PRE-HARVEST PRICING CONSIDERATIONS FOR CORN AND SOYBEANS

New-crop corn and soybean futures prices have declined about 22 and 66 cents per bushel, respectively, since mid-January. The downward pressure on December corn futures has occurred despite widespread talk and trade projections of a sharp decline in 2001 U.S. corn plantings. Weakness in November soybean futures is more understandable, with good to excellent crop prospects in South America and widespread expectations for increased U.S. soybean plantings this spring. Weakness in corn prices reflects continuing problems with StarLink in export markets, especially in South Korea and Japan, as we have noted in previous issues of *Iowa Farm Outlook*. New-crop futures hint that grain traders expect these problems to continue into the 2001-02 marketing year. Co-mingled old-crop supplies and reports that some non-StarLink seed varieties intended for sale this year may have StarLink contamination reinforce this view. One should also consider the severe weather-related decline in feed grain production in China and Eastern Europe last year (total decline of 1.71 billion bushels corn equivalent from 1999, according to USDA estimates). Historical weather patterns suggest (but don’t guarantee) better weather and higher yields are likely this year in those areas. Precipitation in much of China was sharply above normal in January, but was below normal in parts of its northern three corn-soybean provinces in February. The following web sites provide crop weather information for China, as well as for other areas: [http://news.bridge.com/gws/wpages/w2frame.htm](http://news.bridge.com/gws/wpages/w2frame.htm) and [http://www.fas.usda.gov/pecad/highlights/2001/02/China/02wheat.htm](http://www.fas.usda.gov/pecad/highlights/2001/02/China/02wheat.htm)

Parts of Eastern Europe have had below normal rainfall this winter. In the former Soviet Republics, crop conditions are reported to be favorable for fall-planted grains.

South American Soybean Update

Current USDA projections place South America’s spring 2001 soybean harvest at approximately 200 million bushels above last spring’s harvest. With recent rains to help finish out the growing season, South American trade sources say USDA projections could be 35 to 45 million bushels too low. However, harvesting weather will be important in the final crop size, along with rainfall in the next two to three weeks. Harvesting in northern soybean areas of Brazil has started earlier than normal.

European Union Update

On the demand side, the European Union ban on meat meal feeding will add substantially to soybean meal demand. For the U.S., this added demand is likely to be in soybeans rather than meal, and is likely to be most significant from now through mid-May before new-crop South American soybeans start moving in large volumes in world markets. If EU extends its meat meal-feeding ban to the last six months of this year, the total increase in soybean meal demand could come close to matching the increase in supplies from South America. Additionally, China’s demand for soybean meal is expected to continue to increase in the year ahead. On the negative side for both corn and soybeans, EU’s program of slaughtering cattle to eradicate BSE or “mad-cow” disease may reduce total feed demand, at least a little. That may free up EU supplies, especially grain, for export to other countries.

Historical Changes in December Corn, November Soybean Futures

Is further downward pressure likely on December corn and November soybean futures prices this year? To help answer that question, it may be useful to examine historical price patterns for these two crops. *Market history since 1975*
has shown a high frequency of declining new-crop prices for both crops from spring to fall. Figures 1 and 2 show the change in December corn and November soybean prices, year by year, from the second week of April (or mid-February, if the previous year was a weather-induced short U.S. crop) to mid-October for soybeans and the first week of November for corn. Over this period, December corn futures prices declined from spring to harvest time 81 percent of the years, with an average decline of $0.16 per bushel over all years. For soybeans, new-crop prices declined 69 percent of the years, with an average decline of $0.28 per bushel for all years. Previous work at ISU and Ohio State was based on price changes from mid-May to harvest time, and revealed nearly the same pattern. Exceptions to this declining price pattern were major short-crop years: the severe droughts of 1980, 1983, 1988, and 1995 (in parts of the Corn Belt), as well as the 1993 flood year, and 1976 and 1978 for soybeans. Pre-harvest contracting or hedging allowed farmers to protect against declining prices, but provided very disappointing results in the short-crop years. Purchases of put options (or hedging and buying calls) allowed farmers to obtain downward price protection while benefiting from higher prices in the short crop years.

**Fig. 1. Change in December Corn Futures, Mid-February After Short U.S. Crops and Early April After Normal Crops vs. Early November**

Prices Rose 19% of Years, **Declined 81%**.

Avg. Decline, all years, = $0.16/Bu.

Past results are no guarantee of future performance

**Fig. 2. Change in November Soybean Futures, Mid-February After Short U.S. Crops and Early April After Normal Crops vs. Mid-October**

Prices Rose 31% of Years, **Declined 69%**.

Avg. Decline, all years, = $0.27/Bu.

Past results are no guarantee of future performance
Will 2001 follow a pattern similar to that of the long-term average? That is an unanswerable question this early in the season, and will depend heavily on this summer’s weather. December corn futures prices, while well below January highs, are still well above the average of the last few harvest seasons. In contrast, new-crop bean prices are already 12 to 16 cents lower than during harvest last fall. The USDA March 30 planting intentions report will be an important market indicator for both December corn and November soybean futures prices this spring. For those wanting to price a substantial amount of new-crop corn before harvest, it may be important to consider CRC or harvest-price RA crop revenue insurance, especially if your subsoil moisture is low. These two products insure lost bushels at the fall replacement value if it is higher than the pre-harvest February average for the respective fall-delivery futures contracts. If you forward contract with these insurances, then have a low yield and prices rise sharply, the insurance provides extra coverage to replace lost bushels up to your insured bushel level. Since these insurances reflect the interaction of price and yield, high yields and declining prices in most cases don’t give indemnity payments. Thus, they do not fully protect against lower prices, but can be an important tool in controlling production risk for those who want to lock in pre-harvest prices. Pre-harvest hedging or forward contracting of soybeans has more risk than in the pre-1997 years because of the LDP mechanism and low prices. Current new-crop futures reflect local harvest-delivery prices about $1.10 to $1.20 per bushel below the loan rate. If you lock those prices in, and the price declines, you gain from an even larger LDP. But the risk comes when you lock in current prices that far below the loan rate and prices rise sharply. In that case, you might have a price more than a dollar below the loan rate, and no LDP. Options purchases, either puts without forward sales or calls to offset a contract or hedge sale, can help to deal with this risk. The risk exposure with the options purchases is the up-front purchase cost.

StarLink Update

USDA plans to double the sample size used for testing in its StarLink-free export certification programs. That may reduce the risk of getting false-negative samples. Also, Japan’s regulatory agency is testing StarLink corn in livestock and poultry feeding. While that offers some hope that Japan might approve StarLink for feed, such a decision may take several months. Meanwhile, China continues to export corn to fill market needs in South Korea and Japan, and appears likely to continue doing so until at least midyear. South Korea begins a GMO testing and labeling program for corn, soybeans, and potatoes to be used for food starting March 1. Japan will begin a similar program on April 1. In the European Union, three major food retailers have announced they will begin selling livestock products produced from non-GMO feed.

Robert Wisner

FOOT AND MOUTH, AND BSE

Britain and Western Europe have been particularly hard hit by recent outbreaks of animal disease. While the UK appears to have BSE under control, it is being discovered in Western Europe. More recently, however, foot and mouth disease (FMD) was found in northern England. In spite of an immediate quarantine in the initial region, FMD appears to have spread to Northern Ireland and Western Europe.

While both outbreaks grabbed headlines, they are quite different in how they spread and how they impact producers and consumers. The last outbreak of FMD in the United States was in 1929. FMD is highly contagious to cloven-hoofed animals, but is not dangerous to humans. It can be spread by animals, carried by humans on clothing and shoes, or carried on machinery and vehicles. It can also be spread by contaminated meat for humans (such as a sandwich) consumed by farm animals. Because it is so contagious, authorities are destroying animals that are or may be affected in efforts to control the spread of the disease. Other countries restrict imports of animals and meat products from infected countries to prevent the possible spread to the importing country.

FMD exists in several South American countries limiting their export of meat products only to precooked items. Last year Argentina was declared FMD free and was allowed to export fresh or frozen meat to the US, but recently was quarantined again because they found new evidence of infected animals believed to have come in from a neighboring country.

The meat from FMD infected animals is safe for human consumption, but consumers may still shy away from the product, and exports come to an end. As a result, livestock prices drop dramatically when a country has an outbreak. It is also very costly to contain because the movement of animals must be traced to identify potential infected herds. The movement of animals and even people and vehicles from the infected area may be restricted to stop the spread. For example, sporting events such as horse racing and soccer are canceled in England because of the number of people from rural areas traveling to a single site. Finally, large numbers of animals must be destroyed and farmers at least compensated.
for the livestock. Input suppliers and rural communities that rely on income from livestock producers are greatly impacted.

Unlike FMD, BSE is not very contagious. The technical information below is taken from a paper by Dr. Nolan Hartwig (http://www.iowabeefcenter.org/Publications/bovine_spongiform_encephalopathy.htm), who has followed the development of this disease for several years. BSE, also called “mad cow disease,” is believed to be transmitted to humans in the form of new variant CJD. It is disconcerting that more than 90 people, most in the U.K., have died of vCJD. Our best information is that the risk to the U.S. cattle population, although not zero, is small. Since, to the best of our knowledge, BSE does not exist in the U.S., the risk of vCJD is extremely small.

BSE is one of a group of diseases called the transmissible spongiform encephalopathies (TSE). They are also called prion diseases because of the abnormal deposition of proteins called prions in the brain and central nervous system. Deposition of large amounts of prion proteins is common to the various TSE diseases found in man and animals. All people and animals have deposition of “normal” prion protein in the brain. In the TSEs, however, the proteins are deposited in large amounts and are not broken down and removed.

Unlike viruses, bacteria, and all animals and plants, prions contain no genetic material, yet they can sometimes be transmitted from animal to animal, at least under the right conditions. Although there is still some debate, most research scientists believe that prion proteins are ingested and transverse internal nerves to the brain. BSE spreads to other cattle by feeding rendered ruminant by-products that are infected. The eventful result is one of the prion diseases. For at least one prion disease (scrapie in sheep), there is a definite genetic susceptibility. Unlike most proteins, prions are quite heat stable. Normal cooking temperatures may not denature the prions and prevent transmission to susceptible individuals.

The market risk from BSE is consumer fear of beef for fear of the disease. Some countries have restricted trade with countries known to have BSE. There is evidence that the older animals have a higher incurrence. European countries have been destroying cattle over 30 months of age and removing them from the supply. The entire animal is incinerated.

What are the implications for U.S. producers? Currently, U.S. consumers have not turned away from U.S. beef due to BSE or FMD. Considering the media coverage, they may start to do so, even though there is no human risk from FMD and very low human risk from vCJD from eating US beef. Such action would be a negative to the US beef market for BSE and possible the pork market if they are concerned about FMD.

Are there opportunities for U.S. producers to sell to Europe or elsewhere? Europe does not buy U.S. beef because of trade restrictions due to use of growth promotants. It is doubtful that Europe will increase purchases of U.S. beef except for cattle in the non-hormone treated beef program. The U.S. may benefit from increased exports to countries that previously bought beef from European countries.

The spread of FMD may have a greater impact on U.S. pork producers. Europe is a pork export competitor of the U.S. Denmark, which is not currently infected with FMD, is one of the three largest pork-exporting countries, along with the U.S. and Canada. If FMD spread to Denmark its exports would be curtailed leaving, at least a short-term opportunity of US producers.

Risk Management Considerations
If a BSE scare does hit the United States or if a FMD outbreak suspends exports, there would be a significant market impact. Cattle producers should consider buying a put option. Underlying beef market conditions are bullish, but a negative consumer reaction or a loss of exports would dramatically impact prices. Out of the money puts may not protect breakeven, but will protect against a dramatic price fall caused by a market tragedy. Pork producers would gain from FMD problems in exporting countries in Europe, but would be hit particularly hard if the disease hit the U.S. and halted exports. Pork producers could also benefit from buying a put option.

U.S. Environmental Protection Agency
Public Meeting – Proposed Feedlot Regulations
The U.S. Environmental Protection Agency (EPA) will hold a public meeting about proposed feedlot regulations from 1:30 - 5:30 p.m., Wednesday, March 7, at the Benton Auditorium, Scheman Building, Iowa State Center, Elwood Drive, Ames, Iowa.

Livestock producers and others who have questions about the proposed revisions to the Concentrated Animal Feeding Operations (CAFOs) Permit Regulation and Effluent Limitation Guidelines under the National Pollutant Discharge Elimination Systems (NPDES) program are strongly urged to attend.
EPA headquarters officials will give a brief presentation on the proposed regulations followed by a question and answer session. Each speaker’s time will be limited so that all interested parties have an opportunity to ask their questions.

For more information, contact Ralph Summers, Region 7 CAFO Coordinator, (913) 551-7418 or email: summers.ralph@epa.gov; or Mark Matthews, (913) 551-7635 or email: matthews.mark@epa.gov. EPA’s toll free number is 800-223-0425. Additional information is available at: http://www.epa.gov/owm/afos/proposedrule.htm.

John Lawrence