



Forage Management

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PERENNIAL FORAGE CUTTING HEIGHT

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In a recent farm visit, the farmer had just purchased a nice new discbine. On the day I was there, he and the equipment dealer were replacing the shoes on the cutter bar with thicker ones. This farm has predominately grass forages and the farmer recognized that this new machine was cutting much shorter than his former haybine, and he knew this was not good for the grass.

This topic has been written about several times over the last decade, but warrants a refresher. Recommended cutting height is not a “one size fits all” scenario. Consider the crop species, field conditions, ash content of the harvested forage, time of year and age of the stand. As this scenario demonstrates, new machines may not be set up appropriately for your forage stands.

The prevalence of discbines over the last few decades allows a closer cut to the ground (if you choose) without as much risk of costly damage that often occurred with traditional sicklebar mowers. This makes it very tempting to lower the cutting height a few inches to get extra yield. Research from Miner Institute indicates that up to ½ ton DM/season (three cuttings) can be gained by lower cutting height from 4 inches down to 2 inches, without a sacrifice of quality.

So if increased yield is the benefit, what are the issues? From a mowing standpoint, there is a risk of scalping an uneven field and increasing the ash content (amount of dirt and debris) in the forage. Tom Kilcer, Advanced Ag Systems refers to this as “minimum-till haylage.”

Nutritionists indicate that the presence of ash in forages is becoming a chronic problem on many dairies. It has been reported that a 2 percent increase in ash (from 9 to 11 percent) can reduce milk by 1.9 lbs/cow/day (Sniffen, Fencrest, LLC.). That is certainly significant.

In addition to the connection between cutting height and ash content, improperly set up rakes can add to this issues as well. While rakes need to be able to pick up all the hay, they are often set closer to the ground than needed.

Alfalfa

- Manage cutting height based on field conditions, time of year and considerations for ash content in forage
- Consider higher cutting height in fall to help capture and retain snow cover

Grass

- A minimum of 3-4 inches stubble is critical
- Grass stands are even more sensitive in the seeding year
- The loss in grass stand productivity from cutting too low far outweighs any yield boost you might get from harvesting a few extra inches in that one cutting

Mixed Stands

- In mixed stands cutting height could actually be used as a management tool for stand composition by choosing a cutting height that either favors grass or alfalfa

Crop species is a critical factor in determining an appropriate cutting height. Because alfalfa generates new shoots from the crown of the plant after each cutting, it can generally tolerate a very low cutting height. Conversely, a low cutting height on grass can be very detrimental. Grasses have to re-grow from the stubble left in the field. Therefore, if grasses are cut too short, the plant is robbed of the energy reserves it needs to re-grow.

In research conducted at Miner Institute, the effect of cutting height on orchardgrass and reeds canarygrass was measured in a greenhouse experiment. This work showed that first year reeds canarygrass was completely killed at a 2 inch cutting height. The orchardgrass did regrow, but at a much slower rate. The 2-inch orchardgrass required 38 days to reach a height of 16 inches. In contrast, at the 4 inch cutting height, both grasses responded quickly after cutting and measured 16 inches of regrowth in just 21 days.

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