

Cow Supplementation

Getting the best bang for your buck.

by **Kindra Gordon**, field editor

When it comes to cow supplementation, there are two aspects to consider:

1. Using supplements only if needed and when they will enhance the nutritional value of the base forage, and
2. Determining the most cost-effective protein supplement.

That was the message South Dakota State University Extension Beef Specialist Ken Olson shared with Range Beef Cow Symposium attendees in November.

“It’s not one or the other; both aspects are really important to consider and to maximize the value of a supplementation program,” he said.

Olson outlined that cattle typically require some form of supplementation when they are on a diet of low-quality forage, defined as high in fiber and 7% or less crude protein. He noted that the fiber can serve as an energy source if animals can digest it, but they will likely need some protein supplementation.

He emphasized that producers must remember they are feeding the cow for “two.” He clarified he wasn’t talking about feeding a fetus or calf. Instead, Olson said, “You must



► “You must feed the cow and the rumen microbes,” Ken Olson said.

feed the cow and the rumen microbes.” Rumen microbes play an important role in breaking down the fiber into an energy source.

Regarding protein supplementation, Olson said it is important to select a feedstuff with a high protein content, such as soybean meal or cottonseed meal, which rank at about 49% and 46% crude protein, respectively. Additional options include byproduct

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— **Ken Olson**

feedstuffs such as distillers’ grains, corn gluten feed and wheat middlings, which range from 30% to 17% crude protein.

Protein has the role of providing nitrogen for rumen microbial activity to aid digestion, Olson said. “We can increase the nutrient value of base forages by adding protein in the form of supplementation.”

However, he cautioned, grain-based energy supplements that are high in starch and low in protein — such as corn and barley — can have a negative effect on forage intake and digestibility.

Several factors must be evaluated when pricing supplements: differences in different feedstuff price, crude protein content, moisture content and transportation costs, Olson said. “Consider cost per delivered unit of the needed nutrient.”

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Table 1: Forage intake approximation

Type of forage	Digestibility, %	Intake, % of BW
Lush pasture	>65	2.75-3.5
Moderate-quality pasture	60	2.5-3.2
Good-quality grass hay	55	2.0-2.5
Moderate-quality grass hay	45-50	1.5-2.0
Poor-quality grass hay	40	1.0-1.5
Straw	35	<1.0

Table 2: Moderate-protein supplements

	Crude protein, %	Total digestible nutrients, %
Corn grain	9	88
Distillers’ grains	31	96
Wheat middlings	17	75
Corn gluten feed	23	80
Field peas	23	85

Editor’s Note: Kindra Gordon is a cattlemaster and freelance writer from Whitewood, S.D. This summary is part of the Angus Journal’s online coverage of the 2015 Range Beef Cow Symposium hosted Nov. 17-19, 2015, in Loveland, Colo. For additional coverage, to review this presentation’s PowerPoint or to listen to the presentation, visit the Newsroom at www.rangebeefcow.com. The Angus Journal’s coverage of the event is made possible through collaboration with the event committee and sponsorship of LiveAuctions.tv.

As part of the Angus Journal’s full meeting coverage, you can listen to Ken Olson’s presentation at <http://bit.ly/1YXhn00>.