cotton. Barley intentions are 2 percent lower than last year's planted acreage. North Dakota, the largest barley producing State, reduced its intended plantings because of several years of scab disease outbreaks as well as a poor barley price outlook. Despite lower prices, planting intentions for oats are virtually unchanged from 1997, but it would still be the second lowest planted acreage on record.

Total wheat area intentions for 1998—at 67 million acres—are down 6 percent from last year's planted area. In 1998, farmers intend to reduce "other" spring wheat (i.e., non-durum) plantings by 16 percent from 1997 to the lowest level in 10 years. Unfavorable spring wheat prices and several years of widespread disease problems have encouraged Northern Plains producers to plant alternative crops, including durum, soybeans, and minor oilseeds (including sunflowers). Prospective durum wheat intentions are 4.1 million acres, up 25 percent from last year's planted acreage and the highest since 1982. With durum wheat prices currently at a strong premium, farmers in Minnesota, Montana, and North Dakota plan to shift toward durum and away from other spring wheat.

In January, the *Winter Wheat and Rye Seedings* report indicated that farmers planted 46.6 million acres of winter wheat, the lowest since 1973. Global wheat production reached a record level in 1997/98, and the U.S. harvested its largest crop in 7 years, resulting in low price expectations for winter wheat at planting last fall. Farmers have sought more profitable crops, and in Kansas, pro-

ducers have indicated a shift toward planting soybeans and corn or possibly increasing fallow land.

Cotton planting intentions are 13.2 million acres, 4 percent lower than last year's planted acreage. Cotton prices have fallen for the second straight year, while alternative crops remain attractive. Additionally, some producers are reportedly shifting away from cotton because of higher input costs (e.g., pesticides) relative to other crops. Intended cotton acreage is down in both the Delta region and the Southeast for 1998 while corn plantings increase. However, Texas producers intend to seed more cotton acreage in 1998 compared with last year, when wet conditions in south Texas hindered planting.

Rice growers intend to plant 3.1 million acres, a 1-percent increase from 1997, with long-grain and medium-grain plantings both indicated up 1 percent from last year. Planting intentions are higher or unchanged this year in five out of the six major producing States, with only Texas indicating lower acreage. U.S. rice prices have been strong during the 1997/98 crop year because of robust domestic demand and higher exports of rough rice to Latin America.

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**May Releases—USDA's  
Agricultural Statistics Board**

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

**May**

- 1 Cheddar Cheese Prices (8:30 a.m.)
- 4 Dairy Products  
Egg Products  
Poultry Slaughter  
Crop Progress (after 4 p.m.)
- 6 Broiler Hatchery
- 8 Cheddar Cheese Prices (8:30 a.m.)
- 11 Crop Progress (after 4 p.m.)
- 12 Cotton Ginnings, Annual (8:30 a.m.)  
Crop Production (8:30 a.m.)
- 13 Broiler Hatchery
- 14 Potato Stocks  
Turkey Hatchery
- 15 Cheddar Cheese Prices (8:30 a.m.)  
Cattle on Feed
- 18 Crop Progress (after 4 p.m.)  
Milk—Production, Disposition, and Income  
Milk Production
- 20 Agricultural Chemical Usage, Field Crops  
Broiler Hatchery  
Cold Storage
- 21 Catfish Processing
- 22 Cheddar Cheese Prices (8:30 a.m.)  
Chickens and Eggs  
Farm Labor  
Livestock Slaughter
- 26 Crop Progress (after 4 p.m.)
- 27 Broiler Hatchery
- 28 Peanut Stocks and Processing
- 29 Cheddar Cheese Prices (8:30 a.m.)  
Agricultural Prices



A more detailed analysis of the soybean-to-corn price ratio is available in the 1998 *Feed Situation and Outlook Yearbook*. Call 1(800) 999-6779 to order a copy, or visit <http://usda.mannlib.cornell.edu/reports/erssor/field/fds-bby>.

**Livestock, Dairy & Poultry**

# Record U.S. Meat Supplies Hammer Prices

*Record red meat and poultry production, along with clouded export prospects due to economic problems in Asia, have pressured livestock prices downward in 1998. In January-March 1998, pork production was up 12 percent from a year earlier, broiler production was up 3 percent, and beef production was up 2 percent. During the same period, hog prices sank to a 26-year low, while prices of fed cattle, broilers, and turkeys were below a year earlier.*

*With export demand sluggish, most of the additional beef production was forced into the domestic market. For broilers, however, exports remain relatively strong, which has moderated price declines. Measures of production (inventories of market hogs, cattle-on-feed, eggs set, poultz placed) indicate that the large meat output will continue until midyear, resulting in lower prices for hogs, fed cattle, broilers, and turkeys in April-June, compared with a year earlier.*

*Although meat supplies were abundant and farm prices down considerably, retail meat prices declined only about 2 percent in the first quarter from a year earlier. In the second quarter, primary market prices are expected to rebound a little, and retail prices are expected to remain down 1-2 percent from a year earlier. Retail prices are usually "sticky," lagging changes in farm prices (AO December 1997). For the year, retail meat prices are expected to average about 2 percent below 1997.*

**Hog** prices in the first quarter averaged about a third below a year ago as pork production surged 12 percent above year-earlier levels and competing meat production rose 3 percent. The surge in pork production was larger than projected in late 1997 due to the under-reporting of the June-August pig crop and to the sharp increase in Canadian slaughter hogs shipped to the U.S. following the now-resolved labor problems in the Canadian packing industry. The March *Hogs and Pigs* report indicated that the June-August

pig crop was revised upward by 578,000 head (up 2.3 percent).

Although second-quarter 1998 U.S. pork production is expected to remain 12 percent above year-earlier levels, hog prices are expected to be up \$2-\$3 per cwt from the first quarter as production follows its typical seasonal decline. Retailers are expected to maintain minimal inventories, given continuing large pork supplies and implied low prices indicated by the March *Hogs and Pigs* report.

As of March 1, the hog breeding inventory was only 2 percent above a year ago. The modest rise in the breeding inventory indicates that pork production gains will slow in the second half of 1998 and in early 1999, but not enough to prevent average hog prices for 1998 from sinking to a 24-year low. Feed costs are declining, however, which softens the price impact on producers' returns. USDA's *Prospective Plantings* report indicates large planted area for corn and soybeans in 1998,

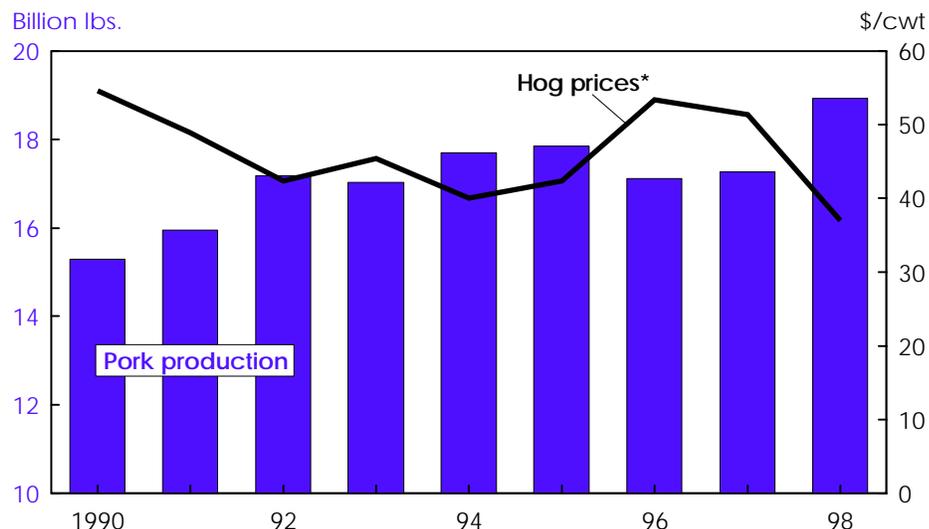
which could further reduce feed costs in the coming months.

Although pork exports in January-March 1998 are estimated up nearly 30 percent from last year's depressed level, the result of Japanese import limits, overall hog prices were relatively unaffected by the export surge. Much of the increase was likely due to sales of low-value products to countries looking for inexpensive protein products.

While the stage is set for tighter **beef** supplies and stronger prices (AO December 1997), the sector must first hurdle excess total meat supplies and sluggish demand, which will continue until domestic demand strengthens seasonally with the onset of barbecue season.

Weak international demand for high-quality beef led to minimal growth in U.S. exports in January-March 1998. On the other side of the trade ledger, beef imports in the first quarter likely rose to the highest level since 1994, as other exporters sought alternative markets for their processing beef and as the U.S. cow slaughter declined 12 percent from a year earlier. Imported processed beef and lean cow beef are blended with fed beef trimmings to produce hamburger for the domestic market.

**Large Pork Production Pulls Down Prices in 1998**



1998 forecast.  
\*Barrow and gilt prices, Iowa and southern Minnesota.  
Economic Research Service, USDA

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## U.S. Livestock and Poultry Products—Market Outlook

		Beginning stocks	Production	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price
								Total	Per capita	
								<i>Million lbs.</i>		
Beef	1997	377	25,490	2,343	28,210	2,136	465	25,609	66.9	66.32
	1998	465	25,431	2,675	28,571	2,090	350	26,131	67.7	65-68
Pork	1997	366	17,274	633	18,273	1,044	408	16,821	48.7	51.36
	1998	408	18,930	575	19,913	1,020	470	18,423	52.9	36-38
								<i>Lbs.</i>		
Broilers	1997	641	27,041	5	27,687	4,664	607	22,416	72.7	58.8
	1998	607	28,007	4	28,618	4,900	650	23,068	74.2	56-59
								<i>c/lb.</i>		
Turkeys	1997	328	5,412	1	5,741	598	415	4,727	17.6	64.9
	1998	415	5,458	1	5,874	610	425	4,838	17.9	59-62
								<i>Million doz.</i>		
Eggs*	1997	8.5	6,459.8	6.9	6,475.2	227.8	7.4	5,348.3	239.6	81.2
	1998	7.4	6,625.0	4.5	6,636.9	235.0	10.0	5,461.9	242.5	75-79
								<i>No.</i>		
								<i>c/doz.</i>		

Based on April 9, 1998 *World Agricultural Supply and Demand Estimates*.

\*Total consumption does not include eggs used for hatching.

See appendix tables 10 and 11 for complete definition of terms.

Economic Research Service, USDA

The April *Cattle On Feed* report points to reduced beef supplies by late summer. Monthly feedlot placements in the seven reporting States have been below year-earlier levels since October, which continues to pull down cattle-on-feed inventories. Feedlot placements in March were down 16 percent from a year earlier, with first-quarter placements also down 16 percent. Feeder cattle supplies outside feedlots continued to decline, with supplies down less than 1 percent from April 1997. Fed-cattle marketings during the first quarter were up only about 1 percent, suggesting more cattle at heavier weights were carried over into the spring quarter. Federally inspected slaughter weights for steers and heifers in March were 30 and 26 pounds above a year earlier.

Fed-cattle prices remain under pressure from large supplies of heavy cattle and burdensome supplies of competing meats. Fed-steer prices averaged in the mid-\$60's per cwt during the first half of April, up from the low 60's in the first quarter. Prices will likely remain in the mid-\$60's through summer, then rise to the upper \$60's this fall as supplies decline. In

comparison, 1997 prices averaged nearly \$66 per cwt in every quarter. Since breakeven prices continue to average in the upper \$60's, feedlot losses remain large. While above a year earlier, prices for feeder cattle are in the mid-\$70's and under pressure from large fed cattle supplies. In contrast, prices for utility cows (cows sold for processing) remain strong as cow slaughter declines.

Relatively slow production gains and continued growth in exports are supporting **broiler** prices. Wholesale prices in March were about 10 percent above the December 1997 lows and are approaching year-earlier levels. Increases in broilers placed have continued small through February and March and will limit the April-June production increase to only 2-3 percent from a year earlier. Larger increases in broiler production can be expected in the last half of 1998 if relatively strong increases in egg sets continue. Despite abundant supplies of competing meats, wholesale broiler prices are likely to decline by only 1 cent per pound.

Wholesale **turkey** prices averaged 55 cents per pound in January-March 1998, the lowest since 1988. Contributing factors include a 5-percent production increase, weakness in the export market, and large supplies of pork. Production has increased as higher average weights per bird more than offset declines in bird numbers. If larger bird weights continue, production for the year may be larger than in 1997, even though poult (young turkey) placement numbers indicate that fewer turkeys will be available during most of 1998. Turkey production is expected to be below a year earlier for the remainder of the year, registering only a 1-percent gain for the year. The dropoff in production should boost prices into the mid-60 cents-per-pound range this fall.

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