

Co-Products As Feed

UI Ruminant Nutritionist Discusses Ways To Use Alternative Feed

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The availability of distillers grains and corn gluten feed coupled with high corn and hay prices has led many cattlemen to using these alternatives for feeding cows, particularly in the winter. Dan Shike, University of Illinois ruminant nutritionist, discussed different ways to use the alternative feed recently.

“Some of the most economical ways to feed cattle in the early fall and winter is to graze corn stalks or stock-piled fescue and supplement with distillers grains or corn gluten feed,” he said. “Distillers grains and corn gluten feed are high in energy and protein. When corn was cheap, corn was used as an energy supplement. However, corn doesn’t have enough protein to meet the cow’s requirement when she is lactating. Then soybean meal or some other protein sources can be used.”

However, corn and soybean meal are both very expensive right now, so distillers grains and corn gluten feed have become a popular alternative.

“Distillers grains and corn gluten feed not only are an excellent source of energy and protein, but they are also high in phosphorous,” Shike said. “When we think about supplementation, we start thinking about energy, protein, and phosphorous and the distillers grains and corn gluten feed are an excellent source of all three of those. They’re kind of an all-in-one supplement. Coupled with trace mineral mix, that would be all you would need to supplement the stock. However, if you feed high levels of co-products you would want to consider adding calcium because of the high phosphorous levels.”

How much you feed depends on your cow size, calving season, and what forage you are supplementing. If you have a fall calving herd, those cows are going to be nursing calves so their nutritional requirements will be higher in those fall months. Lactating cows out on cornstalks would be supplemented 12 or 15 pounds of dry distillers grains. If you have a spring calving herd then the calves are weaned and dry cows are grazing the stalks, then four to five pounds of dry distillers grains should be enough energy and protein supplementation.

Later in the winter when grazing isn’t an option about January, February or March, farmers may bring them up in a lot and feed them stored feeds. The standard used to be a round bale of hay, which today is pretty expensive. Hay also has a lot of waste.

“Often, with today’s hay prices, it could cost you \$3 a day to feed those cows,” he said. “There can be up to 40 percent waste with feeding big round bales ad libitum. Also, you can’t limit intake with the big round bales. They’re just going to eat all they can whether they have a calf nursing or not.

“They will eat/waste 40 or 50 pounds of real good hay,” Shike said.

There are some alternatives. You can put out big bales of cornstalks, soybean stubble or feed straw or some poorer grass hay. The cattle will not eat near as much. They don’t like poor quality hay or crop residue very much.

“Their limitation is the quality of forage,” he said. “The higher quality it is, the more they eat. More of the high quality forages are digested faster, so it has a faster passage rate. Then they can eat more.”

Cows will only eat/waste 20 pounds of a crop residue when it is offered ad libitum. There would be a substantial savings in cost of forage, but then you would have to supplement with distillers or gluten. How much distillers or gluten depends on whether or not they are lactating and have a calf at side. You may need to supplement with four or five pounds of dry distillers, or 12 to 15 pounds of dry distillers, depending on the stage of production of the cow. The combination of the co-products with the crop residues or poor quality hay is probably the most economical way to feed the cow when she can’t graze.

Some farmers with a grinder and wagon could limit feed hay and that certainly works, but if you had that equipment, the same could be done with cornstalk bales or wheat straw.

“Just grind up the residue and mix in the distillers and feed it as a total mixed ration in a bunk,” he said. “Then again, there’s the equipment consideration. Grinders aren’t cheap, but if that was something you were already utilizing, it is certainly an option.”

Shike said that if a farmer has access to grazing, grazing is the cheapest. However, not everyone has that access. Also, the quality of the stalks decline as you progress into the winter, especially if it’s a wet winter. Also, when it gets muddy it’s not an option.

“Further north if it freezes up you can still graze some but we recommend strip grazing,” he said. “That makes the quality of the stalks last a little longer, but it really works best in fall. If you can purchase stalk bales or wheat straw at a reasonable price, combined with the co-

products, that would be a good choice over high quality hay.”

In a recent study, Shike compared spring calving cows on good quality hay to cows on cornstalk bales with three different combinations of co-products.

“We fed either dry distillers grains, dry corn bran and dry distillers grains, or dry corn bran with dry high protein distillers grains to cows that had ad libitum access to corn stalk bales and compared that to control cows that had ad



Dan Shike, University of Illinois Ruminant Nutritionist, recently discussed different ways to use distillers grains and corn gluten feed.

Photo by John LaRose, Jr.

libitum access to high quality alfalfa hay,” he said. “There wasn’t much difference between any of the co-product combinations, but we saw about \$2 a day savings with the co-products and cornstalk bales compared to the high quality hay. There was no difference in performance, and, actually the cows on hay lost a little bit more weight than the cows on the co-products and residue. That \$2 a day savings is quite a bit.”

Distillers grains have fluctuated in price as price of corn has gone up and down.

“Even when distillers grains were \$180 or \$200 a ton, they were still cheaper than \$6 or \$7 a bushel corn or \$180 a ton hay,” Shike pointed out. “We’ve been doing these combinations for the last five years now, and the crop residue and co-products have always been less expensive than good hay,” Shike said.

One of the considerations about switching over to co-products is the farmer has to think about handling, storage and feeding. If you have a small herd you will likely feed dry products, and it can be stored in a shed or on a concrete floor. You will not have to invest in much equipment either.

“A few buckets and \$100 plastic bunk is a pretty low investment,” Shike said. “Put the bunk out on some gravel and carry a few buckets.”

But if you are talking several hundred cows then you’d be getting a truckload at a time and you would have different equipment considerations. You would need some sort of commodity shed for storage, which certainly is the best option. Also, you would want to use a feed wagon and fence-line bunks. Those who normally use big round bales will have some equipment considerations and will have to make changes to shift over to this feeding system.

“If you have 500 cows, and you can save \$2 a day, you can afford to buy different equipment too,” he said. “Those who are feeding corn silage, probably already have a wagon and are using bunks or some sort of feeding system, so it’s easy to add distillers grains. The co-products can be used to mix with silage. If it’s corn silage made from \$7 or \$8 corn, silage wouldn’t be the best choice. But if you’re back in the \$5 or \$6 corn, silage can price in. With \$3 or \$4 dollar corn, a silage based diet would likely be the least expensive.”

Wet products are a whole other set of storage considerations, Shike warned.

“You can pack it in a bunker and cover it. It is not recommended to bag wet distillers grains by itself because of the chance of blowing out the bag. Nebraska has evaluated several methods of bagging distillers grains. They have had success mixing distillers with wheat straw or other dry residues and forages, just so it’s not quite so wet. It is also possible to add enough straw or crop residue so you have a complete feed, and you don’t have to do any mixing when it comes out. You do your mixing with the residue as you bag it.”

One of the least expensive ways of feeding cows in the fall and early winter is utilizing corn co-products as a supplement while grazing corn stalks or stockpiled forages. If grazing is not available, feeding harvested crop residues and corn co-products is an excellent alternative to ad libitum hay feeding. Herd size will depict what equipment, if any, is necessary, but feeding corn co-products will likely fit any operation as long as storage and handling is taken into proper consideration. Δ