



## Strategies to deal with high corn prices for the beef cowherd, Part 2

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*This is the second in a two-part series on strategies for cattle producers to deal with high corn prices. Part 1 focused on strategies for cow/calf producers to deal with high corn prices.*

The fact that feedlot producers rely on corn as a main component of their diets more than any other segment of the beef industry is not news to anybody. By now you have heard and read enough information on current corn ethanol production and projections to figure out that those days of \$2.50/bu corn are likely long gone. We will not discuss those trends here. Instead we will assume a likely scenario of corn prices in the range of \$3.50-4.00/bu for the near future, and attempt to devise some viable alternatives to replace part of this key ingredient in feedlot diets.

Generally we can consider two main strategies to deal with high-corn prices. One is the use of marketing strategies such as selective hedging and options to protect from market volatility. Recent studies show that cattle feeders can often increase profitability and decrease the variability of profits through the use of selective marketing instead of cash marketing strategies. But this concept is not limited only to fed cattle prices. The use of such marketing strategies to procure feedstuffs necessary for the feedlot (largely corn) could be an effective way to protect against increasing corn prices or the impact of weather on feedlot inputs costs. Even though the use of these marketing strategies may have a great impact in the overall profitability of the operation, some disadvantages are that they require certain knowledge of the

markets and their signals, and they may increase the complexity of the marketing process (for example, the need of a broker when hedging with futures markets).

The second set of strategies that we will discuss here is related to the use of alternative feed sources to reduce the dependence on corn.

With the development of the corn ethanol industry, there are a tremendous amount of co-products available for the animal feed market. Some of the most common co-products from the wet and dry corn milling processes include distillers grains with solubles (wet and dry), corn gluten feed, modified distillers grains, and condensed distillers grains. The inclusion rate in feedlot diets of these co-products is highly variable. Among the many factors that contribute to this variability include proximity to an ethanol plant, corn processing method, sulfur content, fat content, storage capacity, etc. The proximity to an ethanol plant often dictates what type of co-products can be used. Spoilage of wet distillers grains with solubles usually begins about a week from delivery in the summer, and three to four weeks in the winter. This combined with increasing transportation costs determines the feasibility of feeding this relatively inexpensive and energy-rich co-product. Interactions with grain processing methods are a big topic of discussion amongst nutritionists. Studies have reported that medium-to-high inclusion levels (20-40 %) of wet distillers grains in diets containing steam flaked

corn as the main grain source have negatively impacted animal performance when compared to the same inclusion levels with dry-rolled or high moisture corn. Sulfur (S) toxicity can also limit the amount of co-product to include in the diet. Dietary sulfur levels above 0.4% (DM basis) can develop toxicity and reduce performance and even cause animal death. We have to keep in mind that the main sources of S are both water and feed, so high levels of S in the water can largely contribute to the total S intake, especially in the summer months.

In order to demonstrate the potential of the use of co-products in total feed cost savings, let's consider two corn price scenarios: one with corn at \$3.50/bu and another one at \$4.00 /bu (Dec. 10 cash corn price = \$3.64/bu, Source: Feedstuffs). Then we will calculate the cost of gain under two different diets of 0 and 25 % inclusion (DM basis) of wet distillers grain with solubles (WDGS). Some of the assumptions of this exercise will be: no change in feed efficiency or ADG between the two diets; a control (no co-product) diet comprised of 85% cracked corn (\$125/ton or \$143/ton for \$3.50/bu or \$4.00/bu, respectively), 10% alfalfa hay (\$110/ton), 5% supplement (\$250/ton); an ADG = 3.2 lb/d, a F:G = 7.1, a DMI = 22.7 lb/d (from VetLife Benchmark); and a wet distillers grains with solubles of \$40/ton (35 % DM), constant for both corn price scenarios.

With the cheaper corn (\$3.50/bu), the cost of the diet without co-products is \$144/ton DM, whereas diet cost with 25% WDGS is \$138/ton DM. Now, with the current assumptions of feed efficiency, this translates into a feed cost of gain of \$0.51/lb. and \$0.49/lb. for 0 and 25 % WDGS, respectively. This difference with the inclusion of 25% WDGS represents

a saving of about 4% in feed cost of gain by including co-products in the diet with corn at \$3.50/bu.

Now let's take a look at what could happen with corn at \$4.00/bu. The cost of the diet without co-products becomes \$160/ton DM, whereas the one with 25% WDGS becomes \$149/ton DM. Feed costs of gain then become \$0.57/lb. and \$0.53/lb. for 0 and 25% WDGS, respectively. That difference translates into an approximately 7% improvement in feed cost of gain with the inclusion of the co-product in a scenario of corn at \$4.00/bu.

As you can see, the percent of savings in feed cost of gain greatly increased from a scenario of corn at \$3.50/bu to one of \$4.00/bu, both of which we have seen within the past year. This is just a simple example of how much the corn price can impact the feed cost of gain when it is the main component in the diet and how we can modify that by taking advantage of some currently available corn milling co-products. This scenario also assumes equal performance between cattle consuming 0 and 25% WDGS, while some research has shown that feed conversions may be improved when distillers grains is included in feedlot diets. This would provide an even greater feed cost of gain response to including distillers grains in the diet.

If we consider that feed costs are the largest input for feedlot operators, feed cost of gain savings of 4% or more may represent the difference between red and blank ink in the bottom line ... especially when you multiply that 4% by the number of cattle on feed. For more information on this and other beef-related topics, please visit our website at [www.extension.umn.edu/beef](http://www.extension.umn.edu/beef).