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SOUTH DAKOTA STATE UNIVERSITY

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CROP REVENUE COVERAGE - PRICE AND YIELD PROTECTION¹



by

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Producers have until March 15 to make their crop insurance decisions. A new product available for some South Dakota producers is Crop Revenue Insurance. This article is used to discuss some of the considerations.

A generally popular insurance product, crop revenue coverage, will be available to some producers in many South Dakota counties this year. It may be the best price and yield protection in some cases. In other cases, multiperil crop insurance (MPCI), hail insurance or some other insurance product or combination of products may provide better protection, especially after taking costs versus benefits into consideration.

Individual situations need to be reviewed to determine what is the best protection for you. Your costs versus your benefits, your marketing behavior, your financial situation, and your risk attitudes are the key factors that need to be reviewed.

Crop revenue coverage, CRC, offers many of the same benefits as multiperil crop insurance, such as subdivision of the farm into insurance units. In addition, CRC combines yield with price to arrive at a revenue coverage: CRC ensures that gross revenue from production (calculated revenue) covers a level of cash flow called a final revenue guarantee.

¹Revised from February 20, 1997 Market Advisor report by George Flakerud, North Dakota State University.

(Continued on p. 2)

LIVESTOCK OUTLOOK -- 1997



by

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In the period from Dec. 27, 1996 through Feb. 14, 1997, the USDA released four major reports related to the livestock industry: (1) Dec. 27 - Hog and Pig report; (2) Jan. 24 - Cattle on Feed report; (3) Jan. 31 - Cattle Inventory report; and (4) Feb. 14 - Cattle on Feed report. The first three reports were bullish, while the last report was bearish. Some reports, especially the Hog and Pig report, had a major impact on prices. Some did not.

The first part of this issue of the Commentator will be devoted to a discussion of the price outlook for the hog and cattle industries. Included in the discussion will be a brief review of 1996. The last part of this issue will include a brief discussion of why USDA reports are needed by the hog and cattle industries.

Hogs

Hog prices in 1996 averaged \$53.42 at the five major terminal markets. That was the third highest annual average on record (1982 was first at \$55.07 and 1990 was second at \$54.55). Both November and December set records for the highest average monthly prices for those months.

In 1996, prices were lowest at the start of the year (about \$40) and highest in late July and early August (the low \$60s). During most of the last 4 to 5 months in 1996, prices were in the mid \$50s.

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The final revenue guarantee is the larger of a minimum revenue guarantee or a harvest guarantee. The minimum revenue guarantee is derived from a base price while the harvest guarantee is derived from a harvest price.

The following illustration uses wheat as an example crop. Producers are encouraged to check with their insurance sales agents to determine which crops are available for them to insure under the Crop Revenue Coverage policies.

The base price is 95 percent of the February average settlement (market close) for the September futures contract on the Minneapolis Grain Exchange. The harvest price is 95 percent of the August average settlement price for the September futures contract on the MGE. There is a \$2 limit to the maximum change, up or down, between the base and harvest prices. The 95 percent represents a conversion of the futures price to a local cash price, on average.

How does CRC work? A loss occurs when the calculated revenue is less than the final revenue guarantee.

Scenario I. Consider a situation where the actual production history wheat yield is 35 bushels per acre. The MPC I price for 1997 has been established at \$3.85. Assume that the CRC base price is \$3.40 ($3.58 \times .95$), the CRC harvest price is \$3.00 ($3.16 \times .95$) and the actual 1997 wheat yield on the farm is 20 bushels.

In this situation with 65 percent coverage, the CRC indemnity would be \$6 greater than the MPC I indemnity. The CRC indemnity would be \$18 per acre, derived as follows: The final revenue guarantee is $.65 \times 35 \times \$3.40 = \78 , where \$3.40 is the higher of the base or harvest prices. The calculated revenue is $20 \times \$3.00 = \60 . The calculated revenue of \$60 is \$18 less than the final revenue guarantee of \$78. In contrast, the MPC I indemnity would be \$12 per acre derived as follows: The guaranteed yield is $35 \times .65 = 23$. Since the actual yield is 20, the yield loss is 3 bushels per acre. The indemnity payment is $3 \times \$3.85 = \12 .

Scenario II. Consider a situation the same as in Scenario I except that the CRC harvest price is \$5. Now the CRC indemnity would be \$3 greater than the MPC I indemnity. The CRC indemnity would be \$15 per acre, derived as follows: The final revenue guarantee is $.65 \times 35 \times \$5 = \115 , where \$5 is the higher of the base or harvest prices. The calculated revenue is $20 \times \$5 =$

\$100. The calculated revenue of \$100 is \$15 less than the final revenue guarantee of \$115. The MPC I indemnity would be \$12, the same as in Scenario 1.

Scenario III. Consider a situation the same as in Scenario I except that actual yield is 10 bushels per acre. The CRC harvest price remains at \$3. Now the CRC indemnity would be \$2 less than the MPC I indemnity.

Scenario IV. Consider a situation the same as in Scenario I except that the actual yield is 10 bushels per acre and the CRC harvest price is \$5. Now the CRC indemnity would be \$15 more than the MPC I indemnity.

CRC outperformed MPC I by \$6 in Scenario I, by \$3 in Scenario II, and by \$15 in Scenario IV; but, MPC I outperformed CRC by \$2 in Scenario III. Whether you would choose CRC or MPC I depends on how much more CRC costs than MPC I, your perception of potential risks, and how aggressive you are in the use of cash-forward contracts or futures hedges.

CRC allows producers to sell insured growing inventory at higher prices before harvest than does MPC I. To illustrate, assume the following: Your production guarantee at the 65 percent level is 10,000 bushels, you forward-contract or hedge the 10,000 bushels but "none is produced" and the wheat price goes to \$5 at harvest. The 10,000 bushels would need to be replaced at the harvest price of \$5.

Under MPC I, a total of 7,700 bushels could be purchased with the indemnity payment. The indemnity payment ($10,000 \times \$3.85 = \$38,500$) divided by \$5 equals 7,700 bushels. The difference of 2,300 bushels would have to be purchased with other funds.

Under CRC, the 10,000 bushels could be purchased with the indemnity payment. The indemnity payment ($10,000 \times \$5.00 = \$50,000$) divided by \$5 equals 10,000 bushels.

Can CRC be a useful risk management tool? Yes, but its usefulness depends on your situation. Be sure to compare CRC to other risk management tools, all of which are competing for generally limited operating capital. Keep in mind, too, that low yields were used in the examples to illustrate the insurance concepts--in effect, to show how to minimize the consequence of an adverse event should it occur.

(Livestock ... Cont'd from p.1)

Higher hog prices in 1996 did not necessarily translate into profits for producers. High corn prices

and low slaughter hog prices early in the year meant losses. It also meant very low feeder pig prices. Later, as prices moved higher, some profitability returned. Even then, high corn prices limited that profitability through at least mid-Summer. A large corn crop helped lower corn prices enough so that, for most of the last 5 to 6 months of 1996, producers earned profits.

Because hog production was profitable in late 1996, many market watchers expected expansion in 1997. The Hog and Pig report noted earlier did not support that idea. In fact, the report pointed toward lower production, at least early in 1997 (as compared to 1996), and only modest expansion late in 1997. After the report was released, the futures market moved higher. Pork producers had (and still have) very favorable forward pricing opportunities.

Prices in 1997 should be above \$50 most of the time. Short-term exceptions, such as in late Feb when demand was weak, could occur. Prices also could go above \$60 for short periods of time. If that does occur, early Summer is the most likely time. Prices late in 1997 could slip below \$50. However, even then, prices should stay in the upper \$40s most of the time. Producers should consider the use of forward pricing.

Prices above \$50 should mean profits for hog producers in 1997. Feeder pig producers should be major beneficiaries of those profits. The profit situation could change by late in the year. If expansion is greater than now expected, prices could be pushed lower than those noted above. And, we don't yet know what will happen in the corn market.

If profits for hog producers are maintained for most of this year and if we have another large corn crop, look for major expansion and lower slaughter hog prices in 1998.

Cattle

Cattle prices in 1996 were well below breakeven levels for most producers, especially early in the year. A combination of plentiful supplies of beef and other meats kept fed cattle prices low early in the year. Extremely high costs of production (mainly due to high corn prices) didn't help. By mid-year there was some improvement in prices. However, production costs remained high. Only after a large 1996 corn crop and lower corn prices did cattle feedlot operators move out of the red into the black.

Very low prices for feeder cattle in the Spring of

1996 helped feedlots earn a profit later in the year. High corn prices were the driving force behind low feeder cattle prices. As a result, cow-calf producers who retained ownership of their 1995 calf crop lost even more money. And, cow-calf producers didn't have a profitable Fall in 1996. Low prices once again caused losses and some producers went out of business.

Then, the winter of 1996-97 created more problems. Many cattle were lost. And, more problems are expected when calves are born. Calves born in cold, damp conditions are subject to scours and pneumonia. Calves born to poorly conditioned cows have lower survival rates. And, cows in poor condition don't always breed back.

The net result of low prices in 1995 and 1996, the Winter of 1996-97, and the drought in parts of the southwestern U.S. is a smaller cow herd. Fewer cows means fewer calves, about 3 percent fewer in 1997.

The seeds for recovery have been sown. The Cattle Inventory report noted earlier provided data that show numbers are down in most inventory categories. This is the first decrease in inventory for 5-6 years. Culling of cows probably will be at a lower pace in 1997 than in 1996. In some sense, the industry really needs one more year of culling to get numbers down to a more "profitable" level.

Price for fed cattle in 1997 probably won't be where producers would like them to be. An average of \$65 for fed cattle probably won't be far off. The two Cattle on Feed reports noted earlier gave indications that there will be plenty of fed cattle, at least through the first half or two-thirds of the year. Prices could be below \$65 (maybe even closer to \$60) during the Summer. And, prices could be closer to \$70 late in the year.

While lower numbers will provide a boost to feeder cattle prices, a bigger boost could come from the corn market. With a normal crop, feeder cattle prices for 500 pounders could be in the \$80-90 area this Fall. With a very large crop, another \$10 could be added to that range. And, with a very poor corn crop, the range could be \$10 lower.

USDA Reports

There often is discussion that USDA reports are not needed. The discussion ranges everywhere from "they ruin the market" to "it's not anyone else's business how much I produce". A quick look at a few of the issues might be in order.

First, there is a wide disparity in "size" of producers. Some produce a little, others produce a lot. Most people in production agriculture in SD fit into the medium to small scale size of production. Their only access to production estimates often is USDA reports. The "big guys" have their own sources of information. It seems as if the "little guys" should have their sources, too.

Second, if production agriculture is "really a business" (it should be viewed that way), then some ability to forecast production and prices is needed. If only one part of the production side (the big guys) has that ability, then the small to medium scale producers are at a disadvantage. Information is a key to a successful business. More information is better than less.

Third, even if USDA reports cause the market to go up or down (yes, it can cause "up" moves as well as "down" moves), pricing opportunities often are created. A producer should not really care why prices are offered at given levels. Rather, they should be ready to "take those offers" if they are acceptable.

ECONOMICS COMMENTATOR

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