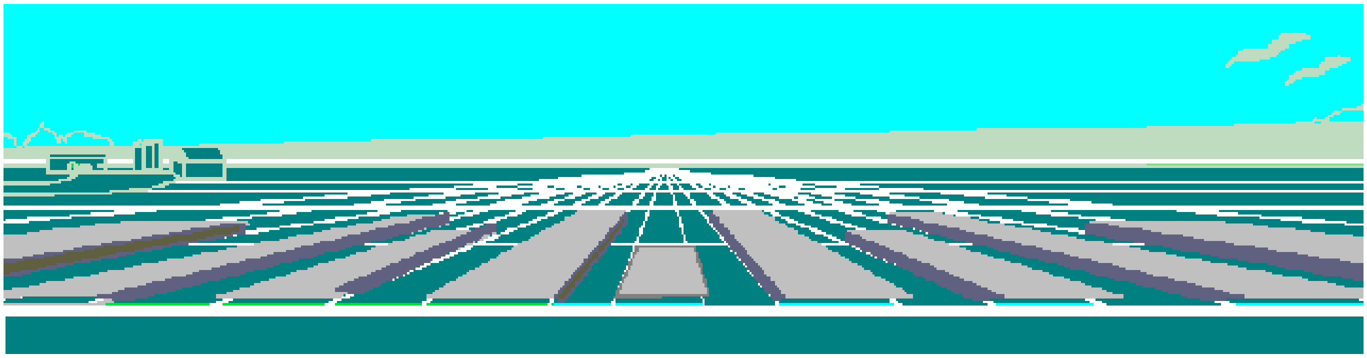
Iowa Farm Outlook



February 15, 2003 **Ames, Iowa** **Econ. Info. 1856**

Futures Based Price Forecast

The futures markets are projecting stronger cattle and hog prices throughout 2003 compared to last year. Figures 1 and 2 depicts futures based price forecast for cattle and hogs. The price projections for both cattle and hogs were localized using a 5-year average Iowa-Southern Minnesota basis. According to Figure 1, the markets are suggesting the 2003 live cattle high is behind us. The price outlook calls for price levels back down to the $70 range by May, and find a mid-summer bottom in the mid-to-upper $60 range. Overall, prices should remain $3-$5 higher than last year. Figure 1 also includes estimated break-even prices for the next five months based on Oklahoma City feeder cattle prices, North Central Iowa corn prices, and a 150-day feeding period. Unexpectedly strong live cattle prices in late 2002 and early 2003 created profitable conditions for feeders. The futures based outlook suggests live cattle prices will remain above break-even through late spring but falling below break-even during the summer months.

The Cattle on Feed Report released last Friday showed the on February 1 feedlot inventory down 7.7% from the previous year. January placements were down 1.4%. On the slightly bearish side, marketings were down 5.4%, somewhat lower than pre-report expectations.

Figure 1. Futures based live cattle price forecast for 2003, estimated break-even prices through July 2003, and 2002 average monthly prices.

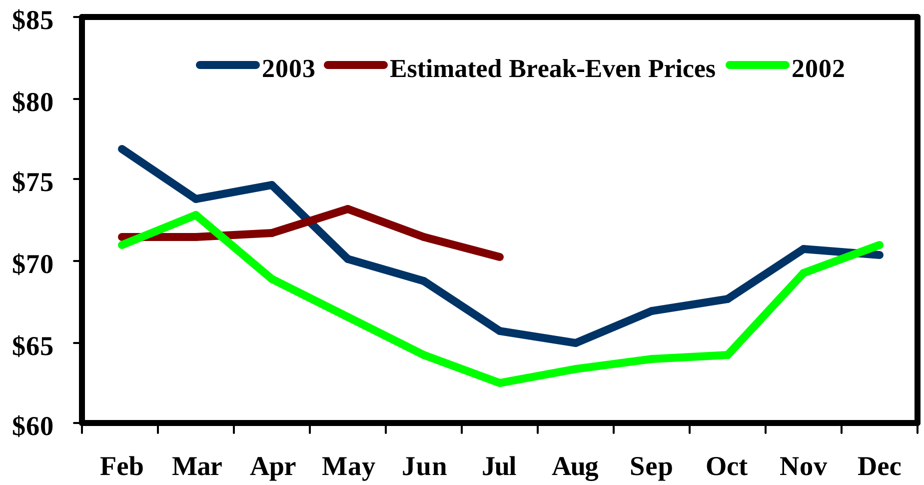
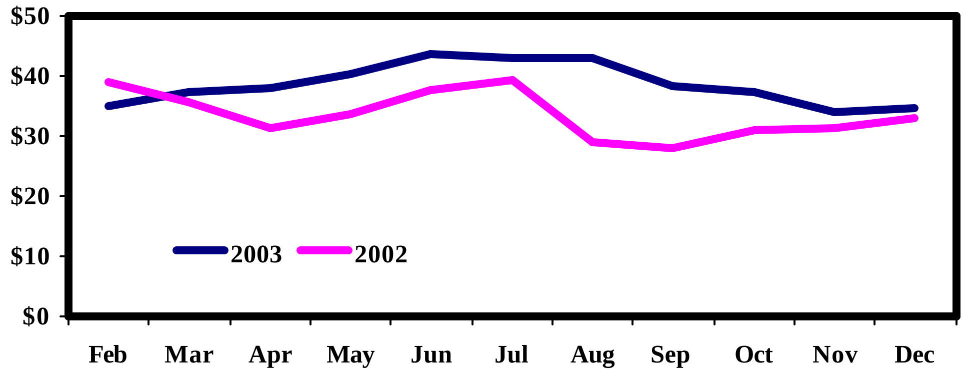


Figure 2 shows the futures based 2003 live hog price outlook compared against 2002 average monthly prices. Like cattle futures, hog futures are suggesting 2003 will see stronger prices than last year. The outlook calls for a return to a typical price pattern, with live prices peaking in June in the low $40 range, declining gradually to the mid $30's by the end of the year.

The monthly Hogs and Pigs report released January 31 was consistent expectations and did not change the price and production outlook. The 1st of month (January 1) sow and gilt inventory was down 3.1% from the year before and 0.3% from the previous month. December farrowings totaled 905 thousand head, down 2.0% from December 2001. This pace was somewhat lower than Dec-Feb intentions indicated in the December quarterly report. Given the jump in pigs per litter, however, the December pig crop was down just 0.5%. Overall, the report confirmed the industry entered 2003 with fewer hog numbers than last year. Whether or not this translates into lower pork production and higher prices depends on slaughter weights, which are largely determined by weather and feed prices. Other sources of uncertainty will be ongoing trade issues and the production of competing protein sources, particularly poultry.

Figure 2. Futures based price forecast (live equivalent) for 2003 and 2002 average monthly prices.



Implied Volatility and Market Risk

Although futures markets provide unbiased forecasts, prices rarely turn out as projected. The forecasts depicted in Figures 1 and 2 do not portray the risks inherent in the markets. Unforeseen local or international events could quickly change the price outlook. The cattle market in both 2001 and 2002 provide a case-in-point. Cattle feeders enjoyed 10-year high profits throughout early 2001. In early summer, the futures markets were projecting relatively profitable prices throughout the remainder of the year. A BSE outbreak in Japan, September 11, and a souring economy were among the factors that unexpectedly reversed the fortunes of cattle feeders during the fall. In January and February of 2002, the markets were recovering amid optimism that cattle numbers were down and the economy was in recovery. As a result, the futures based price forecast based on mid February 2002 prices looked very similar to the 2003 outlook presented in Figure 1. In March, however, the markets unraveled beginning with an FMD scares in Kansas. At the same time Russia banned poultry imports from the US and the domestic market was flooded with cheap protein. Other developments, such as record slaughter weights and a weak economic recovery further pressured the cattle market. Consequently, 2002 prices were substantially weaker than the February forecast suggested.

Option premiums provide a barometer measuring the degree of confidence traders place in prevailing futures prices. In the insurance industry, premiums are determined in part, by the probability of an adverse event such as an accident or fire. Call and put options on futures contracts are essentially insurance against rising or falling futures prices. Although options are not priced with the actuarial precision of life or auto insurance, premiums reflect the degree of uncertainty facing the market. During the 1960's, a pair of scholars developing an option pricing model coined the phrase "implied volatility" to describe a mathematically derived range, based on option premiums, within which delivery prices on financial futures would likely fall. Using common statistical techniques, we can then assign probabilities to the realized delivery prices. Since options on agricultural commodities are similar to options on financial securities, this tool can be applied to livestock markets.

Table 1 shows the price forecast with their corresponding implied volatilities. Unlike figure 2 the hog forecast prices are on a carcass rather than live basis. The table shows the upper and lower 1/6 prices derived from the implied volatility estimates. There is an equal (1 in 6) change that prices could go higher than the upper 1/6 price and below the lower 1/6 price. A brief visual appraisal of the table confirms the obvious-- price forecasts are highly imprecise. Rather than focus on a precise point forecast, producers should consider the range of likely prices and consider how outcomes within these ranges would impact their operation. For example, the lower 1/6 fed cattle price is below $60 throughout the summer. A producer's ability to endure prices this low depends largely on the strength of his/her balance sheet. If this outcome would spell a financial disaster, the producer should take steps to manage the risk.

The implied volatilities near 15% on cattle are substantially higher than last year, but similar to two years ago. The threat of war in Iraq is likely the reason behind higher premiums this year. Two years ago, war and terrorism were not a major concern. However, FMD outbreaks occurring in Europe and South America undoubtedly worried traders. Overall the 1/6 cattle market price range is about $4/cwt wider this year than the past 5-year average.

	Cattle					Hogs				
	Forecast	IV (%)	IV (4/cwt)	Upper 1/6	Lower 1/6	Forecast	IV (%)	IV (4/cwt)	Upper 1/6	Lower 1/6
Mar	73.77	15.3%	11.29	85.06	62.48	50.35	28.0%	14.10	64.45	36.25
Apr	74.62	15.3%	11.42	86.04	63.20	50.95	27.8%	14.18	65.13	36.77
May	70.07	15.3%	10.69	80.76	59.38	54.27	25.4%	13.80	68.07	40.47
Jun	68.82	15.2%	10.45	79.27	58.37	59.02	23.6%	13.92	72.94	45.10
Jul	65.70	15.0%	9.83	75.53	55.87	57.92	24.3%	14.06	71.98	43.86
Aug	64.90	14.7%	9.56	74.46	55.34	57.72	21.5%	12.40	70.12	45.32
Sep	66.92	13.1%	8.77	75.69	58.15	51.82	21.4%	11.11	62.93	40.71
Oct	67.67	11.5%	7.77	75.44	59.90	50.43	21.4%	10.79	61.22	39.64

By Gary May

USDA Supply-Demand Report Shows Sharp Decline Needed in Soybean Exports

Key features of report

Domestic, changes from last month:

- Soybean carryover reduced 25 mil. bu. (higher exports & residual use)
- Soybean carryover now at 165 mil. bu., 3.1 weeks supply on 8/31/03
- Corn carryover raised 5 mil. bu. to 929 mil. bu., 5 weeks supply on 8/31/03
- Corn exports lowered 25 mil. bu., processing increased 20 mil. bu.
- 2002-03 avg. corn price lowered 5 cents to $2.35 (No CCP expected for '02 crop)
- Avg. soybean price lowered 5 cents to $5.40 (No CCP expected for '02 crop)

World:

- Argentine feed grain production up 50 million bu. vs. last month
- EU feed grain production up 37 mil. bu. vs. last month
- Brazil soybean production up 72 mil. bu. from last month, up 17% vs. 2002
- Argentine soybean production unchanged from last month, up 12% from 2002

- Total Brazil/Argentine soybean crop forecast at 3,110 mil. bu., up 405 mil. bu. from last year & 380 mil. bu. above 2002 U.S. crop.

Market Implications

USDA's February 11 supply-demand report showed a 25 million bushel decline from the previous month in projected U.S. corn exports for the current marketing year (the fourth reduction so far this season, and fourth in the last four months). The reduction in exports was partially offset by a 20 million-bushel increase in food, industrial, and seed use of corn. In contrast, USDA's soybean projections showed a tightening U.S. supply situation, with crush projections unchanged and slightly increased export projections despite increasing competition from South America. USDA economists also increased their projected "residual" soybean use by 15 million bushels, reflecting an unusual discrepancy between export inspection data and census export data. These changes should increase the chances for modest short-term strength in soybean prices in the next few weeks. However, major strength in corn prices would almost certainly require either a significant increase in weekly export sales for several consecutive weeks, or serious weather worries related to 2003 production. New-crop corn prices have risen about 12 to 15 cents per bushel in the last six weeks on media coverage of dry weather in the plains states. The dry weather there may affect wheat yields, depending on spring weather.

Fall rains helped to recharge subsoil moisture in much of Iowa, Minnesota, and a substantial part of the eastern Corn Belt. Corn/soybean growing areas with seriously low subsoil moisture include parts of Kansas, Nebraska, South Dakota, extreme southwest Iowa, and parts of northwest Missouri. In a normal year, these areas produce about 20 % of the U.S. corn crop. Much of the production in Kansas and Nebraska is irrigated. In the limited areas where irrigation is from reservoirs, lack of snow and rain might limit irrigation water if spring rains and snow-melt are below normal. At this writing, December 2003 corn futures are at $2.44 per bushel and appear to have a weather-risk premium of 25 to 35 cents per bushel. November '03 soybean futures are at $5.34 per bushel and reflect local Central Iowa hedging prices near the loan rate. Because of the risk of receiving a reduced or zero CCP on the 2003 crop if prices rise, hedging 2003 soybeans involves significant risk.

Substantial slow-down in soybean exports needed

To put USDA's soybean projections in perspective, soybean demand will need to slow sharply in the months ahead to keep ending U.S. carryover stocks from dropping below minimum pipeline levels. Total exports and outstanding unshipped sales through February 6 were down only 0.6 percent from a year earlier. ***Ninety-two percent of USDA's projected marketing year total soybean exports have already been sold. That is a higher percentage than any time in the last five years, and compares with a five-year average of 77 % sold at this time.***

Soybean export sales so far this season work out to an average of about 38 million bushels per week (including old-crop carryover sales last September). For the remaining 29 weeks of the marketing year, average sales will need to drop to an extremely low 2.3 million bushels per week to meet official projections. That would be a sharp drop from last year's average sales of approximately 6.5 million bushels per week from mid-February through August 31. U.S. soybean crushings from September through December were down about 13 million bushels from last year. That's an average monthly decline of 3.3 million bushels per month. ***For the rest of the marketing year, crushings will need to average four million bushels less per month than a year earlier to meet USDA projections.*** That prospect looks attainable without much price strength. However, it is looks doubtful that exports will be trimmed by the needed amount without further short-term strength in old-crop cash prices and the basis. ***One development tempering upward price potential is the 115 million bushels of outstanding unshipped sales destined for China and unknown***

destinations. China has been known to cancel purchases, and some or all of the unknown sales could be destined for China.

China recently gave approval for imports of Brazilian soybeans under its zero-tolerance GMO labeling policy. Earlier, there was speculation that Chinese approval would not be possible since it is illegal to plant GMO soybeans in Brazil, but in its southernmost provinces, some GMO soybean seed has been imported from Argentina.

Low U.S. Soybean Carryover Stocks

USDA's Projected U.S. soybean carryover stocks at 165 million bushels are slightly below normal working stocks needs. Actual stocks may be slightly lower than currently indicated. Low stocks likely will bring a very strong soybean basis in August and September, as incentive to sell remaining old-crop supplies. The basis probably will be strongest in those areas that suffered serious yield losses last year, including Kansas, Nebraska, Missouri, Ohio, Indiana, and parts of Illinois.

In today's global market, low U.S. carryover does not guarantee extremely high late-summer cash soybean prices. South American stocks on September 1 likely will be in the 750 to 850 million bushel range, and should provide ample supplies for the world market until 2003 U.S. soybeans are widely available -– provided U.S. yield prospects are favorable. To adjust to low U.S. stocks, look for domestic crushers to close plants sooner than normal for end-of-season maintenance, and late-summer exports to drop to a very low level as users shift heavily to South American supplies. If U.S. soybean meal supplies run short, soybean meal is likely to be imported into the southern U.S. from Brazil. That appears likely to be the market situation with normal U.S. soybean yield prospects. However, in case of U.S. yields 4 to 8 percent or more below normal, substantial strength in soybean prices would be likely. Our balance sheets (http://www.econ.iastate.edu/faculty/wisner/ , upper right hand column) show likely supplies, utilization, prices, and CCPs with low, normal, and slightly above normal 2003 soybean and corn yields.

Market Indicators

Keys to corn and soybean prices this spring and summer will be (1) the final size of the South American soybean crop, (2) weekly export sales reports from USDA, (3) U.S. planting intentions, out March 31, and (4) Midwest weather. Last week's net soybean export sales were 16.0 million bushels, down from 20.2 million bushels the previous week. If sales continue at last week's level for three more weeks, net sales for the remaining 26 weeks would need to average an extremely low 0.6 million bushels per week to meet current USDA projections. Sales performance to date suggests that the latest USDA export projection may be too low by at least 10 to 15 million bushels. That prospect may add 10 to 20 cents per bushel upside potential to cash soybean prices in the next several weeks. At this writing, crop prospects appear generally favorable in Brazil and Argentina. Weather in the next four to six weeks can still have moderate impact on yields there. With continued good yield prospects there, slight weakness in soybean prices is possible by late spring.

Potential Soybean/Corn Acreage Shift

Early indicators point to a significant shift from soybeans to corn in Iowa and Minnesota, as well as parts of Illinois where corn yields were good last year. Some shift from soybeans to wheat appears to have occurred in parts of the Plains states as well. Reasons for the soybean-to-corn shift in the western Corn Belt include soybean yield increases that have lagged significantly behind corn in recent years, and the lower soybean/corn loan rate ratio in the new farm bill.

See our balance sheets for projections of next season's corn supply-demand balance and price prospects with alternative U.S. average yields. Reduced soybean plantings appear likely to prevent harvest-time soybean prices from being under the severe downward pressure of the last few years before 2002. The chances for cash prices to drop to the low $4 or upper $3 level next fall look relatively low. Normal yields would be likely to push prices down to the loan rate or slightly lower at harvest time. Prices at that level and increased U.S. production would probably generate a substantial counter-cyclical payment in the farm program—perhaps the full $0.36 per bushel (times 85%) on FSA base and yields.

In case of another year of serious weather problems, we would expect the upper limit on U.S. soybean prices to be tempered by the cost of importing beans and/or meal from Brazil. Upward potential would likely be considerably less than in short crop years of the 1980s, because of the much larger role of South America in world markets. With normal corn yields and slightly increased plantings, harvest-time corn prices are at risk of dropping to the loan rate or slightly lower. With yields 5 to 10 percent or more below normal, a strong increase in new-crop corn prices would be almost certain.

Corn Exports

Corn export sales the rest of the marketing year will need to average about 32 million bushels per week to meet the downward-revised USDA projection. Sales so far this marketing year (through February 6, including old-crop carryover sales in September) averaged about 39 million bushels per week. Last week's net sales were 26.6 million bushels, down from about 29 million bushels the previous week.

Robert Wisner