

Five-Year Outlook for Iowa Agriculture

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Crop and livestock producers in the United States are facing another challenging year. Prices for corn and soybeans have been hovering at or below cost-of-production levels for more than a year, and large global supplies and a strong U.S. dollar have led to weak export demand, hampering price recovery.

After trimming breeding herd numbers, pork producers are finally able to breathe a sigh of relief as prices for barrows and gilts have risen above break-even levels. Cattle producers continued to reduce inventory numbers and keep feeders busy by placing record numbers of cattle on feed. Cattle prices in 1999 demonstrated real strength, fueled by increased beef demand, the first such increase in 20 years. Congress helped stabilize the farming sector in 1999 with a record \$8.7 billion income assistance package. These recent trends and developments cause

industry professionals, analysts, and policymakers to speculate where agriculture is headed.

Against this backdrop, in January 2000, the Food and Agricultural Policy Research Institute (FAPRI) established its annual baseline projections for crop and livestock commodities produced in the United States and around the globe. An updated outlook for Iowa agriculture was generated from the results of these projections. The outlook period for Iowa is from 2000/01 to 2004/05. This baseline contains policy assumptions consistent with the continuation of the 1996 Farm Bill.

IOWA AND U.S. CROPS

Corn: U.S. producers are projected to trim corn planting to 77.2 million acres in 2000/01, then increase gradually over the period to 80 million acres by 2004/05. Corn trend yields increase over the period causing production to increase from 9.4 billion bushels in the first year to 10.3 billion bushels by the end of the

period. The season-average farm price of corn is projected to increase from \$1.85 per bushel during 1999/00 to \$2.25 per bushel in 2004/05, as overall world supplies remain fairly large.

Iowa corn plantings for 2000/01 are projected to dip to 12.08 million acres initially, then increase to 12.5 million acres by the end of the period. Iowa corn yields continue to be well above average U.S. yields, and corn production is projected to increase from 1.7 billion bushels in 2000/01 to 1.81 billion bushels by 2004/05. The season-average farm price for the marketing year in Iowa is projected to be \$1.79 per bushel during 1999/00, and increase steadily over the period to \$2.18 per bushel.

Soybeans: U.S. acres planted to soybeans are projected to increase 700,000 acres in 2000/01 to 72.7 million acres, and then trend downward through the rest of the period to 71.3 million acres by 2004/05. The increased acreage in 2000/01 reflects a more favorable bean-to-corn ratio. Soybean yield follows the trend over

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the new South American crop, estimated by the USDA at 51.5 million metric tons, finds its way to export ports.

A shift in demand has been the key in the meat sector. It appears that the increased demand the markets experienced during the last quarter of 1999 has continued to be strong during the first quarter of this year. This is a true shift in demand, as consumers continue to consume more red meat at higher prices. The USDA reported fed cattle sales for the week ending April 21 at \$74.00 per hundredweight on a live basis and \$119.00 per hundredweight on a carcass basis. Cattle feeders have

been doing an excellent job of keeping showlists current, which is especially amazing when one considers the record numbers that have been placed on feed during the last 12 months.

Beef production for the first quarter of 2000 is running above last year's record production but production is expected to dip below last year's levels as we move into the fall. The April cattle-on-feed report showed a rather large number of heavy weight placements for the previous month, which might backup the feedlots when they finish in June and July. This could add pressure to the seasonal downturn in prices this spring and summer. However, prices will firm up in the fall as production declines.

The Iowa-Southern Minnesota market closed April 25 at \$50.85 per hundredweight for the average hog. Strong demand for pork products has helped trim stocks in cold storage and raise prices about \$15.00 per hundredweight above year-ago levels. Low feed costs along with higher prices recently have enabled producers to start regaining some of the equity lost during 1998 and 1999. The key is the ability to maintain the increased demand in light of higher prices. The question is going to be how much consumers are willing to continue to pay and how much red meat they will eat. ♦

the period, and production increases marginally, from 2.93 billion bushels in 2000/01 to 2.99 billion bushels in 2004/05, as yield increases more than offset acreage declines. The season-average farm price of beans during 1999/00 is projected to be \$4.77 per bushel, then dips to \$4.24 per bushel in 2000/01 before increasing to \$5.17 per bushel during the 2004/05 marketing year. Competition from South America in the export market continues to dampen any dramatic price recovery.

Iowa soybean plantings for 2000/01 are projected to increase slightly to 10.98 million acres, then decrease by the end of the period to 10.78 million acres. Iowa soybean yields continue to be above average U.S. yields, and soybean production is projected to increase slightly from 1999/00 production levels, due to a return to trend yield. Production then slowly increases from 511 million

bushels in 2000/01 to 521 million bushels by 2003/04. The season-average farm price for the marketing year in Iowa is projected to be \$4.70 per bushel during 1999/00, and then drop to \$4.18 per bushel in 2000/01 before increasing steadily over the period to \$5.10 per bushel.

Hay: Statewide hay and oat production continue to trend downward. Season-average hay prices reflect large U.S. supplies in the short run and are projected to drop to \$77.48 per ton in 1999/00, then recover slowly to \$82.08 per ton by the end of the period. Season-average oat prices are projected to increase to \$1.19 per bushel in 2000/01 and continue to increase marginally to \$1.29 per bushel by 2004/05.

Pork: Pork producers trimmed breeding herd numbers down to 6.24 million head in 1999 and are projected to slowly start to rebuild their inventories to 6.25 million head in

2000, increasing to 6.45 million head by 2004. Hog slaughter will dip from 101.6 million head in 1999 to 95.7 million head in 2001 before rebounding to 99.5 million head in 2004. U.S. pork production is projected to drop to 18.6 billion pounds in 2000 then increase to 19.4 billion pounds in 2004. The U.S. season-average farm price is projected to increase \$4.21 per hundredweight to \$38.21 per hundredweight in 2000, obtain its cyclical peak of \$43.53 per hundredweight in 2002, and then decline to \$40.58 per hundredweight by the end of the period.

Iowa's breeding herd is projected to increase slowly from 1.16 million head to 1.21 million head by 2004. Hog slaughter will fluctuate around the 28 million head a year range as Iowa's pork industry continues to bring in pigs to feed. The Iowa season-average farm price for barrows and gilts in 2000 is projected to

Modified Corn
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Table 2. Added value (cents per bushel) of six genetic modifications of corn in swine and poultry rations

Modification	Swine		Poultry		
	Piglets 8-13 lb	Finishers 233-238 lb	Broiler	Tom turkeys	Layer
High protein	29.4	15.6	57.4	45.0	27.1
Enlarged-germ	0.0	10.3	48.0	44.2	36.3
High starch digestibility	—	—	39.8	33.4	5.7
High methionine	—	—	7.4	4.1	5.7
High lysine	0.0	5.2	—	—	—
High available phosphorus	1.7	1.7	—	—	—

— Indicates that estimates were not calculated in these diets.

the seed corn business. Another potential avenue that may prove profitable in the longer term includes, as mentioned, doubling the protein content of corn.

With possible federal or state mandates for reducing the phosphorus and nitrogen content of animal waste on the horizon,

grain with altered nitrogen and phosphorus content holds a promise for less costly compliance. As far as investment goes, research to modify corn plants might be less costly than building capital-intensive facilities to produce desired additives such as enzymes and flavor-enhanced milk substitutes. ♦

A more in-depth discussion and additional tables are contained in "What Do Livestock Feeders Want from Seed Corn Companies?" by Dermot J. Hayes and Noah Wendt, CARD Briefing Paper 00-BP 29 (April 2000). Available online at www.card.iastate.edu. ♦

be 16 percent above the 1999 price at \$37.99 per hundredweight. Sow prices are projected to increase 11 percent in 2000 to \$26.25 per hundredweight. Barrow and gilt prices, along with sow prices, are projected to hit their cyclical peak in 2002 before declining to \$40.35 per hundredweight and \$28.25 per hundredweight, respectively, by 2004.

Cattle: Improved beef demand and low grain prices have moderated production costs and allowed most sectors in the beef industry to experience profitability in 1999. January 1, 2000, all cattle and calves inventory numbers indicated that the cattle industry is still in the reduction phase of the cattle cycle. Inventory numbers are projected to continue to decline to 95.3 million head in 2002, before rebuilding starts, with 96.4 million head in the inventory at the end of the projection period. Beef production is projected to decline from 26.5 billion pounds in 1999 to 24.8 billion pounds in 2002, before increasing to 25.4 billion pounds in 2005. Nebraska direct steers are projected to average \$70.03 per hundredweight in 2000 and increase 9 percent by 2003 before declining to

\$74.57 per hundredweight by the end of the period. Oklahoma City 6-weight steers are projected to peak at \$93.87 per hundredweight in 2003 before shedding a couple dollars and averaging \$90.73 per hundredweight in 2004. Cattle placed in Iowa feedlots are projected to slow, compared to the strong placements in 1999. Placements will continue to decline slowly as U.S. inventory declines and as more heifers are retained for replacements. The projected average price received by feeders for Iowa fed steers in 2000 is \$70.65 per hundredweight. Prices are projected to increase to peak in 2003 before finishing the period at \$75.29 per hundredweight.

Meat Consumption: Fueled by a strong domestic economy, and strong consumer confidence and spending, meat consumption increased 3.7 percent in 1999. Pork consumption increased by an estimated 2.5 percent, beef consumption increased an estimated 2 percent, and poultry consumption jumped an estimated 7 percent. FAPRI projects consumption to decline somewhat in 2000 before returning to growth. Iowa's beef and

pork producers will continue to face stiff competition from poultry producers for consumers' dollars. Over the projection period, pork's share of total meat consumption is projected to decline from 25 to 23 percent, and beef's share of consumption is projected to slide from 31 to 29 percent. Pork's and beef's losses are the broiler industry's gains, as broiler's share increases from 36 to 40 percent, while turkey's share remains constant.

Net Farm Income: Iowa net farm income for 1999, which was buoyed by the \$8.7 billion dollar assistance package, is projected to be 20 percent above 1998 at \$2.73 billion. The average net farm income for Iowa from 1990 to 1998 is \$2.54 billion. For 2000, net farm income is projected to decline to \$2.3 billion in the absence of additional government assistance. Looking further out, slow gains in crop prices are more than offset by cyclical declines in the livestock sector, resulting in income projection slipping toward the \$2.2 billion range.

The FAPRI World and U.S. Outlooks are available online at www.fapri.iastate.edu. ♦

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