



# FORAGE NEWS

Research & Education Center  
Princeton, KY 42445

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

## July 2010

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### KENTUCKY WINS AWARDS AT RECENT AMERICAN

#### FORAGE AND GRASSLAND COUNCIL ANNUAL MEETING

Undergraduate students from Kentucky Universities and Colleges swept the Forage Bowl Competition. The University of Kentucky team of Krista Cotton and Kelly Vaughan took first place. Western Kentucky students Christopher Gerald, Morgan McGwire, and Marie Weldon placed second and the Berea College team of Lisa Baxter and Shauni Nichols placed third.

Kentucky hay producers, Clayton and Christopher Gerald, won the following four awards in the Hay Contest with some of the highest quality hay and baleage in the contest. When you see Clayton or Christopher make sure you congratulate them.

1<sup>st</sup> Place – Alfalfa Baleage - 23% CP, 31% ADF, 40% NDF

1<sup>st</sup> Place – Alfalfa Hay - 22% CP, 32% ADF, 38% NDF

1<sup>st</sup> Place – Perennial Cool Season Grass Hay - 18% CP, 37% ADF, 51% NDF

2<sup>nd</sup> Place – Grass/Legume Hay - 18% CP, 38% ADF, 50% NDF

Caldwell Willig gave an excellent presentation in the National Forage Spokesperson contest summarizing his farming operation in Oldham County.

Each AFGC conference recognizes outstanding master and PhD students or recent graduates at the Young Scientist Competition. Each student writes a research paper and gives a presentation on their graduate research. University of Kentucky students took all three top spots. We want to congratulate Laura Schwer (Masters Student with Dr. Ray Smith) for placing first. Dr. Jennifer Johnson (recent PhD graduate with Dr. Glen Aiken) was a close second place and Kristen Herbst (Masters Student with Dr. Bob Coleman) was third place.

We all know that Kentucky is a beautiful state and we are proud to report that Christopher Gerald won two awards in the AFGC annual photo contest, 1<sup>st</sup> Place in the "Production" category and 3<sup>rd</sup> Place in the "General" category.

### KENTUCKY HOST INTERNATIONAL MEETING

Scientists from around the World met in Lexington June 28-July 1, 2010 to attend and participate in the Joint Meeting of the International Symposium on Fungal Endophytes in Grasses and Mycological Society of America. The meeting was held at the Hilton Hotel in Lexington. During the week, scientists reported on the latest research findings on endophytes including the "Entophyte in Tall Fescue" which was of most interest and importance to Kentucky.

### DR. SMITH BECOMES PROFESSOR SMITH

Forage News co-editor and Extension Forage Specialist, Dr. Ray Smith, was promoted to Full Professor in the Department of Plant and Soil Sciences. This milestone represents academic's highest level of promotion. Congratulations Ray – we are proud of and for you!

### TOM KEENE RE-ELECTED TO FORAGE FOUNDATION EXECUTIVE COMMITTEE

Mr. Tom Keene, UK Hay Marketing Specialist was unanimously re-elected as Treasurer of the National Forage & Grassland Foundation at their annual meeting held in Springfield, Missouri. Tom has served on the board of directors and as treasurer. Congratulations Tom!

### GETTING THROUGH THE SUMMER SLUMP

The second 2010 Kentucky Grazing School will be held August 9-10 at the Woodford County Extension Office and UK Animal Research Center in Versailles. The grazing school focus will be on extending the grazing season, the value of shade and water, and summer grazing options. Participants will also work together in designing and building temporary pastures and watering systems, calculating pasture production, and determining stocking rates. Participants will learn how to design a rotational grazing system for their farm, and receive classroom instruction on all aspects of forage and livestock production related to grazing systems. Go to our UK Forage Website for more information and a registration form ([www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage)), or contact Adam Probst if you have any questions [adam.probst@uky.edu](mailto:adam.probst@uky.edu) or 859-257-0597. (SOURCE: Adam Probst, UK Master Grazer Program)

### NATIONAL HAY ASSOCIATION CONVENTION

The National Hay Growers will return to Kentucky in September for their 115<sup>th</sup> Annual Convention. It will be held September 1-4, 2010 at the Griffin Gate Marriott Resort in Lexington. David Brumfield (Brumfield Hay & Grain – Lexington) is NHA President and Program Chair. David and his group are hard at work putting together an outstanding conference. The conference will feature several Kentucky speakers including Hart County Hay Producer Mr. Clayton Gerald.

### HEART OF AMERICA GRAZING CONFERENCE COMING TO KENTUCKY

The 10<sup>th</sup> Heart of America Grazing Conference will return to Kentucky January 25-26, 2011. The conference will be held at the Hurstborne Holiday Inn in Lexington. Speakers from five different states will cover cutting edge topics relating to grazing. More details will be forthcoming in future issues of Forage News and on our website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage)

### CLOVER COMING UP IN ALFALFA FIELDS

We have had several calls concerning clover coming up in alfalfa fields. The concern of the grower is that the alfalfa seed had clover mixed with it. Clearly this not the case since field inspections during seed production would have ensured alfalfa seed fields clean of clover and, more importantly, none of the alfalfa seed cleaning/bagging plants also handle clover.

It is important to recognize that clover seed can lay dormant in a field for 15 or more years and then, with the right environmental conditions, will come out of dormancy. We saw this same "clover bloom" in alfalfa fields about 12 years ago.

While the source of the clover seed can be difficult to determine, there are several clues that can help determine whether or not alfalfa seed and clover were planted together. Clearly the clover was not seeded with the alfalfa if:

- 1) Some emerging clover plants are in between the seeded rows, if a drill was used for seeding.
- 2) Is any clover coming up in areas the seeder did not cover, e.g. on corners, edges or other skip areas of the field? With either a billion seeder or drill,
- 3) Is clover coming up on the edge of the field in areas not seeded?

4) If the farmer seeded more than one field, is clover coming up on all fields?

Usually one or more of the above will indicate that the clover was not seeded with the alfalfa. (SOURCE: Dan Undersander, Forage Agronomist, University of Wisconsin)

### SELECTING SUMMER ANNUAL FORAGE GRASSES

Will your hay and forage supply be adequate this year? Maybe summer annual grasses can help, but which one should you plant? Stick around.

Are you planning to plant a summer annual grass, maybe to boost cattle numbers or to build hay supply? Which one will you plant? It can be confusing because there are six different types of major summer annual forage grasses — sudangrass, sorghum-sudan hybrids, forage sorghum (which we often call cane or sorgo), foxtail millet, pearl millet, and teff. Each one has its own strengths and weaknesses. So base your choice primarily on how you plan to use it.

For example, do you want pasture? Then use sudangrass or pearl millet. Both are leafy, they regrow rapidly, and they contain less danger from prussic acid poisoning than other annual grasses.

What if you want hay or green chop? Then select sorghum-sudan hybrids or pearl millet because they yield well and they have good feed value when cut two or three times. On sandy soils, though, foxtail millet may be a better choice for summer hay. It dries fast, doesn't regrow after cutting, and handles dry soils well. Cane hay is grown in many areas and produces high tonnage, but it's lower in feed value and dries more slowly after cutting than the hybrids or millets. Or you could choose teff for a really soft, leafy, high quality horse hay.

Maybe you plan to chop silage. Then choose the forage sorghums, especially hybrids with high grain production. They can't be beat for tonnage or for feed value.

See, it's not so confusing after all, is it? Simply select the one that is best adapted to the way you plan to use it. And, of course, pray for rain since even these grasses won't grow without some moisture. (SOURCE: Bruce Anderson, University of Nebraska)

### ABUNDANCE OF CLOVER IN 2010

As Extension Forage Specialists we have been asked to comment on factors that have contributed to the abundance of clover in 2010. We have been in regular contact with livestock producers and industry throughout the state and we have heard about and seen an overabundance of white clover in many pastures this year. This has raised concerns about bloat and a number of farmers have experienced death losses due to bloat.

There are several reasons for the high percentage of white clover this year. Ironically the drought years of 2007 and 2008 set the stage. During those years many pastures in Kentucky were overgrazed due to restricted plant growth and they simply could not sustain the number of cattle on most farms. Even the pastures that were not overgrazed had thin stands as many pasture plants died due to drought. Simply put, there just was not enough forage to support the normal number of cattle raised on Kentucky farms. When normal precipitation returned during the fall of 2008 and spring of 2009 white clover that had been dormant in the soil for years had bare soil and perfect conditions to germinate and grow. Throughout 2009 clover continues to germinate and grow leading to a higher than average abundance. Additionally, the abnormally cool moist conditions during 2009 were perfect for white clover to spread due to aboveground runners or stolons. Ample precipitation continued during the fall of 2009 and spring of 2010 allowing additional seed to germinate and more spreading to occur and clover seemed to take over many pastures.

In short, the clover abundance of 2010 goes back 4 years with bare ground caused by drought in 2007 and 2008, and above average precipitation and cool growing conditions during 2009 and 2010. And although clover is very high quality and desirable as forage, too much clover can lead to bloat in grazing cattle.

### HEAT DAMAGE TO MOIST HAY

Did you bale some first cutting hay a little tough due to high humidity and frequent rain showers? If so, your hay could mold, spoil, or suffer heat damage. Let's deal with this problem in a moment.

Excessive heat can cause hay to be less digestible, especially the protein. Heat damaged hay often turns a brownish color and has a

sweet caramel odor. Cattle often eat this hay readily, but because of the heat damage, its nutritional value might be low.

Heat produced by a bale basically comes from two sources. Some heat is produced by biochemical reactions from the plants themselves as hay cures. This heating is relatively minor and rarely causes hay temperature to rise above 110 degrees. Very little damage occurs to hay that gets no warmer than 110 degrees.

Most heat in hay, though, is caused by the metabolic activity of microorganisms. Millions of these microbes exist in all hay and they thrive when extra moisture is abundant.

As the metabolic activity of these microbes increases, the temperature of your hay rises. Hay with only a little excess moisture probably will get no warmer than 120 degrees. Wetter hay, though, quickly can get as warm as 150 degrees. Hay that gets this warm nearly always becomes discolored, and nutritional value can be very low. If hay temperatures rise above 170 degrees, chemical reactions can begin to occur that produce enough heat to quickly raise temperatures over 400 degrees and cause fires.

We all bale hay a little too wet from time to time. Be wary of the fire danger with wet hay and store it away from buildings and other hay just in case. Also, remember the lower feed value that is caused by heat damage in wet hay. Get a thorough forage test and then use this hay accordingly. (SOURCE: Bruce Anderson, University of Nebraska)

### THE ECONOMICS OF GRAZING, ORGANIC, AND CONFINEMENT DAIRY FARMS

Since many non-organic farmers are asking how the financial performance of organic farming compares with non-organic systems, a nine-year simple average cost of production summary was compiled for Wisconsin organic, grazing and confinement herds.

Several measures should be examined when analyzing financial performance and economic competitiveness because no single measure tells the whole story. However, one usually is limited to just a few measures to explain the results. The primary measure used to illustrate in this report is net farm income from operations (NFIFO) as a percent of farm income or revenue based on accrual adjusted income and expenses. A similar measure is used in the non-agricultural business world.

The use of this measure is driven mainly by two factors. The organic milk price was usually much higher than the milk price received by confinement and grazing herds. The pounds of milk sold per cow by confinement herds was 30% and 40% more per cow sold by grazing and organic herds, respectively.

The following table shows the range in observations, herd size, NFIFO/\$ income and nine-year (1999-2007) simple average NFIFO/\$ income for organic, grazing, small confinement and the average Wisconsin confinement group. Although the 2008 data summary has not been completed, 2008 performance should be similar to 2007.

	Farm # Range	Ave. Herd Size Range	NFIFO/\$ Income	NFIFO/\$ Income Range
Graziers	21-43	61-68	25.52%	19.23-31.86%
Organic	6-17	48-64	20.91%	13.53-26.26%
Small Confinement	217-157	62-63	18.27%	7.76-24.93%
All Confinement	581-660	96-133	14.26%	6.99-18.21%

(SOURCE: Tim Kriegl, Univ. of Wisconsin-Ext., IN Proceedings GLCI Conference, Reno, NV, Dec. 2009)

### UPCOMING EVENTS

AUG 9-10 Kentucky Grazing School, UK Animal Res. Ctr., Versailles  
SEP 1-4 National Hay Association Annual Conference, Lexington  
SEP 14 KFGC Field Day, Barren Co., KY  
SEP 23 UK Beef Bash, UK Res. & Education Center, Princeton  
**2011**  
JAN 25-26 Heart of America Grazing Conference, Louisville  
FEB 24 31<sup>st</sup> Kentucky Alfalfa Conference, Lexington

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