Overview

After the second largest percentage decline on record in global feed grain production in 1995-96, a modest recovery in the world crop appears likely this season. However, production is not expected to regain the full decline that occurred last season. With stocks at record low levels, current prospects suggest U.S. and world supplies will likely remain unusually tight for the year ahead. Weather from now through harvest will be a key element helping to determine the extent of tightness in 1996-97 global supplies. If USDA's mid-July corn yield projection (which looks optimistic) materializes, supplies should be slightly more adequate than in 1996. Even so, ending U.S. carryover stocks would be expected to recover only to normal pipeline levels.

Late July supply and demand prospects suggest that the U.S. average corn price will be at least thirty to forty percent higher than the average of the 10 years preceding 1995-96 but probably a little lower than in the current marketing year. If yields were to deteriorate from late July prospects, corn and other feed grain prices could be well above the 1995-96 market average, especially during the first half of the marketing year. Corn, sorghum, oat and barley prices will be extremely sensitive to crop conditions from now through harvest. Any major deterioration in crop prospects would almost certainly require significant further reductions in U.S. grain feeding in the year ahead, and would bring sharply higher prices to encourage an early start on adjustments in livestock feeding. Price volatility promises to remain high during the next year. That will bring continuing challenges to both grain and livestock producers in pricing decisions and choice of risk-management tools for grain sales and feed purchases.

U.S. demand for corn and other feed grains is undergoing major structural changes. The most significant of these is in the pork industry, where a shift to large, capital-intensive production facilities is occurring. The pork industry is the largest user of U.S. corn. In the past, pork producers have tended to reduce hog numbers and rely more on cash grain income when corn and soybean prices were unusually high. However, with a shift to larger operations and capital-intensive production facilities, the demand for corn to be fed to hogs is becoming much more price inelastic than in the past. These changes are being reinforced by a strong and growing pork export market. Other sources of increasingly inelastic demand for corn include the expanded corn processing industry and a growing Mexican corn market, in part because of changes brought about by NAFTA.

China and Corn Exports...

Another major development impacting U.S. corn is China's shift from the world's second largest corn exporter to a net importer in 1994-95 and 1995-96. This change reflects a rapidly growing Chinese economy and expanding demand for pork and poultry. Despite large Chinese investments to increase feed grain production, China appears likely to remain a net importer of corn for the foreseeable future. The size of its imports will vary from year to year with fluctuations in its feed grain crops. So far, China has
been only a small market for U.S. corn, accounting for about four percent of U.S. exports in 1995-96. However, its shift from exports to imports has substantially reduced competition in Pacific Rim feed grain markets, and has led to sharply increased U.S. exports to Japan and Korea in the last two years.

A Look At The Long-Term Picture

While much emphasis has been given to growing world demand for grain, the current tight supplies are related more to lagging world production than to accelerated demand growth. Figures 1 and 2, respectively, show world, U.S. and foreign feed grain production and exports since 1960, using USDA FAS data (Figure 2). Growth of world production slowed dramatically beginning in the mid-1980s when U.S. policy changes removed the long-standing floor under world prices. Slower growth also has been present in wheat production and occurred both in the U.S. and abroad. The slowing U.S. production trend partly reflects the 10-year Conservation Reserve Program (CRP). A sharp decline in foreign feed grain and wheat acreage also contributed to the global trend. About 90 percent of the decline in world grain acreage was offset by increased oilseed area planted and harvested. Price signals to encourage sharply increased grain production likely will lead to reductions in world oilseed crops. Some adjustment has already occurred in grain vs. oilseed plantings in Canada (3) and parts of Europe.

Figure 3 shows annual percentage deviations from the previous year's world feed grain production since 1961. Note that in the 1960s, all the deviations except one were positive. In the 1970s, only a few were negative. Beginning in the 1980s and 1990s, negative deviations became increasingly common, perhaps related to global climate changes or climate cycles. Figure 4 shows percent changes in global grain use over the same period. With previous U.S. agricultural policies that included the Farmer Owned Reserve and CCC grain storage, adequate reserve supplies were generally available to maintain the upward trend in global use even in those infrequent years when crop production declined. One exception was 1974-75, when world grain carry-in stocks had dropped to exceptionally low levels. At the same time, weather problems curtailed 1974-75 production, and lagged rationing effects from the previous year's high prices impacted utilization. In the late 1980s and 1990s, annual world grain use has declined several times and has become more variable due partly to the lack of an organized reserve policy. If 1996 crop yields would be severely reduced by adverse weather, a decline in use similar to that of 1974-75 could occur in the year ahead.

Soft red wheat prices have been at a large discount to corn throughout the eastern Corn Belt and South for six weeks. Wheat prices in much of this area has been running at least 20 to 30 cents below corn prices, with some locations seeing price differences of as much as $.70 to $1.00 per bushel in favor of wheat feeding. As a rule of thumb, wheat is usually considered to have a 10 percent higher feeding value than corn. That reflects wheat's higher protein content and 60# bushel weight vs. 56# on corn. In the central and southern plains, wheat prices have been near those of corn so that the 10 percent value difference creates a potential for some wheat feeding. With these wheat market conditions, a sizeable amount of wheat likely is being used for feed this summer. While wheat feeding is difficult to quantify, it would not be surprising to see numbers in the 300 to 350 million bushel range.
Another influence on the tightness of summer corn supplies is the amount of corn and sorghum to be harvested in August and early September in the South. Planted acreages in many southern states are up sharply from last year, as corn growers there apparently targeted the tight old-crop situation for some of their new crop corn (Figure 4). In the Midwest, sales of short-season corn apparently were large. However, in some areas, the late plantings and/or cool spring delayed plant growth and may push harvesting a little further into the fall than intended. More than the usual amount of early-harvested corn and sorghum may find its way into feed channels before the start of the 1996-97 marketing year. In effect, that could tighten next season's supplies a little more than taking supply numbers at face value would suggest.

In ISU analysis, three variables have been useful in forecasting corn yields during the growing season. These include (1) percent of the crop planted by late May, (2) a 0-1 weather variable to denote weather-stress years, and (3) percent of the corn crop rated G-E in late July. Last year, a regression analysis using these variables showed a potential U.S. average corn yield of 113.5 to 116.4 bushels per acre. That compares with the USDA-NASS current estimate for the 1995 crop of 113.5 bushels per acre. Using 1996 data, the models forecast yields of 113.2 to 118 bushels per acre.

An alternative way of analyzing yields is to use percentage deviations from trend yields for other late-planted years. With this approach, the U.S. average corn yield is about 120 bushels per acre. This yield and 0.5 million fewer harvested corn acres than USDA's June 30th estimate would produce a corn crop of 8.84 billion bushels. Current annual use is about 8.63 billion bushels. Similar analysis gives a 35 bushel per acre U.S. soybean yield and a 2.22 billion bushel crop. Current annual use is about 2.31 billion bushels. On July 12, the USDA projected a corn yield of about 123 bushels per acre. It is possible to achieve or slightly exceed these yields if weather conditions are quite favorable from now through harvest.

Soybean Overview

In contrast to feed grains, soybean supplies have been adequate for market needs during the past year, although carryover stocks are being drawn down from 7.3 weeks' supply on August 31, 1995 to 4.15 weeks' supply this year. Unlike the corn and wheat markets which have greatly exceeded the old record high prices in the 1995-96 marketing year, soybean prices have remained about one-third below the previous record established in June 1973. Part of the difference between corn and soybean market conditions is that last year's corn acreage fell sharply, due to the combined influences of a 7.5 percent corn idle-acreage requirement in the farm program and extremely late plantings in the southern half of the Corn Belt and South Dakota. Soybean acreage, however, increased in 1995 as some corn land was shifted to beans. Also, soybean yields held up relatively better than corn under adverse weather.

For the year ahead, early signs point to a tightening of soybean supplies as farmers in oilseed areas of Canada and Western Europe shifted from oilseeds to more profitable grain production. In addition, with the unusually late plantings of U.S. soybeans, yield potential likely is lower than normal and may limit U.S. production. Nearly one-third of the 1996 U.S. crop was planted after the middle of June. Tightening supplies likely will bring the soybean/corn and soybean meal/corn price ratios closer to normal than they have been in the past year.
Demand Developments

Large U.S. livestock and poultry numbers should keep domestic demand for soybean meal relatively strong in the year ahead. Additionally, meal export demand likely will be well above a year earlier during the fall and winter because of a smaller 1996 Brazilian crop than a year earlier and heavy South American exports this summer. Soybean oil demand is more uncertain but may increase somewhat in the year ahead.

A modest increase in domestic use of soybean oil appears likely, with reduced competition from cottonseed and sunflower oil. Positive influences on export demand for U.S. soybean oil include (1) growing world demand for vegetable oils, (2) expected smaller sunflower seed and rapeseed crops in the Northern Hemisphere, (3) and reduced availability of South American soybean oil until its 1996 soybean crop is harvested next spring. Major uncertainties in export prospects center around imports by China, India, and other Asian nations. A year ago, China had built up excessive vegetable oil inventories after large purchases on world markets. Their inventories may now be worked down to a point that will bring increased imports this fall and winter.

U.S. exports of beans and products during the last half of the 1996-97 marketing year will be heavily influenced by the size of the spring 1997 South American soybean and sunflower harvests. Early reports from that area indicate plantings will be up sharply in response to strong soybean prices. However, one might expect feed grains to also be strong competitors for cropland and to limit the potential oilseed expansion.

...Robert Wisner

LIVESTOCK

The hog market has rebounded to over $60/cwt, near its highs set in late May. Supplies have been far less than were predicted based on the USDA June report. Although weekly slaughter has increased, it is still below year-earlier levels. In spite of this summer's corn prices, sow slaughter has been below year-earlier levels since the third week of May when prices first topped $60. If this trend continues, pork supplies could show year-to-year increases by mid 1997. Prices are expected to decline through August, but remain in the mid- to upper $50s. Fall lows below $50 are possible, but should be short-lived.

Fed cattle prices weakened slightly after tracking as high as $66. Weekly commercial slaughter is expected to remain under 700,000 head until November. Seasonal increases in cow slaughter, and increased fed cattle slaughter and carcass weight resulting from delayed second quarter placements will pressure prices late in the fourth quarter and first quarter 1997. Fed prices are forecast to trade in the mid- to upper $60s through the fall. Highs of $68 to possible $70 are expected. Feeder prices are increasing due to higher fed cattle futures and lower corn futures prices.

...John Lawrence