



JUD HEINRICHS
Dairy And Animal
Science Extension
Penn State

This spring and summer, as you are making haylage and hay, keep in mind some basic management principles of good forage making.

First of all, proper maturity counts. In fact it is likely the most important part of a good forage program.

Second, check dry matter. If it is haylage, we know that there are specific moisture ranges that encourage good packing and fermentation. If we go too wet, which is less than 30 percent dry matter, or too dry, greater than 60 percent dry matter, we drastically increase the likelihood of a poor fermentation.

High quality silage requires a proper fermentation to promote good intakes and high levels of milk production. The only way to know the dry matter of haylage is to measure it. Use a microwave, oven, or koster tester — but you must measure the first load and check it periodically. If you are good at squeezing a handful to monitor moisture, then calibrate your handful with a few measured analyses in the microwave. Very few people can retain their hand squeezing calibration over the winter or from cutting to cutting.

A next point for haylage is to check particle size as you chop it. Nothing you do to haylage after harvest increases the particle size but everything reduces particle size post-harvest. Silo filling, solo unloading, TMR mixers, and feed delivery systems all reduce particle size of forage.

Some systems are minimal in their effects and some are great. If moisture ranges are monitored for haylage, it is strongly suggested to try to achieve the greatest particle length possible that

will fit with your storage and feeding systems.

For upright silos, you are more limited that with bunker silos in terms of acceptable length. Bunker silos still have to have proper moisture in order to pack longer material.

Never compromise a good fermentation with too long a particle size. The problems of poor packing and moldy, poorly fermented haylage will far outweigh any increases that you may gain from longer haylage particle size.

If the maturity and moisture of the crop are in the proper ranges, then getting your cow's physical effective fiber from grass or legume forages in the form of haycrop silage, balage, and hay will usually beat the physical fiber achieved from corn silage. There are often more problems with fermentation and fiber digestibility from long chopper corn silage supplying physical effective fiber for your cows than if that long fiber comes from a haycrop source.

POTATO LEAFHOPPER-RESISTANT ALFALFAS IN 1997
DAN UNDERSANDER
University of Wisconsin

Potato leafhopper is the insect now causing the greatest economic loss in alfalfa to most Wisconsin farmers.

Resistance to this insect has been widely promoted as a major breakthrough for alfalfa. The resistance is due to glandular hairs on the stem that physically inhibit the ability of leafhoppers to reproduce and may exude a substance that kills leafhoppers.

David Hogg, entomologist at the University of Wisconsin, has shown that the trait really does work—that potato leafhoppers will fail to reproduce on resistant plant and will eventually die.

However, released potato leafhopper resistant varieties have had mixed success in the field during 1997. Why? First, we need to recognize that we had the highest levels of potato leafhopper during 1997 of any of the last 10 years. This caused significant yield loss in both new seedlings and established stands. Our data would indicate that such stress on new varieties. Historically, we would have done all the research first and had many answers on release of varieties with new traits, but now, in the rush to get new traits to farmers, much of this information must be developed after the release. We learned this year that 60 percent resistance or more may be necessary for severe potato leafhopper infestations. Most of the varieties released last year are first

generation varieties with 20 to 40 percent resistance. The lower resistance will still be helpful in years of lower infestation.

Further, the expression of the resistance may be affected by the environment and not always be present to the same extent.

Lastly, the resistance may be primarily to insect breeding and reproduction and be less effective against the first infestation of adults that come from the south. This may mean that the thresholds for spraying are different, and the number of sprayings are reduced for the season but not eliminated.

Many of the users of resistant varieties experience some level of potato leafhopper infestations, but will achieve some yield benefits.

I believe as we learn more about management of these varieties and gradually develop better varieties, we will find potato leafhopper resistance an indispensable tool in the production of alfalfa.

Yeager Receives PFGC Scholarship

DOYLESTOWN (Bucks Co.) — The PFGC scholarship at Delaware Valley College was awarded to Jeremy Yeager of Chambersburg. Jermy grew up on a dairy farm near Chambersburg and has recently worked for a crop consulting firm in Shippensburg.

The PFGC provides this scholarship to a Delaware Valley College student studying forages or forage-related subjects.

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