GUEST COLUMN

Bring Your "A" Game to Alfalfa Management

Randy Welch, CROPLAN® by WinField

Don't Lose the 'Good Stuff' During Harvest

Loss of forage quality is a cost most alfalfa farmers may not consider. Loss of leaves during harvest is a feed quality loss that cannot be supplemented – once it's gone, it's gone. A recent WinField forage quality study evaluated how much feed quality is lost through the harvesting process. Sampling was conducted on seven Wisconsin dairies analyzing each harvest step. We dug deeper into results from three of the farms. *These findings are based on observations from actual farms and real situations. No replication was done with treatments or equipment.*

Farm 1: From Field to Bunker

Farm 1 measured relative feed value (RFV) at each step of the harvesting process. **RFV Loss: 24 points.**

Key Learning: Starting harvest at a lower than expected RFV and adding unexpected leaf loss during each harvest step resulted in serious quality loss and potential income loss. This forage would not be beneficial for high production dairy animals.

Farm 2: Harvesting Under Adverse Weather Conditions

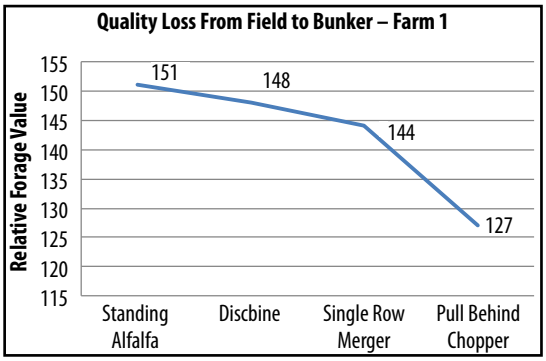
Farm 2 demonstrated quality risks of harvesting in poor weather. RFV – 142 prior to harvest; 121 post-harvest. **RFV Loss: 21 points.**

Key Learning: Weather conditions during alfalfa harvest is a concern. Rained on alfalfa that has been re-dried can lead to more leaf loss. Harvesting under less-than-optimal conditions costs you significantly in the bunker, both in feed quality and dollars.

Farm 3: Foliar Fungicide Applications Can be Beneficial

Applying a fungicide can be a beneficial tool to keep alfalfa plants healthy, and can reduce leaf loss and shatter. Fungicides, like other treatments, only benefit the crop with proper timing. RFV – 164 prior to harvest; 156 post-harvest. **RFV Loss: 8 points.**

Key Learning: Quality loss is unavoidable, but how much depends greatly on the quality of your management.



Summary & Conclusions.

Alfalfa leaves have a very high RFV compared to stems. Each are about 50/50 by weight at late bud, leaves have an approximate 400 RFV and stems about 70. The results of the on-farm harvest loss data indicate:

- Farmers often start harvest at a much lower RFV than they think.
- Quality is overwhelmingly dependent on conditions affecting leaf loss.
- Leaf losses are additive during each harvest step process, and each farm presents its own equipment and loss risks.
- Forage moisture at chopping is the most important factor regarding leaf loss.
- Very little change in ash content was detected in our test farms. Ash content over 8-10% may indicate dirt is being picked up during harvest. Additional ash lowers forage quality on a 1:1 scale.

Minding the Fundamentals

With exciting alfalfa technologies on the horizon, it is easy to overlook basics. You can plant the highest-quality alfalfa packed with the absolute best genetic potential, but if you don't manage that crop correctly, you may derive little return from a significant investment. Here are tips for maintaining high forage quality during harvest, optimizing yield, and achieving stronger return on your investment:

1. **Choose coated seed.** The first 30-60 days after seeding are the most critical to stand productivity. Choosing an excellent coating option helps give your stand a strong start, helping to improve stand establishment and increasing seed efficiency.
2. **Perform soil tests.** Your agronomist can help determine where nutrients are limited or excessive, as well as how to correct low-nutrient areas and judiciously cut back where fertility is adequate. Pay particular attention to ensuring pH levels are on target. In alfalfa, a neutral pH is required for high production. Also make sure macro- and micronutrient levels are within normal ranges.
3. **Take tissue samples.** Tissue testing can let you know what nutrients are actually getting into stems and leaves to foster growth. Your agronomist can advise on optimal times to take tissue samples.
4. **Monitor for insects and diseases.** Regularly scout fields to assess potential problems early. Using the appropriate insecticide and/or fungicide reduces later problems. Fungicides can help promote healthy leaves that remain on stems during harvest.
5. **Control weeds.** Roundup Ready® Alfalfa provides flexible management strategies. Conventional varieties also work with proper herbicide applications.

If We Measure, We Can Manage

To provide farmers with additional management tools a study was conducted to determine if forage yield could be estimated from plant height. This was a joint effort with WinField and Dan Undersander, UW-Madison. Results show when an alfalfa stand density is 55 stems/ft^2 or greater, yield can be predicted at a given plant height. Each inch of additional height is worth ~126 lbs/acre of dry matter. WinField has developed a tool called the Predictive Alfalfa Yield (PAY) Stick, which is designed to predict alfalfa dry matter yield directly in the field based simply on plant height. This tool provides the ability to measure and make management decisions such as determining if an application had a yield effect compared to a non-treated, indicating which fields are the highest producing, and comparing yield between varieties. Talk with your local WinField representative to find out more about the PAY stick.