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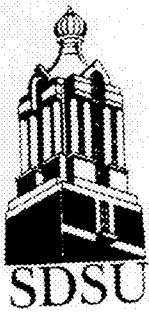
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SOUTH DAKOTA STATE UNIVERSITY

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A LOOK INTO PRODUCERS' DECISIONS TO RETAIN OWNERSHIP OF CATTLE



by

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Beef has lost market share in total meat consumption over the last two decades. This has created financial problems for many sectors of the industry, including producers. Evidence suggests that retained ownership can be a partial solution. Retained ownership can increase producer profit per head and improve quality control, leading to greater consumer satisfaction and increased market demand.

However, retained ownership practices are not for everyone. It is important to identify the factors that lead producers to practice retained ownership. These factors can be useful to others in providing insight into the decision process of producers adopting the practice.

Methodology

In this study, a statistical procedure called conjoint analysis was used to identify the attributes that lead producers to the retained ownership decision. Traditionally, conjoint analysis is a measurement technique used to study consumer quality evaluations. A product is divided into the attributes that make up that product, then the part-worths of each of these attributes are calculated and summed to arrive at the consumer's overall satisfaction for the product. For example, an apple could be broken down into the characteristics of size, sweetness, price, crispness,
(Continued on page 2)

RISK MANAGEMENT



by

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By Spring, most livestock and grain producers know whether or not the decisions made the preceding Fall to retain ownership of their product was a good (profitable) one. For example, they know if the calves they didn't sell as weaned calves in the Fall earned them more profit when they were sold in March. Or, the corn, soybean or wheat producers know if it "paid" to store grain.

Many producers in South Dakota do not make "retained ownership" decisions in the Spring. However, that may be a good time to think about possibilities for the Fall, especially if a lender is involved. Some flexibility regarding sales dates may be desired.

Retained ownership of any commodity longer than "normal" involves added risks. In general terms, risk can be divided into production risk and price risk. Certainly, producers face both types of risk. Just as certain, some of those risks can be managed and, in some cases, almost totally eliminated. This does not imply that total elimination of risk is desirable.

Production Risks

When a producer decides to maintain ownership of his/her product longer than normal (for example, don't sell calves or soybeans in November but background or store until March), there are production risks. The following list includes only some of those risks.
(Continued on page 3)

(A Look ... continued from p.1)

and color. A consumer's overall perception of an apple would then be estimated based on preferences for the characteristics. It would be possible to find which attributes of an apple are more important and by how much. Here, conjoint analysis was used on the supply side, to identify decision making attributes of producers on the issue of retained ownership.

Data for this research were collected through a mail survey conducted in the spring of 1997. The study population consisted of the 248 cow-calf producers involved in the South Dakota State University retained ownership demonstration project.

Attributes used on the main survey were obtained through a presurvey sent to 25 randomly selected producers. As a result, the final list of attributes to be used on the main survey were calf prices at weaning (high / low), cattle futures price (high / low), expected rate of gain (good / poor), expected cost of gain (high / low), and availability of funds (cash or financing) (difficult / accessible).

After the questionnaires were analyzed, four segmented studies were performed on the study population. Each segmented study separated the overall group into two sub-groups based on respondent characteristics. The sub groups of the first segmented study were producers who have retained ownership outside of the SDSU experimental program, and those who never have. The second segmented study separated producers who belong to some type of industrial association from those who do not. The third segmented study separated producers by whether they had or had not participated in extension programs other than the SDSU program. The fourth segmented study separated large producers from small producers by whether they were under or over an average of \$175,000 in total farm sales over the previous 3 years.

Results

Expected rate of gain ranked as the most important attribute in every study, regardless of respondent segmentation. Two reasonable hypotheses for this result are: 1) relative to the other attributes listed in the questionnaire, producers have the most control over expected rate of gain; and 2) it has the most impact on profit.

Availability of funds was considered the least important attribute by such a large degree that it was negligible in every study. Two possible explanations for this result are: 1) producers may consider this

attribute pertains more to the liberality of the banking community than to their own decisions; and 2) having funds or not would certainly affect the feasibility of operations, however, have very little impact on profit.

The two producer controlled attributes (expected rate of gain and cost of gain) were considered relatively more important than the two market price attributes (calf prices at weaning and cattle futures price) by every group. A possible explanation, once again, is a combination of producers having the most control over these attributes and these attributes having the greatest impact on profit.

There was little difference between the relative importance of the top four attributes in any of the groups (i.e., expected rate of gain, calf prices at weaning, cost of gain, and cattle futures price). Again, profitability is probably the issue. In the producers' opinion, these four attributes would contribute equally to profit.

It was expected that producers involved with associations and producers involved with Extension programs would provide similar results because both groups participate in educational programs. However, there were two exceptions to this expectation. Producers involved in Extension programs attributed more relative importance to calf prices at weaning than did producers not involved with Extension. However, it was producers who do not belong to an association who attributed more relative importance to calf prices at weaning than producers who belong to an association. A similar contradiction occurred with the availability of funds attribute.

The two segmented groups, producers who have participated in retained ownership and those who have not, showed almost identical results. Also, in most studies there was very little difference in the relative importance of the four most important attributes. These two facts suggest the possibility that some overriding attribute may have been missing in the study. One such attribute might be tradition. This attribute would specify that producers either retain ownership or not because they have traditionally operated their business in such a way. It has been noted in previous research that many cattle producers conduct their operations the same way every year regardless of market conditions. Unfortunately, the structure of the questionnaire did not allow this issue to be incorporated.

In conclusion, producer controlled production variables are of greater importance in the retained

ownership decision than cattle prices, and financial feasibility seems not to play a role.

(Risk management ... continued from p.1)

1. Poor performance - In spite of everything a producer does, some cattle "do not perform well". There are a number of reasons for this situation, including cattle genetics, feed availability and quality, health problems, and death of the animal (the ultimate poor performance). While some factors can be controlled to some extent, many producers do not know "how their cattle perform" after they leave the farm or ranch. They never have followed their cattle to the background and/or feedlot. They think their cattle will perform but don't know for sure. A quick and dirty recommendation is "find out more about your cattle before you keep them around longer".

While grain in the bin, if stored correctly, should not face production risk, there still could be a problem with maintaining quality. What went into the bin may not always be what comes out.

2. Costs greater than expected - For livestock, this could be because of factors noted above and/or changes (increases) in input prices. If inputs are purchased, forward pricing of those inputs can, in some cases, be used to help control costs. An effective management program can help reduce the risk of higher costs in some cases. Unfortunately, some producers who retain ownership for the first time may not follow an effective management program.

Grain producers often "forget" one of their major costs -- interest. Grain sold at harvest yields dollars. Those dollars could be used to pay off loans. Even \$3.60 wheat used to pay off a 10% loan saves 3¢ per bushel per month in interest charges.

3. Weather - Weather can affect both grain and livestock producers. It is easy for cattle producers in the Northern Plains to remember the Winter and Spring of 1996-97. Blizzards, snow, ice and very cold temperatures had their impact. While we cannot control the weather, management techniques can be used to help offset some of the impacts of weather. In some cases, this will require capital investment in buildings, equipment, and feeding areas.

Grain producers with grain in the bin also were affected by the 1996-97 Winter. Often, a lot of effort (including dollars) was expended just to get to the bin. Then, by Spring, soft (or under water) roads added costs to get the grain to market (if you could get there

at all).

4. Other enterprises - Retaining ownership requires resources. The demand for those resources may have an impact on other enterprises. Pre-planning probably will be required to keep conflicts to a minimum.

In total, retained ownership carries production risks. If you have not practiced retained ownership in the past, these risks probably are greater than for those who have followed the practice before. A good management program may be the best tool one can use to manage production risks.

Price Risk

The longer one retains ownership of a product (a calf or grain), the greater the chances for prices to change. Those changes are not always "up". Or, price decreases may be greater than expected. Unlike production risk, there are strategies which can get rid of all price risk. But, these may be too expensive to "leave anything for profit". There also are strategies which shift part of the price risk. Several strategies, along with a brief statement regarding what each does and does not do, are presented below.

1. Sell now - Selling calves or grain now (now could mean sell weaned calves in the Fall or grain at harvest) gets rid of all price and production risk at that time. It is the "safest" strategy (in terms of risk). It is easy to use. It has been used by many producers for years. It will continue to be used for many years. It is not a bad strategy for many producers.

2. Cash forward contract - Once a cash forward contract is signed, price risk is gone. Both lower and higher prices are "locked out". However, production risk still is there. After all, a cash forward contract usually is an agreement now between a buyer and seller for the later delivery of a product (calf or grain) but at a price agreed upon today. The futures market can be used to "evaluate" a cash forward contract.

3. Sell futures - Once a futures contract is sold, price risk is reduced to "basis" risk. In a sense, production risk is removed since a futures contract once sold can be "bot" back and no delivery is required. In another and more important sense, however, production is required for a "true hedge" to be in place.

Often, basis risk (the difference between your price and the futures price at the time of your cash sell) is much less than the price risk. However, recent history has shown there can be considerable basis risk

for feeder cattle. For example, many feeder calf producers assume a positive basis for spring-born and fall-sold calves. In effect, they assume that light calves (500 lbs) are worth more per hundredweight than heavy calves (750 lbs--the appropriate weight for a feeder cattle futures contract). When corn prices go too high (as in 1996), lighter calves are discounted and the assumption of a positive basis was in error and a "lower price than expected" was received.

Selling futures does provide a minimum price and "locks out" higher prices. Also, there are margin requirements. Those who understand futures know that -- those who don't should learn about futures. In short, if you have sold futures for only part of your expected production, margin calls usually should be welcomed.

4. Other techniques - There are other techniques which can be used to manage risk. Only a few comments about some of them are presented below. The briefness of the comments does not imply lack of importance. It does point to the need for producers to learn more about them in a more "educational" setting.

a. Buy puts - Here, insurance is purchased against "lower prices". The "insurance" has a cost (premium) and is used to purchase price floors but at the same time leave the ceiling open. Buying puts does not remove basis or production risk (see comments on production risk under the "sell futures" discussion above). There are no margin requirements. This is important to many producers and lenders.

b. Fence - This strategy involves the purchase of a put and the sale of a call. A range of prices is established. There still is basis risk and production

risk. Net premium costs usually are close to zero but margins may be required. Producers should be knowledgeable on futures and options before using a fence.

c. Synthetic put - For the cattle or grain producer, this could involve a cash forward contract and buying a call. A minimum price is established with the cash/forward contract but some upward price mobility is possible by purchasing the call. There still is production risk but price and basis risk are eliminated. Premiums must be paid but there are no margin calls. While this is not an extremely difficult strategy, it does require some knowledge of futures and options.

d. Roll up strategies - In some cases, a combination of strategies can be used. One strategy, such as buying a put, can be initiated now and then selling futures could be added later. The use of these combination strategies can reduce price risk if used correctly. Improper use can increase price risk.

Conclusion

Retained ownership increases risk. Some risk can be managed more effectively than other risk. Many of the pricing strategies used to manage risk require knowledge of futures and options. Producers should evaluate their risk position and their knowledge of marketing alternatives before engaging in some of the "more advanced" strategies.

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