



FORAGE BITS

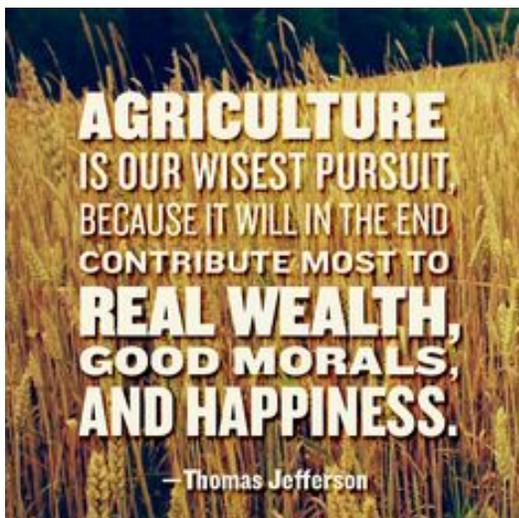
Winter 2014

Publication of the Maryland-Delaware Forage Council, Inc.



INSIDE THIS ISSUE:

- ❖ Designing Efficient Pasture Systems
Focus of Conferences
- ❖ Forage Variety Results Now Available
- ❖ Updated Analysis on Fungicides and Alfalfa
- ❖ Grass- A Panorama in Words
- ❖ Historic Agriculture Data Now Online
- ❖ Mobile App Translates Per Bale to Per Ton Price
- ❖ Forage Seed Preparation
- ❖ Is Your Forage Seeder Calibration Wasting Money



MD-DE Forage Council Officers and Board of Directors

Les Vough, President

vough@umd.edu

Jack Welch, Vice President

welchje@verizon.net

Richard Taylor, Secretary

rtaylor@udel.edu

Kenneth Stonesifer, Treasurer

kston@hotmail.com

Board Members

Producers

Lawrason Sayre

Jack Welch

Richard Winters

Matt Webber

Agribusiness

Karen Holloway

Kenneth Stonesifer

Rob Hawkins

Gabe Zepp

Public Service

Ben Beale

Chris Breeding

Richard Taylor

Les Vough



Designing Efficient Pasture Systems Focus of Conferences



News Release, College Park, MD. – Three regional Hay and Pasture Conferences across Maryland and Delaware will provide opportunities for farmers as well as agribusiness and agency personnel to obtain practical and quite useful information on some of the latest technology and practices related to forage production, management and utilization. I think this winter's series of Hay and Pasture Conferences address timely topics, says Les Vough, University of Maryland Forage Crops Extension Specialist Emeritus and conferences coordinator.

This winter's series of Hay and Pasture Conferences will emphasize efficient pasture systems design that accommodates natural features and management challenges. It is relatively easy to design a system on a flat, square, open pasture field but it is a different matter on rolling or steep topography, irregularly shaped fields with wooded areas, and especially if there is a stream running through the pasture.

One of the featured speakers will be Don Wild, retired Conservation Agronomist and Grazing Specialist with USDA Natural Resources Conservation Service in New York. Over his 39-year career, Wild has assisted hundreds of livestock and dairy producers implement grazing systems to better manage their forage resources.

Wild also manages 'Wild Acres Family Farm' where specialty livestock (lamb, beef, hogs, chickens, turkeys, ducks, and rabbits) are raised for direct meat sales. All of these along with Jersey heifers and steers, llamas and miniature horses have been rotationally grazed on the farm since 1986. Thus, with his background and practical farm experience, he designs and sets up grazing systems that emphasize watering facilities, fencing, walkways, and forage and grazing management from an integrated systems approach. This presentation will have direct application to the stream corridor fencing issue facing Maryland graziers.

When we look at pasture- and forage-based systems we tend to emphasize the plant side of the system and overlook the role that animal genetics can play. Not all animals perform equally well in a forage-based system. John Comerford, Penn State University Extension Beef Specialist, will address animal genetics as it relates to beef and small ruminant pasture-based production systems.

James Glancey, Professor of Mechanical Engineering, University of Delaware, always a popular speaker at these conferences, returns to the program this year. His topic will be proper baler setup and maintenance and the economics of small versus large bales.

Updates on weed control and nutrient management will round out the program agenda.

Conference dates and locations are as follows:

- **Delmarva Hay & Pasture Conference**, January 14, Delaware State Fairgrounds, Harrington
- **Southern Maryland Hay & Pasture Conference**, January 15, Baden Volunteer Fire Hall, Brandywine, Md
- **Tri-State (Md, Pa, and WV) Hay & Pasture Conference**, January 16, Garrett College, McHenry, Md.

Certified Crop Advisor, pesticide and nutrient management, and Conservation Planner certification credits will be offered.

There is no registration fee for the Delmarva conference and lunch will be available on site for purchase.

Registration fee for the Southern Maryland conference will be \$15 per person by January 10 and \$20 at the door. Checks should be made payable to University of Maryland and sent to Hay & Pasture Conference, University of Maryland Extension, PO Box 663, Leonardtown, MD 20650 (phone: 301-475-4484).

Registration for the Tri-State conference will also be \$15 per person by January 8 and \$20 at the door. Checks should be made payable to

Garrett EAC and sent to Hay & Pasture Conference, University of Maryland Extension, 1916 Maryland Highway, Suite A, Mtn. Lake Park, MD 21550 (phone: 301-334-6960).

The 2014 conference series is supported by the Department of Animal and Avian Sciences, University of Maryland, through an endowment from the Jorgensen Family Foundation.

UNIVERSITY OF KENTUCKY FORAGE VARIETY RESULTS NOW AVAILABLE

University of Kentucky has released the results of the 2013 Forage trials. Reports are now available on their website at <http://www.uky.edu/Ag/Forage/>

UPDATED ANALYSIS ON FUNGICIDES AND ALFALFA

Adapted from: University of Kentucky Forage News December 2013 Edition

Last year, Headline® fungicide received a federal label for control of foliar diseases of alfalfa for use on seed, for hay, or for silage (with a 14-day pre-harvest interval in all cases). See additional label restrictions.

The April 9, 2013, issue of *Kentucky Pest News* included an article on the overall performance of Headline® fungicide based on public field research. The present article includes updated tables of field performance. These tables include all the data from the previous article plus two additional sources:

- UK field research conducted this past summer
- A paper¹ on fungicide performance recently published by researchers in Wisconsin.

Updated summary of public research

The results of our analyses are shown in the table below, and key points are summarized here:

1. In almost all comparisons, applications of strobilurin fungicide reduced damage from foliar/stem diseases.
2. In spite of the reduction in disease damage, yield increase was observed in only 11 of 42 comparisons. Most of those yield increases occurred in the first or second cuttings, consistent with manufacturer reports. When they occurred, yield increases were almost always in the range of one- to three-tenths of a ton of dry matter per acre.
3. Forage quality (measured in various ways; see table) was improved in very few comparisons. It is important to note that there were also a number of instances where quality was slightly reduced in the fungicide-treated alfalfa (data not shown, available on request).
4. The physiological “greening” effect of strobilurin fungicides was not reported in alfalfa in experiments where such observations were included in the report.

Parameter	Total number comparisons*	Number beneficial responses*
Disease damage	42	36
Yield	42	11
Crude protein	30	5
Net energy for lactation	27	4
Relative feed value	5	1
Greening/senescence	5	0

*Each strobilurin fungicide in each cutting = a discrete comparison
 ***“Beneficial responses” refers to examples of statistically significant improvement in agronomic performance. Statistical discrimination among treatments at 10% error rate ($P < 0.1$)

Conclusions

It seems clear that application of a strobilurin fungicide very commonly reduces levels of foliar disease in alfalfa in humid regions of the USA. However, in research thus far, strobilurin fungicide was associated with increased forage yield in only about 25% of comparisons. Yield increases, when they occurred, almost always

were in the first or second cutting. This may be because the fungus that causes spring black stem and leaf spot, which is most active in these earlier cuttings, is highly sensitive to Headline®. In any case, if considering the use of fungicide, best results will be obtained by applying during the growth phase of the forage for the first or second cutting.

Forage quality has been minimally improved by strobilurin fungicides in research thus far. This latter finding surprises us, because leaves represent high-quality forage, and we would expect that improved leaf health would translate to improved forage quality. Continuing research is advisable, since several of the growing seasons of these tests were unusually hot and dry; results economically favorable to fungicide use could occur in wet growing seasons.

Samac et al, 2013. Evaluating Headline Fungicide on Alfalfa Production and Sensitivity of Pathogens to Pyraclostrobin. Online. Plant Health Progress doi:10.1094/PHP-2013-0917-01-RS. (Paul Vincelli, Extension Plant Pathologist and Ray Smith, Extension Forage Agronomist



GRASS- A PANORAMA IN WORDS

*Adapted from: University of Kentucky Forage News
November 2013 Edition*



Grass is the forgiveness of nature – her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass-grown like rural lanes, and obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality, and emerges upon the first solicitation of spring. Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements which are its ministers and servants, it softens the rude outline of the world. Its tenacious fibres hold the earth in its place, and prevent its soluble components from washing into the wasting sea. It invades the solitude of deserts, climbs the inaccessible slopes and forbidding pinnacles of mountains, modifies climates, and determines the history, character, and destiny of nations.

Unobtrusive and patient, it has immortal vigor and aggression. Banished from the thoroughfare and the field, it bides its time to return, and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled, but which it never abdicates. It bears no blazonry or bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet should its harvest fail for a single year, famine would depopulate the world. *Dedicated to those who love green pastures. (SOURCE: John James Ingalls (1833-1900) was Senator from Kansas (1873-1891) printed in The Kansas Magazine in 1892.)*



HISTORIC AGRICULTURAL DATA NOW ONLINE



In early July, the USDA's National Agricultural Statistics Service (NASS) simplified access to historic data by putting 77 years' worth of [agricultural statistics](#) online. In the past, this information, published in the annual bulletin Agricultural Statistics, was available in print form only. "U.S. agriculture continues to progress by learning from our past, which is why it is imperative to have historic data easily available," said Dr. Cynthia Clark, NASS administrator. "By publishing this information online we are simplifying the research process and further enhancing access to this important and interesting information."

NASS and its predecessors at USDA have published Agricultural Statistics since 1936. The bulletins are a compilation of data produced by multiple agencies within USDA.

Each volume is a one-stop location for annual production, consumption, trade and price data for all sorts of crops and livestock, as well as farm economics, spending for government programs and lots of other statistics important to our country's agricultural system.

These volumes detail U.S. farming for much of the 20th century, including the Dust Bowl and World War II. While digitizing these past data, NASS statisticians uncovered historical facts, including:

- In 1933, hybrid corn seeds made up only one-tenth of 1 percent of the national crop. Within 10 years, that proportion reached 50 percent, and by 1956, more than 90 percent of the national corn crop was from hybrid seeds.
- Iowa harvested 2.36 billion bushels of corn in 2011, more than the entire U.S. corn harvest of 1935.
- Once staples of American farms, horse and mule populations fell from 18.7 million in 1930 to 3.1 million in 1960, after which the statistic was discontinued.

“Whether you need them for research or are just curious about our country’s farming history, these historic volumes are a valuable addition to the official statistical literature available to the public,” Clark said.

Source: *Progressive Forage Grower Wednesday, 31 July 2013 — From NASS news release*

MOBILE APP TRANSLATES PER BALE TO PER TON PRICE

Using app, horse owners can figure most economical buys

If you sell hay to the horse market, you might want to let your customers know about a recently released mobile phone app. It translates a per-bale price into a per-ton price. The Hay Price Calculator application was developed by University of Minnesota Extension equine specialist Krishona Martinson in cooperation with researchers from around the country.

Many horse owners buy hay by the bale, she says. But, in many cases, buying and comparing different hay types by calculating a per-ton price is probably more economical. “Buying by the bale can make it difficult to compare prices between and within bale types,” Martinson says. “A \$4 small-square bale that weighs 35 lbs actually costs more per ton than a \$5 bale that weighs 50 lbs, for example.”

Horse owners can use the app to calculate per-ton prices for small-square, large-square and round bales of hay and other feedstuffs, like cornstalks and straw. Hay buyers must know the weights of bales to use the app accurately. It does not take nutritive values into account, she adds. “Ideally, the app will be used to compare prices of hay with similar forage nutritive values,” she says.

(SOURCE: *Hay & Forage Growers, eHay Weekly - August 27, 2013*)

FORAGE SEEDBED PREPARATION

Adapted from: PA Forage and Grassland News, Winter 2014

For a forage seed to have a chance of emerging and establishing, the seedbed must allow accurate seeding depth regulation and good seed-to-soil contact. Regardless of the seeding method (no-till, conventional tillage or broadcast) it is very important that seeding depth and seed-to-soil contact be a top priority.

Unlike most grain crops the amount of energy for germination and emergence in a forage seed is relatively small. For this reason, precision in the depth of planting of forages is extremely important. Planting forage seeds too deep can exhaust the energy reserves in the seed before the new seedling has emerged from the soil causing poor seedling establishment which can spell problems (increased weed competition, lower forage yields, and ultimately shorter stand life) for the stand. Ideally, forages should be planted about 1/4 inch deep. Planting depths greater than 1/2 inch will decrease forage seedling emergence as much as 50%.

In a tilled seedbed, firm soil is necessary to obtain accurate and consistent seeding depth. A fluffy or cloddy seedbed will make it extremely difficult to get good seed placement. Seed-to-soil contact is also important because it ensures that the seeds can absorb adequate water from the soil to germinate. Forage seeds generally need to absorb greater than 100% of their own weight in water before germination begins. Poor seed-to-soil contact slows water absorption and allows water to evaporate out of the seed. Good seed-to-soil contact requires a fine seedbed (no soil clods) and

can be improved with press wheels or cultipacking after planting.

So when you are working the field to plant forages remember that a firm seedbed is needed to regulate seeding depth and a fine seedbed maximizes seed-to-soil contact. Creating a firm and fine seedbed is the whole point of preparing the seedbed and the first steps to successfully establishing a great forage stand.

❖

IS YOUR FORAGE SEEDER CALIBRATION WASTING MONEY

*Adapted from: PA Forage and Grassland News,
Winter 2014*

❖

Now is the time to start thinking about and planning to check the calibration of your forage seeder.

Research has shown large differences between seeding rates of different varieties of alfalfa when seeded through the same seeder. Coated seed, flows easier than uncoated seed which results in higher seeding rates than expected (considering the reduction in seed numbers per pound because of the increased seed size associated with seed coating). The seeding rates of uncoated seed, ranged from 14 to 21 lb/acre without changing the settings on the seeder. While this range in seeding rates does surround the normally recommended alfalfa seeding rate (15 -18 lb/acre), the variation can be very expensive. If a farmer thought he was seeding 15 but was actually seeding 20 lb/acre the additional cost per acre for seed would be substantial.

The difference between variety seeding rate was attributed to small differences in seed size and shape. It is a general rule-of-thumb that a pound of alfalfa contains 220,000 seeds with a range from 196,000 to 224,000 seeds per pound. In addition, some seeds were slightly rounder and flowed through the metering device faster than other varieties. Recommended alfalfa seeding rates will normally result in 75 to 90 seeds per square foot. However, the range in seeding rates that was observed resulted in ranges from 70 to 105 seeds per square foot.

Unfortunately, varieties showed no consistent trends in variation. Therefore, seeder calibration is an important consideration when alfalfa varieties

are changed. This can be done rapidly by driving the seeder over a tarp spread on the ground, and counting the seeds that are dropped in a couple square foot areas on the tarp. Seeders which drop between 75 and 90 uncoated seeds per square foot are planting at recommended rates. Seeders should also be calibrated annually before starting to seed since slightly worn seed metering devices on the seeder can cause large changes in alfalfa seeding rate.

❖

Forage Bits is a publication of the Maryland-Delaware Forage Council. It is compiled and edited by Ben Beale, Agricultural Extension Educator-St. Mary's Co. and Richard Taylor, Extension Agronomist, University of Delaware. Please send any comments, questions or submissions to Ben at the St. Mary's Extension Office: PO Box 663, Leonardtown, MD 20650, fax 301-475-4483, phone 301-475-4484 or e-mail at bbeale@umd.edu

Newsletter Request Form

Name _____

Address _____

City _____

State _____ Zip _____

Send to:

Ben Beale, UME St. Mary's County, PO Box 663
Leonardtown, MD 20650

Join the Maryland-Delaware Forage Council

To join the MDFC, send your name and a check for \$15, payable to the Maryland-Delaware Forage Council, to Kenneth Stonesifer, 141 Hilltop Drive, Chestertown MD 21620. The Maryland-Delaware Forage Council is an affiliate of the American Forage and Grasslands Council. Members receive two publications-the Forage Leader and the Hay and Forage Grower.

