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Forage Focus: Corn Stalks Can Stretch Forage Supplies - [Rory Lewandowski](#), Extension Educator, Wayne County and Crossroads EERA

Corn harvest is underway around Ohio and the cornstalks and grain residue that remains after the combine has finished its work can provide the means to stretch forage supplies. There are approximately 3.4 million acres of corn planted in Ohio each year. Those acres harvested for corn grain represent a potential forage source that is often overlooked and underutilized.

It is estimated that about 50% of the total corn plant yield remains in the field after the harvest. Most of this weight is the stalk but there are also leaves, husks, some corn grain and cobs. As a guideline, figure that for each bushel of shell corn produced there will be about 50 lbs. of crop residue. The amount of corn grain left on the field typically averages around 3 bushels per acre. That figure can vary depending upon combine adjustments and the condition of the crop. There is potential for that figure to be higher this year because some drought stressed corn stalks are susceptible to breaking, lodging and dropping ears, so there will be stalks and ears that will not pass through the combine.

Grazing rather than baling typically provides the best utilization of corn residue. Use of temporary electric fence can provide a flexible and economical means for livestock to harvest corn residue. An added benefit is the nutrients returned to the field through the manure. The best use of corn residue is obtained when livestock graze the field as soon as possible after harvest. A good rule of thumb is that corn residue can make suitable feed for between 30 to 60 days after harvest depending upon weather conditions. Generally, one acre of corn residue can provide enough feed for between 45 to 60 days for one animal unit (1000 lbs.).

Although corn stalks and corn residue don't provide nutrients adequate for high production livestock such as dairy cows, young growing livestock or lactating beef cattle, sheep or goats, it does match up well for dry cows, ewes or does that may be in early to mid-gestation. On average, corn residue can provide approximately 6 to 7 percent crude protein, and around 65 percent total digestible nutrients (TDN). The average neutral detergent fiber (NDF) content is about 65 percent. These are averages and the actual nutrient content that an individual animal ingests can vary depending upon how much corn grain is available, how much selection the animal can practice and how long after harvest the field is being grazed. The diet values will tend to be more consistent when the field is strip grazed, allocating 3 to 4 days of grazing before moving the fence.

In those situations where grazing is not possible and livestock owners want to use corn residue to stretch forage supplies, baling may be an acceptable option when some additional harvest practices are followed. Dry baled corn stalks typically have very low forage quality values and waste is high. Reducing particle length by chopping stalks before baling can increase forage utilization. An even better option, if at all possible, is to use the corn residue as an ensiled product, wrapping bales in plastic. To get good fermentation corn residue should be at a moisture level of around 60%. It might be possible to push the moisture content down to 55%, but the risk of poor fermentation increases with drier material. Later planted corn fields and/or corn fields

that may be harvested as high moisture corn grain are probably the best candidates for this option. The next important step is to get a tight bale made that has very little air space.

Air is the enemy of a correct fermentation process for livestock feed. Fibrous materials like corn stalks are difficult to pack tightly together. Crushing the stalks prior to baling can facilitate a tighter bale. I know of some growers who have run a bush hog over the stalks to reduce stalk length and make it easier to pack the pieces together in the bale. If a chop cut baler is available, it would be my choice for this operation. If possible add a microbial inoculant to help provide a more favorable fermentation process.

Forage supplies are tight this year. With a little effort and planning, corn residue can be used to stretch forage resources.