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## Forage News [2005-10]

University of Kentucky Department of Plant and Soil Sciences

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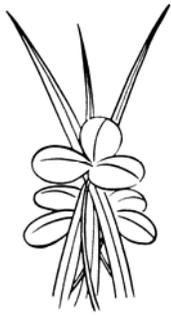
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# FORAGE NEWS

For more forage information, visit our UK Forage Extension Website at: <http://www.uky.edu/Ag/Forage>

**OCTOBER 2005**

Garry D. Lacefield and S. Ray Smith, Extension Forage Specialists • Christi Forsythe, Secretary  
**KENTUCKY AGRICULTURAL INCOME TOPS  
FOUR BILLION DOLLARS**

Cash receipts for Agricultural products in Kentucky exceeded four billion dollars in 2004. According to the National Agricultural Statistics Service, 2004 Kentucky Agricultural Income was \$4,126,185,000. Total livestock receipts were \$2,738,502,000 and income from crops was \$1,387,683,000. (SOURCE: USDA, NASS, Kentucky Field Office, 8-31-05)

## NEW TALL FESCUE BOOK

A new "first of its kind" Tall Fescue book is now on-line. In fact, it will not exist in hard copy. Dr. Henry Fribourg from Tennessee and Dr. David Hannaway from Oregon State University have done a great job in putting together an international team of experts and assembled the "state of the art" information on Tall Fescue. Although this continues to be a work in progress, I encourage you to visit the website and check it out. The website address is:

<http://forages.oregonstate.edu/is/tfis/monograph.html>

It is also linked on our website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage).

## ALFALFA HAY FOR HORSES: MYTHS AND REALITIES

The following was excerpted from the publication "Alfalfa – high-quality hay for horses" written by Glenn Shewmaker, Dan Undersander, Laurie Lawrence and Garry Lacefield. The complete text is available on our website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage):

**Myth:** The excess protein in alfalfa hay will damage the kidneys.

**Reality:** Normal healthy horses can metabolize and excrete the extra protein in alfalfa hay without damaging their kidneys. However, horses consuming high-protein diets may drink more water and produce more urine as part of the normal excretion process. All horses should have access to clean water at all times.

**Myth:** Alfalfa is too rich for horses.

**Reality:** As with any feed, the nutrient content of hay should be matched to the nutrient needs of the horse. Early-maturity alfalfa hay is very nutrient dense and is suitable for mares and growing horses. If fed to recreational horses, the intake of early-maturity alfalfa hay must be restricted. Late-maturity alfalfa hay is less nutrient dense and is suitable for horses with lower nutrient requirements.

**Myth:** The calcium content of alfalfa is too high, especially for young growing horses.

**Reality:** Calcium has been fed at more than five times the requirement without detrimental effects, provided the phosphorus level is adequate.

**Myth:** Alfalfa makes horses cough.

**Reality:** Any hay (alfalfa or grass) that contains dust or mold may make a horse cough. Horses should only receive hay that is free of dust and mold. Ventilation in the feeding area can greatly reduce the effect of dust in hay on horses.

**Myth:** Preservative-treated hay isn't safe for horses.

**Reality:** Most preservatives applied to horse hay contain organic acids that are the same as those found in the horse's gastrointestinal tract. Application of preservatives helps produce mold-free hay. Initially, some horses may prefer hay without preservative, but they are not given a choice, horses will consume the same amount of preservative-treated and non-treated hay.

## BUILDING HAY STORAGE STRUCTURES WITH AGRICULTURE DEVELOPMENT BOARD'S COST SHARE PROGRAM

October usually means finishing up those final harvest chores and at last have all the crops "in the barn".

Nowadays that phrase has a new meaning to Kentucky hay producers. Up until just 3 or 4 years ago, a tremendous amount of Kentucky hay was baled in round bales and stored outside. That outside storage usually meant a loss of quality and quantity of somewhere between 30 and 65% of the total hay crop.

Now, however thanks to the Agriculture Development Board (ADB), many Kentucky hay producers have taken advantage of ADB's cost share program for building new hay storage structures or renovating existing structures for hay storage. Our losses in these type of structures will range somewhere from 2 to 5%.

Current estimates have over \$14,000,000 allocated toward improving hay storage facilities for Kentucky producers. Different counties have different levels of funding and some of the funds have already been exhausted in some counties. However, please contact your local county agent to see if any funds remain in your county.

It is certainly easy to conclude that hay storage cost share is a win-win proposition for Kentucky producers. By reducing our losses so dramatically, we can either produce less hay or feed more animals. (Tom Keene, UK Hay Marketing Specialist)

## KFGC FALL BOARD MEETING

The KFGC board will have their annual fall board meeting November 1. If you have any items that you would like to bring to the board, contact one of the following board members before the meeting. Remember that an organization is only as strong as the sum of its parts. Let us know what you are thinking.

## AFGC ANNUAL MEETING - SAN ANTONIO MARCH 10-14

The annual AFGC meeting will be held in San Antonio March 10-14. It will be a great conference this year. If you are a hay producer then submit a sample for the hay contest. Go to [www.afgc.org](http://www.afgc.org) and look under "Contests" for full details. Winners receive a plaque and a cash award. You do not have to be at the conference to win. If you are a county agent, consider giving a poster presentation of your on-farm research or innovative forage programs in your county. Check the above website for full details.

## LATE FALL FERTILIZATION OF COOL SEASON GRASSES

When most of us think of nitrogen fertilization of cool season grass pastures and hay fields we think of early spring and late summer. Some producers are now taking a cue from turfgrass professionals who routinely apply nitrogen in the late fall (late October and November in KY). Obviously we don't care about late season green color in forage stands, but the advantages of increased grass density (more tillering), improved weed competition, and early spring green-up are just as important in a forage stand as on a golf course or lawn.

The goal is to apply light N rates after grass growth has slowed, but when the leaves are still green. Nitrogen applied in early fall (September and early October) can stimulate excess growth during the time of the year that stands should be preparing of winter. On the other hand, N applied late fall is taken into the plant and improves root growth, tillering, and energy storage.

Current turf recommendations call for 60 lbs/acre for late fall fertilization. This rate is fine for forage stands, but a more economic rate of 30 to 40 lbs/acre is still sufficient to increase tillering and stand density. Nitrogen is high this year, but consider the many advantages of a light rate of late fall N when determining you pasture and hay fertilizer needs. (A.J. Powell and S. Ray Smith, *UK Turf Extension and Forage Extension*, respectively)

## PRUSSIC ACID POISONING

The primary cause of hydrocyanic (prussic) acid poisoning in domestic animals is the ingestion of plants containing this potent toxin. Cyanide-producing compounds (cyanogenic glucosides) occurring in living plant cells are converted to prussic acid when cells are crushed or otherwise ruptured.

The prussic acid potential of plants is affected by species and variety, weather, soil fertility and stage of plant growth. Plants of the sorghum group and leaves of wild cherry trees have a potential for producing toxic levels of prussic acid. There are wide differences among varieties. Some of the sudangrasses, such as Piper, are low in prussic acid. Pearl millet is apparently free of prussic acid in toxic amount.

**Cause:** Prussic acid is one of the most potent toxins in nature. As ruminants consume plant materials containing cyanide-producing compounds, prussic acid is liberated in the rumen, absorbed into the bloodstream and carried to body tissues where it interferes with oxygen utilization. If toxin is absorbed rapidly enough, the animal soon dies from respiratory paralysis.

**Symptoms:** When lethal amounts are consumed, dead animals may be found without visible symptoms of poisoning. Symptoms from smaller amounts include labored breathing, irregular pulse, frothing at the mouth and staggering.

**Prevention:** Forage species and varieties may be selected for low prussic acid potential. The risk from potentially dangerous forages may be reduced by following certain management practices.

1. Graze sorghum or sorghum cross plants only when they are at least 15-18 inches tall.
2. Do not graze plants during and shortly after drought periods when growth is severely reduced.
3. Do not graze wilted plants or plants with young tillers.
4. **Do not graze for two weeks after a non-killing frost.**
5. **Do not graze after a killing frost until plant material is dry (the toxin is usually dissipated within 48 hours).**
6. Do not graze at night when frost is likely.
7. Delay feeding silage 6 to 8 weeks following ensiling.
8. Do not allow access to wild cherry leaves whether they are wilted or not. After storms always check pastures for fallen limbs.

(SOURCE: *Forage Related Cattle Disorders, UK Ext. Pub. ASC-57*)

## COMPARATIVE LAMB AND HEIFER GROWTH RATES ON NON-TOXIC AND ENDOPHYTE- FREE TALL FESCUE

Tall fescue infected with endophyte has detrimental effects on livestock. Although the usual option for avoiding endophyte toxicity is use of endophyte-free cultivars, these stands frequently become re-infested with toxic-endophyte fescue. A new option for avoiding toxicity is the use of non-toxic endophyte tall fescue. Non-toxic endophytes are strains of endophyte that have negligible production of the toxic alkaloids but are identical in every other respect. Currently the tall fescue cultivar Jesup with a non-toxic endophyte is being marketed as MaxQ tall fescue. The objectives of this study were to establish E- and MaxQ pastures to quantify re-infestation by toxic endophyte and measure the performance of livestock grazing these treatments. We found a low level (7.3%) of toxic endophyte in endophyte-free tall fescue over 3 yr, and no toxic endophyte in MaxQ. We found similar lamb and heifer growth rates on both pastures. We concluded that non-toxic endophyte tall fescue was a valid option for livestock production in regions in Ohio that were dominated by toxic endophyte tall fescue. There was some evidence that MaxQ pastures are less likely to show re-infestation by toxic endophyte tall fescue than E- pastures. (SOURCE: D.J. Barker, R. Little, D. Samples, C.D. Penrose, R.M. Sulc, J.S. McCormick, T.L. Bultemeier, M.R. Burgess, *The Ohio State University, Columbus, OH. IN: 2005 AFGC Proceedings, Bloomington, IL*)

## UPCOMING EVENTS

OCT 26-27 Kentucky Fall Grazing School, Scott County Extension Office, Georgetown

2006

JAN 25-26 Heart of America Grazing Conference, Cave City Convention Center

FEB 23 26<sup>th</sup> Kentucky Alfalfa Conference, Lexington



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October 2005