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Soybean Residue, a Forage Crop?

If anyone follows my columns on a regular basis, you might think I'm a broken record. Forage inventory this fall is tight, across a wide region of the heartland. As combines pull out of fields, a whole new source of possible forage and grazing days comes into discussion. Crop residues offer a cost-effective opportunity for cows to graze or for baling and winter feeding. Corn and sorghum residues get most of the attention, for good reason as they make excellent fall feed, but soybean residues have a place in this discussion as well.

Soybeans are very high in protein and fat, which stands to reason in the ways they are utilized in the industry. Even the most efficient harvesters will leave a few beans in the field and that is what the livestock will forage for first. At about 40% crude protein and 20% fat, the beans alone can be a good feed source when fed in moderation. The high fat content can cause issues with rumen function, especially in young calves, so before letting animals out to graze a bean field, be sure to clean up any piles of spilled grain. If the crop field has waterways or other grass buffer areas, this helps with rumen and ration balance. These types of fields make excellent candidates for soybean residue grazing. If water is available, this becomes even more desirable.

Soybean residues, on the other hand, have a much different feed composition. Empty bean pods and stems contain only 4 to 6% CP and the TDN is only 35 to 45%. Soybean leaves are slightly higher in protein at 12%, but the leaves break down quickly and are usually no longer available for consumption once harvest has been completed. Cows will eat this residue, but don't necessarily like it. The more digestible portion of this residue breaks down quickly, so the grazing window tends to be shorter than other crop residue options.

All that said, soybean residues will not meet the nutritional requirements of a dry cow, even if there is some grain left in the field. All is not lost, because there is still opportunity to graze soybean residue in conjunction with a supplemented high-quality feed. Not only does this provides rest to pastures, but can help stretch feed resources while still ensuring the cow is properly fed. There is some benefit to nutrient recycling that occurs as the cow processes and redistributes the residue. Baled soybean residue can be used as a roughage source in rations if that is a needed component for your operation.

As with any discussion of utilizing crop residues, there becomes the discussion of pros/cons to the cropping enterprise. Soil compaction, nutrient removal/recycling, livestock trailing, getting adequate compensation from the livestock enterprise, etc... all need to be looked at and evaluated. The livestock side of the equation looks at fencing, water, distance from operation, etc... This discussion can be saved for another day, but managed appropriately, this can be a win-win for both crop and livestock enterprises.

So, to summarize, soybean residue can be used to rest pasture and stretch feed resources, but residue alone will not meet any class of livestock's nutrient requirements. Second trimester, dry cows are likely the best choice for livestock to utilize these residues. Keep in mind, supplementation will be need if you decide to utilize your soybean residue. Proper grazing management and an open fall weather wise, makes this a more attractive option.