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Cost Changes for Cattle Operations

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Cattle producers have seen several costs increase sharply in recent years. Feed costs have risen with the increased demand for corn and a tighter supply situation because of droughts. Energy costs have stabilized after a run-up that has lasted for a few years. Interest rates have also increased. Managing these costs presents a challenge for cattle producers. In this Commentator, I summarize the various cost changes, what several literature sources have to say about the changes, and offer some management suggestions for the current cost situation. Many of the observations were prepared for and influenced by a series of workshops held earlier in 2007 titled "Cost Control and Risk Planning for Livestock Producers".[1]

Cost Management

Can cost management pay? Much of the time economics is ridiculed as a science that only advocates being a low-cost producer. When the statement is qualified, producers understand that efficient production is what is really being advocated. Looking at and managing costs is a way to improve efficiency. To that end, there is potential to increase efficiency through managing costs.

In a recent study of management practices, McBride and Johnson (2006) categorized approaches as 1) price negotiation, 2) long-term cost control, and 3) input adjustment. Producers tend to do things, manage, in ways that fall into these broad approach categories. Some producers might do things to affect price, such as using marketing tools to fix revenue levels and bargaining to obtain lower input prices. Other producers examine investment opportunities (think of buying land) that have long-term payoffs. Still others tweak how much labor or machinery to use in a given operation.

Most cattle producers have realized higher prices for cattle marketed in recent years. However, production problems may have limited overall profit, especially when coupled with costs that have also increased. For those with higher returns, perhaps some of the costs may have been better classified as investments. Thus, some cost increases might be of a producer's own doing. Maybe an investment is made to reduce labor costs or simplify a tough task. Such investments are reasonable when times are good. Regardless, more changes are underway and cattle producers are also facing costs that are not easy to take or leave. Temporary increases in feed, fuel, and interest costs often need to be absorbed. Managing these costs can pay off.

A general source of information on cattle costs is the Economic Research Service. They annually produce a summary of costs and returns for cattle operations for different regions of the U.S. The last major description and analysis of their cost data was in Short (2001), and was based on an in-depth Agricultural Resource Management Study (ARMS) from 1996. Smaller samples of cow-calf operations in subsequent ARMS surveys are used to update the annual costs and returns summaries. Short (2001) has many of the details and definitions for the cost categories. Across all operations there is a wide range of costs per bred cow. Upon ranking operations, the operating and ownership costs ranged from \$319.46 at the 25th percentile to \$586.28 at the 75th percentile. There is wide disparity of costs across regions and

[1] The workshops were part of a project, titled "Cost Control: Risk Management Planning Strategies for Northern Plains Livestock Producers", funded by the USDA's Risk Management Agency.

across the size of operations. The point is that costs will vary and thus there is room to make management decisions and improve profitability.

Mark Twain once said, "Put all your eggs in one basket, then watch that basket." This command puts standard financial theory to the test, suggesting that diversification is for sluggards. APHIS (1998) gives survey results showing that for cow-calf producers that viewed the calf crop as a primary source of income had higher productivity measures compared to producers that did not rely on the herd for income. Producers relying on the income kept more records, put more effort into managing the enterprise and had more weaned weight per cow exposed relative to the other producers. Management effort can change productivity levels, and thus affect costs and returns.

Armed with the knowledge that costs vary across operations does not help focus any kind of management response. Using Standardized Performance Analysis (SPA) records of producers in Texas, Oklahoma, and New Mexico, Ramsey, et al. (2005) found economies of size in cattle production. They also found feed efficiency and calving percentage were indicators for profitability. The results vary depending on whether one is measuring costs, production, or profits.

Credit

Any producer trying to grow their operation will need the prospect of adequate financial returns to an enterprise. In economics the term opportunity cost is used to say that producers will only raise cattle if doing so pays them at least what they could earn doing something else. The opportunity cost has gone up quite a bit in recent years. National economic growth has increased incomes and family living expenses. Thus, to keep up with the neighbors a cattle operation either needs to get bigger, get more efficient or the operator needs to settle for less.

Input suppliers are also greedy to a certain extent. Again, greed is too strong when they probably only want a fair return on their product. What has happened to various costs? One cost that has quietly begun to increase is interest cost. Interest rates paid on agricultural loans have been increasing since 2003 (table 1).

Table 1. Agriculture Interest Rates

Year	Operating	Real Estate
1996	10.0	9.4
1997	9.8	9.3
1998	9.8	9.6
1999	9.5	8.7
2000	10.5	9.7
2001	8.9	8.5
2002	7.4	7.2
2003	6.7	6.5
2004	6.9	6.7
2005	7.9	7.4
2006	8.9	8.3

Source: Minneapolis Federal Reserve.
Note: Rates are from the 3rd Quarter.

Interest comes into play through a few avenues (table 2). First, there is the higher interest expense for the cow-calf operation. As short-term interest rates increase, the operating loan is more expensive. Cattle feeders also face a smaller feeding margin as their interest cost increases, which they pass on in the form of lower bids for calves for feeders. There is also a tendency for recessions to pressure beef demand. If money is tight, less is available to spend on fine dining. What is being experienced is more of a chipping away of the bottom line rather than some type of implosion. However, little increases in small costs start to add up over time.

Table 2. Annual Cow-Calf Costs

Year	Operating Interest	Capital Recovery	Fuel, Lube, Electricity
1996	11.47	50.78	21.86
1997	11.65	76.71	16.41
1998	10.89	74.76	16.44
1999	10.71	73.16	16.40
2000	13.17	82.26	16.39
2001	7.64	88.72	16.38
2002	3.79	89.42	16.36
2003	2.39	89.41	29.42
2004	3.55	93.42	32.51
2005	7.64	98.89	48.22

Source: USDA

Check your interest expense level. See if your financial position has changed. See if the change is consistent with your interest level. Also, temper your calf price expectations. Several costs have crept up, which combine to decrease profitability.

Corn

The most publicized cost change this past year was corn because its tremendous price increase during the past six months has been directly affecting calf prices and feed costs.

Corn and cattle prices are bound together in a few ways. Finished cattle in recent years started out as a calf and about 75 bushels of corn. If you keep the price of fat cattle the same and increase corn by $1 per bushel, feedlots would want to bid $75 per head less for calves. Those partial budget figures worked pretty well at the national level during the fourth quarter of 2006. When localized to South Dakota the situation changed from a sellers market of calves to a buyers market.

Relatively low corn prices in years leading up to the 2006 marketing year have widened out the spread between steer and heifer prices and increased the price slide for light weight cattle. A longer-run view or looking at earlier years with higher corn prices would be warranted when trying to assess the current market.

Other effects are more indirect. Price volatility for various inputs tends to weigh on cattle prices (Marsh). The relationship between corn price and finished weights of cattle is historically weak, largely because of the time lag between facing higher corn prices and being able to do much about them. The final indirect impact is through ethanol co-products. Much of the increase in corn prices is from ethanol-induced demand. As ethanol production increases there will be a corresponding increase in the supply of co-products, which cattle can use more effectively than swine and poultry.

CRP

The Conservation Reserve Program (CRP) continues to come up in conversations as a ready source of additional land that will be converted to corn production, or converted to wheat production, or maybe converted to pastureland. CRP grass has been receiving attention for a couple of years because of the looming bottleneck of contracts due to expire in 2007. Any transition into these other uses will be much more orderly and less dramatic than earlier thought. There are very large acre amounts enrolled in CRP in the Northern Plains that were set to expire in late 2007 (table 3). In South Dakota 729,180 acres expire, but of those 411,277 acres have already been re-enrolled or extended. That leaves only 317,680 acres to be potentially converted to crop ground or other use in 2008.

CRP payments in western (eastern) South Dakota tend to be above (below) cash rental rates (Taylor and Janssen). Then, there are the many externalities to consider with potential changes ranging from conservation benefits, recreational use, wildlife habitat, and effects of changes such as the new restrictions on managed haying and grazing. For additional insights see Sullivan et al. (2004).

Table 3. Expiring CRP Acres in 2007

Location	Originally Scheduled	Estimated After REX
Montana	1,679,914	243,181
North Dakota	1,708,415	305,602
South Dakota	728,957	317,680
Wyoming	197,320	28,249
U.S. Total	16,027,476	2,997,381

Note: REX is Re-enrolled or Extended.
Source: USDA Farm Service Agency

South Dakota producers have been planting about 4 million acres of corn a year, so even if all the CRP acres were to be converted to corn acres, it would not have a tremendous effect on production. Remember opportunity cost – CRP was the best alterative for those acres when enrolled. Had it been prime corn ground it would likely have been more profitable to keep it in production. Iowa, Missouri and Kansas are the only corn-belt states with more than 100,000 acres potentially coming out of CRP. For the U.S., the Re-enrollments and Extensions only leave 3.0 million acres to potentially come out in 2007 and 1.1 million acres in 2008.

Take Home

Producers may have inherent tendencies to concentrate on certain management aspects. Look at some of the other cost categories from time to time and challenge what you have been doing. Specialization may pay off with a concerted effort and knowledge of the relative profitability of different enterprises. Substitutions for high cost inputs may affect production performance, but by making sure the benefits exceed the costs not affect economic performance.

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