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### Utilizing Crop Residues 10-17-22

Fall is in full swing, with both corn and beans coming out of the field. When crop fields open up for grazing behind harvest, what can be expected from the remaining residue?

Both bean and corn stubble can provide grazing value for animals turned out on harvested crop fields, however, if forced to choose between the two, corn residue is the easy winner.

While beans themselves are high in protein and fat, the residue doesn't live up to the grain. Soybean pods and stems are only 4-6% crude protein and 35-45% TDN, well below maintenance levels for even dry cows. Bean leaves are higher in nutrient value, but by the time harvest rolls around, most have been shed and are already starting to decompose. Those that aren't are shattered and torn up by the combine and can't be counted on to bring much to the table.

When grazing soybean stubble, animals will seek out the more nutritious beans. In small amounts, these can be a great source of protein and energy, but the high fat content we mentioned earlier can cause issues. Too much fat in the rumen can interfere with the digestive process, especially in young calves who haven't developed full rumen function yet. Keep an eye out for piles of spilled beans and clean them up before allowing animals to graze.

By comparison, corn residue packs a bit more punch than bean stubble. While crude protein content can be similar, around 5-6%, the big difference comes with energy. TDN levels of corn residue are typically around 50-55%, enough to provide maintenance energy for a dry cow under normal conditions. Add a bit of spilled or dropped grain to the mix and most cattle can be perfectly content on corn residue for a while.

To figure out how to stock corn residue we first look at the grain produced. Studies have shown that we can assume that for each bushel of corn produced, there will be 8 lbs. of consumable forage. For simplicity sake, if we have a 200 bushel per acre field, this will mean about 1600 lbs. of consumable dry matter. On lower quality forages like corn residue, we can assume an animal can eat about 2% of its body weight daily, so for a 1,300 lb. cow, about 26 lbs. If we put this all together, that comes out to 61 cow days per acre. We can make this even simpler, and use a rule of thumb that with every 100 bushels of grain plan for 30 grazing cow days, per acre.

Just like with the beans, a bit of spilled grain in corn fields is a nice bonus, but too much can cause problems like acidosis. Clean up any large spills and if you have an area with a lot of downed corn, allow animals to only graze a bit at a time to limit intake. If an entire field has downed corn, work animals up to a high grain diet slowly to allow the rumen to adjust to the change in feed.

Typically, residue holds its nutrient value fairly well into the winter. However, with wet conditions quality will be decreased. Most easily noticed is how fast stalks can get soiled or trampled into muddy ground and are no longer able for consumption.

When grazing residues, we have a few management options. Grazing the whole field at once allows animals to pick the best of the residue and can result in better early gains. However, once the field is picked through, lower quality forage will be all that is left and animals may need to be moved or supplemented.

Strip grazing on the other hand, has the benefit of limiting animal selectivity, keeping some of the higher quality forage around throughout the entire grazing period. While the initial diet and gains may not be as great, this slightly lower quality diet can be maintained for longer, weather permitting. Strip grazing like this can allow for a higher stocking rate due to increased utilization and the more uniform diet.

When it comes to crop residues, corn stalks are where the real value lies. Assume roughly, 30 cow grazing days per acre for each 100 bushels produced, and graze to meet your goals. Whole field for quick utilization and gains or strip for sustained diet and increased stocking rate. Utilized right, crop residues can be a key and relatively inexpensive part of feeding your beef herd.

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