

# Mid-West Cattlemen News

## Purchasing Feed & Forage

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With parched pastures and depleted soil moisture, many operations will require purchased feed and forage to survive this year. Outside of drought conditions, being good at purchasing nutrients for your operation can be the difference between financial success and failure. Whether it is purchasing commercial feed, hay, or fertilizer, nutrients are the biggest operating expense we face as cattle producers.

Making sound purchasing decisions can be as simple as weighing a bale of hay before you buy it. The first important part of being a good purchaser is understanding your purchasing and feeding capabilities or limitations. Are you limited to feeding round bales in rings? Do you have a commodity shed and mixer to provide a TMR? Can your feed purchases be stored or contracted? Many producers have different feeding capabilities and available labor but it is important to understand your own capabilities to store and deliver nutrients and focus on being successful within your nutrient infrastructure.

### **Purchasing Weight**

The first rule of good purchasing is to know weights. Cows don't eat bales, they eat pounds and it is critical that we purchase nutrients with that in mind. Bale weight can vary over 1,000 pounds and while it is not a common practice in the

industry, purchasing hay by the ton can save you a lot of trouble due to variability in bale weight. I understand that scales can be hard to come by and inconvenient when purchasing baled forage out of the field, but obtaining at least a few check weights can give you an idea of what forage is costing! Knowing the weight of what you are purchasing can lead to better purchasing decisions as you begin to compare different nutrient sources.

### **Dry Matter**

Second, understanding dry matter is critical to purchasing nutrients well. Many basic ingredients in ruminants, like silage, contain lots of water which provides no nutritional value. It is important to adjust nutrients on a dry matter basis, especially when we are considering purchasing them. The best number to start with would be calculating dollars per ton of dry matter for every ingredient under consideration. Consider purchasing corn silage out of the field. In most cases, this product would be sold on a dollars per ton value. If this corn silage is being sold for \$35 per ton and is 32 percent dry matter, simply divide the \$35 by 0.32 and you figure out this particular corn silage is costing \$109 per ton of dry matter (**DM**) .

### **Purchasing Nutrients**

The next important step to make great purchases is to focus on purchasing cheap nutrients, not necessarily cheap tons. Cattle don't have a requirement for pounds of hay or corn, but they do have requirements for protein and energy to grow or maintain. Becoming nutrient focused can have a big impact on feed cost in your operation. I tend to talk a lot about energy so I will run through a 2018 energy example with expensive hay and cheap corn. Lets say hay is costing \$100 per ton and corn is costing \$3.65 per bushel or \$130/ton. Also, we will assume that corn contains 0.99 Mcal NEm per pound while fescue hay contains 0.56 Mcal NEm per pound while both ingredients are 88 percent dry matter. By calculating the pound price of each ingredient and dividing by the Mcal NEm per pound, it will give us dollars per unit of energy (Mcal NEm). In this particular scenario, that means hay is costing \$203 per ton of Mcal NEm while corn is costing \$149 per ton of Mcal NEm. To sum this up, corn is costing 73 percent the price of hay when we consider the energy content of each feed ingredient. I have included cost analysis of other ingredients in the table on the next page.

### **Limitations**

Whether you like it or not, every feed ingredient has

Ingredient	\$ per ton	\$ per ton Protein	\$ per ton Energy
Fescue Hay	\$115	\$1306	\$233
Stockpile Fescue	\$46*	\$375	\$87
Corn Silage	\$45	\$1757	\$167
Soybean Hulls	\$170	\$1756	\$219
Corn	\$150	\$2130	\$172
Corn DDGS	\$200	\$710	\$227

\*Assuming nitrogen application of 50 pounds per acre results in 1250 DM pounds of additional forage with 70% utilization rate

its limitations. Like the sulfur content of distillers or the starch content of corn. We will never completely avoid forage as the staple to most ruminant diets, but if we look at the economics for this year and the short forage supply, reducing the use of forage can pay big! Achieving a balance will always be important and that's where our team of nutritionists comes in.

Managing within the constraints of your operation can also provide limitations on what options are available for your operation. I would encourage every producer to think outside of the box to survive this forage shortage. Not every operation has a vertical mixer and bunk space capable of making a total mixed ration to supply cows

exactly what they need on a daily basis but there all alternative methods to limit hay intake with cows along with a supplement program. The most realistic approach is to limit the amount of time cows have access to hay during the day. I have summarized forage intake by time of access in the table below.

#### Efficiency

Efficiency of nutrient utilization is always important but it can provide especially good returns when nutrients are expensive. Managing forage waste by reducing rain and soil exposure during storage and feeding in hay saving feeders can reduce hay waste by 50%! By reducing waste of forage during storage and feeding we can help reduce overall forage use and

reduce cost during our winter feeding program.

#### Economics

How important is purchasing nutrients to your operation? To summarize, let's walk through an example of maintaining a September calver through this winter using some ingredient options in the Midwest. Let's stick with corn costing \$130 per ton and hay costing \$100 per ton and assume a 1,200 pound cow requires 17 Mcal's NEm per day. With average quality fescue hay (10 percent Crude Protein, 0.56 Mcal NEm per pound), it would take 30 DM pounds of hay to meet her energy requirements. If we used the energy content of corn to compare against, it would only require 17 pounds of corn to provide the same energy. With current markets, it would cost \$1.70 per day to feed this cow with average quality fescue hay compared to \$1.26 per day using corn. This difference is almost \$70 per head over 150 day wintering period! Remember this is just an example and everyone knows we can't feed a cow 17 pounds of corn with nothing else, but this just demonstrates the magnitude of purchasing nutrients and its impact on your bottom line.

#### Forage Intake by Time of Access to Large Round Bales

	3 hours	6 hours	9 hours	Free Choice
Hay Intake, % BW	0.95%	1.5%	1.6%	1.75%

1250 pound cows, 3<sup>rd</sup> period



Contact your Cargill representative for nutrient purchasing tools.