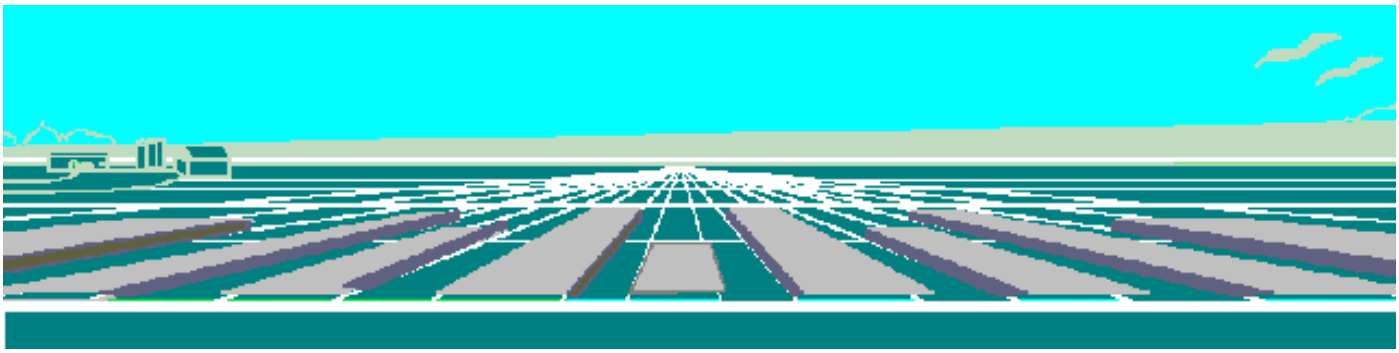

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REDUCED CROP ESTIMATES OFFSET BY REDUCED DEMAND

Corn and soybean prices weakened sharply in response to four major USDA reports that were released January 11. The most widely publicized of these was the last crop estimates for the 2000 growing season. Estimates of both corn and soybean production were reduced less than many private analysts had predicted. But a larger negative impact came from slightly less corn feeding in the fall quarter than a year earlier and USDA's reduction in projected U.S. corn exports for the current marketing year. The net result was a 10 cent drop in corn futures prices in the next two days after the reports were out, and a 20 cent reduction in soybean prices. The reports triggered liquidation of long positions by speculators, as well as commercial grain users' reassessment of supply-demand prospects for spring and summer. This information slightly tempers the upside potential in both corn and soybean prices for this winter as well as for the spring planting season. Even so, Iowa cash corn and soybean prices appear likely to increase a few cents from January 12 levels in the next month. Prices for both crops have the potential to weaken modestly in the last half of February as farmer selling increases to meet large cash-flow needs. After mid-March, modest additional strength in corn and soybean prices appears likely into early to mid-May as the market reacts to potentially reduced corn plantings and low subsoil moisture in the western third of the Corn Belt. New-crop corn prices during this period have a bit more upward potential than soybeans. However, keep in mind that subsoil moisture in the eastern half of the Corn Belt looks much better than a year ago, and that the reduced wheat plantings last fall plus reduced corn plantings may bring significantly higher soybean plantings in 2001.

Tables 1 and 2 (http://www.econ.iastate.edu/faculty/wisner/GrainBalance/BAL2001.pdf) show our projected corn supply-demand balance for 2000-01, and for 2001-02 with alternative yields. Both corn and soybean carryover stocks are expected to be slightly higher than a year earlier at the end of the current marketing year. In these projections, we have lowered corn domestic feeding and exports from those indicated a month earlier.

Our projected 2000-01 U.S. corn feeding is now up two percent from a year earlier, slightly less than the USDA projection and slightly less than we indicated last month. Corn feeding in the fall quarter was indicated to be one percent below a year earlier, based on the January 11 stocks report, and reported processing use and exports. To meet USDA projections, feeding the rest of the quarter would need to be four percent above a year earlier. Fall quarter grain sorghum feeding was up 10% or about 25 million bushels, but grain sorghum feeding likely will decline in the spring and early summer as supplies tighten.

Our export projections are lowered for the marketing year to a seven percent increase, four percent or 75 million bushels below the latest USDA projection. Season-to-date U.S. corn exports and outstanding unshipped export sales through January 4 (one-third of the way through the marketing year) were down 12 percent from a year earlier. To reach USDA projections, exports for the rest of the marketing year would need to be up 27 percent.

2001-01 Projections

Note that we've projected a modest decline in corn plantings in response to high energy and nitrogen fertilizer costs. However, the projected decline is considerably smaller than some private projections showing up to two million fewer corn acres to be planted this year than last. Corn acreage reductions likely will be restrained by agronomic factors that limit the shift from corn to soybeans in the Midwest. Where agronomically feasible, some continuous corn will shift to a corn/soybean rotation. In parts of the Southwest, high energy costs for irrigation may push some acres out of corn into crops that use less water. Wheat is one of the major alternatives in that region, and fewer wheat acres were planted last fall than a year earlier. Spring wheat is not a feasible alternative in the region. Rather than a sharp reduction in corn plantings,

a more likely outcome is a very modest decline in acres, but with farmers finding creative ways to apply water and plant nutrients (especially nitrogen) more efficiently than in the past. Impacts on yields will depend heavily on the weather, but may tend to keep corn yields a little below the long-run trend unless there is an offsetting weather influence. Column A represents low-yield growing conditions such as the droughts of the 1980s or the 1993 flood year. Column B represents a very slight reduction from the longer-run trend yield, and column C represents slightly above trend yields. Column A yields would dramatically tighten supplies, pushing prices sharply higher and requiring some market rationing of utilization. The long-run probability shows the approximate frequency of growing conditions that would give yields within a few bushels of the respective column yield, over the last 25 years.

In contrast to corn, U.S. soybean plantings for 2001 appear almost certain to increase. About 600,000 fewer soft red wheat acres were planted than a year earlier, and much of that land likely will be replanted to full-season soybeans. A small amount of these acres probably were double-cropped with soybeans last year. Also, Great Plains wheat acreage is down and a dry fall caused irregular wheat stands in parts of the central and southern Great Plains. Part of the planted and unplanted wheat land in this region may be replanted to soybeans in the spring. Our projected 1.2 million acre increase in 2001 U.S. soybean plantings could be a little low, depending on the condition of the wheat crop in the spring.

World Crop Estimates

USDA estimates of corn and soybean production in Brazil, China, and Argentina were unchanged from last month. Argentina's soybean crop to be harvested this spring is projected to be up 14 percent from last year, along with a 6 percent increase in Brazil. Argentina's spring 2001 corn harvest is projected to be down 10 percent. Recent growing conditions have been favorable in both countries.

What to Watch

A key indicator for corn prices this winter will be USDA's Thursday export sales reports. Starlink problems were a major factor in the 15% decline from a year earlier in cumulative U.S. corn exports from September 1 through January 4 and outstanding unshipped corn export sales to Japan, along with a 61% decline to Korea and a 12% decline in corn exports outstanding unshipped sales to all destinations. Despite USDA's Starlink-free export certification program, sampling problems have caused Far East buyers to be uneasy about U.S. corn purchases. Another key area to watch is Chinese corn export policies. Estimates of China's 2000 corn crop are down sharply from normal, due partly to weather problems. However, it has large carryover stocks, and has been exporting old-crop corn. Recent trade reports indicate its export sales policies for this spring and summer have not been determined, although there is some indication it may continue exporting into about mid-year. If China reduces its export volume sharply due to tightening supplies, that would be a significant positive influence on corn prices.

For soybeans, key indicators to watch are South American weather and weekly export sales reports. Export sales of U.S. soybeans and soybean products have increased sharply since late November, in response to EU's ban on meat meal feeding to control "Mad Cow" disease. Combined U.S. soybean exports since September 1 and outstanding unshipped sales were up 10 percent from a year earlier in early January. Bean meal and oil exports and sales were 6% under a year earlier, a dramatic improvement from late fall.

Robert Wisner

HOG PRICE FORECAST ERRORS IN THE 1990S: UNIVERSITY, FUTURES, AND SEASONAL INDEX

I recently spoke in an undergraduate class on how to forecast hog prices. At the end of the class I presented a brief outlook based on the September Hogs and Pigs report with the forecast of lower prices in late 2001. The only question from the class was, "*How good are you anyway? Should we believe you that prices will be lower?*" A fair question!

Iowa State University and other land grant institutions are often asked to forecast commodity prices. We use information from USDA reports and historical relationships between supplies and price, and incorporate current market conditions to a forecast of what prices may be in the future. The Lean Hog Futures is a single location where anyone with an opinion on what prices will be in the future can essentially vote their forecast. The resulting futures prices represent a "composite" forecast at a particular point in time. Finally, because hog prices follow a fairly predictable seasonal pattern, the current price, coupled with this historical relationship, can be used to forecast prices.

Table 1 summarizes the three forecasting methods described above for the 1990-2000 period. On the same day of each quarterly Hogs and Pigs report, I forecast prices four quarters into the future and publish those in the ISU Iowa Farm Outlook Newsletter. We also evaluated the futures market forecast by using the closing futures price one week after the report was related and adjusting it for the previous 5-year average basis. A price was forecast for each month and the three months were averaged into the quarter. The seasonal index was based on the monthly average price for the same month as the report (i.e., December average price following the December report) to forecast a price for each of the next 12 months and then averaged three months into each quarter. These forecasts were then compared to the actual average price for the first quarter 1990 through the third quarter 2000.

The forecast error was defined as the actual price minus the forecast price. A positive error means the forecast was too low. A negative number means the forecast was too high. On average, all three forecasts work pretty well for the first two quarters and are not bad three and four quarters out. But it is not the average that you worry about—it's the variability. One measure of the variability is the standard deviation. If the errors are distributed in a "bell-shaped" curve around the average, then the actual price will be within plus or minus one standard deviation of the average about two-thirds of the time. For example, there is about a 67 percent chance that first quarter prices will be from $4.28/cwt below the ISU forecast to $4.28/cwt above the ISU forecast—not very reassuring, but comparable to the Futures market and the Index forecast. All three have similar "average" errors, standard deviations, and in general even the extreme misses are close to one another.

What are the forecasts by these three methods following the December 2000 report, and can the information be helpful in planning marketings for 2001? Table 2 summarizes the forecast adjusted for the errors reported in Table 1 and reports the plus and minus one standard deviation range for each of the four quarters.

This information may be more valuable in managing risk than it is in predicting price. Prices are expected to fall in the plus and minus one standard deviation range approximately two-thirds of the time. The remaining one-third of the time prices are expected to be equally divided above or below this range(about 16 percent of the time above and 16 percent of the time below). Look at Table 2 and ask yourself if your operation can stand a 16 percent chance, 1 in 6, of price below about $26 in the fourth quarter of 2001. If not, you should implement some type of risk management strategy to protect against this chance. Likewise, if the market is offering a price that is near the top end of this range, ask if you want to take the price or stand an 84 percent chance of lower prices.

Table 1. Summary of Hog Price Forecasting Errors ($/cwt), ISU Iowa Farm Outlook, Futures with Five-year Basis, and Ten-year Seasonal Index.

	ISU	Futures	Index
One Quarter Out Forecast Error			
Average	0.06	-0.34	-0.10
Std Dev	4.28	3.36	4.09
Min	-7.81	-9.35	-9.07
Max	8.69	4.92	10.73
Two Quarter Out Forecast Error			
Average	-0.26	-0.18	-0.51
Std Dev	6.61	6.06	6.23
Min	-19.01	-16.04	-15.18
Max	13.69	12.10	16.02
Three Quarter Out Forecast Error			
Average	-0.44	-0.37	-0.84
Std Dev	7.14	7.36	8.28
Min	-20.01	-19.13	-15.77
Max	12.89	11.66	16.56
Four Quarter Out Forecast Error			
Average	-1.10	-1.35	-1.33
Std Dev	8.80	9.21	10.55
Min	-21.01	-21.59	-22.00
Max	15.85	13.54	20.00

Table 2. Forecast Following December 2000 Report.

	ISU	Futures	Index
Forecast for Jan-Mar, 2001			
Forecast	39.50	40.79	43.59
Adjusted	39.56	40.45	43.49
Minus 1 SD	35.28	37.08	39.40
Plus 1 SD	43.84	43.81	47.58
Forecast for Apr-Jun, 2001			
Forecast	44.50	42.90	48.00
Adjusted	44.24	42.72	47.49
Minus 1 SD	37.63	36.67	41.26
Plus 1 SD	50.85	48.78	53.72
Forecast for Jul-Sep, 2001			
Forecast	38.50	42.01	47.75
Adjusted	38.06	41.64	46.91
Minus 1 SD	30.92	34.28	38.63
Plus 1 SD	45.19	49.00	55.19
Forecast for Oct-Dec, 2001			
Forecast	35.50	36.83	41.31
Adjusted	34.40	35.48	39.98
Minus 1 SD	25.60	26.27	29.43
Plus 1 SD	43.20	44.69	50.53

John Lawrence