Back to Basics

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Effect of ethanol on the beef industry

Several questions loom in the minds of many cattlemen relative to the corn/cattle relationship and the long-term effect ethanol production may have on the livestock industry. In this issue of "Back to Basics" I would like to address those questions.

There is a linear relationship between the price of corn and the price of cattle. Cattle-Fax data show that for every 50¢-per-bushel (bu.) increase in corn price, the value of a 550-pound (lb.) steer calf moves in the opposite direction by $12.50 per hundredweight (cwt.), or $65 to $70 per head. A 750-lb. steer's value is affected by $7 per cwt. ($52 per head). This relationship is modified with grass availability.

Since September of 2006, the price of corn has risen by more than $1.25 per bu. This explains last fall's huge crash in the feeder-cattle and calf market as feedlot operators passed on rising costs of the finishing ration.

A looming question: "Aren't there other grains such as barley, oats, and wheat or byproduct feeds such as distillers' grain (a byproduct of the ethanol industry) and potato waste to fatten cattle on?"

Yes, there are. However, very simply put, "corn is king" when it comes to energy and feedability.

Corn has an energy content of 90% or more. It takes energy to make cattle fat. It takes fat to make cattle grade. American consumers prefer and will pay for beef grading Choice or higher. This is evident by the wide Choice-Select spread ($10-$20 per cwt.) that has existed for many years.

These premiums paid for high-grading cattle have encouraged extra days on feed. These extra days on feed have resulted in extra fat and heavier carcass weights. Consequently, feedlot finishing rations have been built around corn.

Barley, wheat, milo, soybeans and oats — as well as many of the byproduct feeds such as potato waste and the large supply of distillers' grains — are all fair sources of energy. With the exception of distillers' grains, these commodities are currently not produced in the quantities required to fill the void left by corn's redirection and do not compare to unprocessed corn in energy value.

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The feedability of these other commodities is not near that of corn. As Cevin Jones, owner of Intermountain Beef Producers of Eden, Idaho, states:

"Here in southern Idaho, potato waste is what we are all about. It is our competitive edge relative to the 'Corn Belt.' However, to balance a finishing ration, a limited amount of corn is required to boost the energy level. This is in an effort to get cattle to grade. Many of these commodities, including distillers' grains, work well in a growing ration and as a portion of a finishing ration. However, more energy is required to get that intramuscular fat deposition (also known as marbling).

"There are also feedability and animal health issues such as acidosis and other digestive upsets that arise when too large a percentage of the finishing ration is made up by these other commodities."

Grass options

Another question relative to the energy issue is what market effects do you see for calves and yearlings as a result of the ethanol industry's hunger for corn? As Andy Peek of Western Video Market notes, "Historically, as feedlot cost of gain increases, the incentive to place lightweight, young cattle into feedlots decreases and pasture rates increase. Grass cattle generally increase in value as long as supply of grass is available to meet the increased demand of light cattle destined for grass. If the supply of grass falls below demand, such as wintertime grass, drought or saturation of the market, lightweight calves will be discounted severely due to the more expensive feedlot cost to grow or house these animals until grass becomes available."

"Feedlot in-weights and age of cattle will both increase," predicts Vern France, consultant for Intermountain Beef Producers. France goes on to predict, "In spite of heavier in-weights, carcass weights should moderate or decrease. As cost of gain increases, days on feed historically have decreased. Lighter carcass weights equate to reduced supply or tonnage which is price supportive. High cost of gain discourages overfeeding of cattle, so the percentage of Choice cattle may decrease. This will result in an even wider Choice-Select spread. On the plus side, the percentage of Yield Grade (YG) 4 and 5 carcasses will decrease.

"These new developments and market climate certainly suggest that quality genetic cattle will demand even more of a premium than they have; i.e., those cattle that convert feed efficiently and grade Choice based on genetic ability rather than overfeeding. The steer/heifer price spread should widen, primarily due to the lower average feed conversion of heifers in comparison to steer counterparts," France concludes.

On the corn demand side, the ethanol industry shows no signs of slowing down. It is estimated that there are roughly 80 ethanol plants scheduled to be built in 2007 alone. Growth is expected to continue primarily due to government subsidies of 51¢ per gallon of ethanol. One bu. of corn (56 lb.) produces roughly 2.8 gal. of ethanol. It is expected that increased acreages will be planted to corn as a result of the economic signal being sent. These acres will probably be at the expense of other commodity feeds such as wheat, barley, soybeans and milo.

There is the school of thought that the beef industry will be less affected by the increase in corn prices than our competition — poultry and pork. To a large extent feedgrains are not used in our breeding herds and do not enter feeder-cattle diets until they reach the finishing phase, usually 120 days prior to harvest. Conversely, poultry and pork rely almost entirely on feedgrains to sustain their breeding females as well as every production phase up to harvest. This fundamental difference may favor cost of production on the beef side.

While the ethanol industry will be great for the American farmer, it may not have that same effect on the American cattleman. We can cuss government subsides, exports, the feedlot operator, the farmer or the family dog. Cussing and finger-pointing do no good.

The old saying "When you are handed lemons, make lemonade" certainly applies in this situation. Historically, with every challenge handed the industry, there has also been opportunity. Grass is king again, thus such marketing options as grass-finished beef and changing calving dates to better fit double-season grazing of lightweight calves are all options that should be explored.

As always, if you would like to discuss this article or simply would like to talk cows, do not hesitate to contact me at (775) 738-1721 or torellr@unce.unr.edu.