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Forage News [2001-06]

University of Kentucky Department of Plant and Soil Sciences

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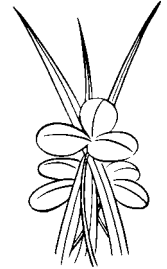
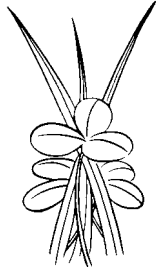
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FORAGE NEWS



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June 2001

Garry D. Lacefield and Jimmy C. Henning, Extension Forage Specialists • Christi Forsythe, Secretary

MARE REPRODUCTIVE LOSS

SYNDROME REPORT

Sample Testing Summary

Results and Conclusions

1. White clovers were not a source of cyanide due to stress and frost on problem farms.
2. Ergot-type alkaloids from bluegrass or orchardgrass were not the cause of early fetal loss (EFL) or late term abortions (LTA).
3. Tall fescue alkaloids were associated with all fields where LTA were observed (although this was a small number of fields). Therefore, there is possible involvement with endophyte-infected tall fescue and the LTA problems. However, the symptoms of LTA observed in 2001 are unlike any known case of fescue toxicosis. Therefore, tall fescue alkaloids alone cannot be responsible for the LTA in 2001.
4. It is unlikely that pasture mycotoxins from *Fusarium* were involved in EFL or LTA. This conclusion is based on HPLC results from the Trilogy Laboratory in Missouri. However, testing is ongoing to fully test the early samples that tested positive for *Fusarium* mycotoxins using the ELISA based assays.
5. Ten Kentucky hay samples baled before the rain on May 6 were tested for *Fusarium* mycotoxins. No *Fusarium* mycotoxins were found in any of these samples. It is, therefore, highly unlikely that properly cured hay from first or subsequent cuttings in Kentucky will cause any *Fusarium* mycotoxin problems in horses.
6. Because of the possible presence of eastern tent caterpillars in first cuttings of hay, producers should cull any hay made from fields that either had significant numbers of wild cherry trees in the proximity.
7. There is an extremely close association between the presence of wild cherry trees, the presence of the eastern tent caterpillar in very high numbers, and both EFL and LTA. Therefore, this wild cherry/ETC complex has to be considered a leading suspect in the cause of the MRLS in 2001. This conclusion is strengthened by the finding that previous outbreaks of EFL (1979-1981) were also correlated with high numbers of eastern tent caterpillars.

Recommendations for Horse Producers for Pasture

It should be considered safe to turn horses back out on to pasture. The following recommendations should be followed to minimize problems.

1. If not done already, mow pastures to dislodge any larvae or caterpillar excrement from the leaves.
2. Do not confine horses in small areas that are surrounded by wild cherry trees.
3. An extra level of safety can be achieved by using temporary fence posts and polytape fencing to skirt off fence line areas next to high numbers of wild cherry trees.

Hay Recommendations

1. *Fusarium* mycotoxins were not found in any first cutting hay made before May 6. This hay should be a good measure of the *Fusarium* mycotoxins present on forage across Kentucky. Hay producers may have to have their hay tested for mycotoxins to satisfy the needs of their clients. This test must be done by a laboratory using the correct procedures. Please contact Jimmy Henning (859 257 3144, jhenning@ca.uky.edu) if you need more information about the proper labs and tests to run.
2. Hay fields surrounded by cherry trees should be scouted for the presence of larvae or cocoons prior to cutting. First cuttings of hay may have to be culled due to the potential for caterpillar larvae or cocoons. This decision will have to be made by the producer on a field by field basis. If in doubt, we recommend not feeding hay made from these suspect fields.
3. Future cuttings from these fields are considered to be safe because there would be no larvae or cocoons present. More information on the life cycle of the eastern tent caterpillar, see the following URL: <http://www.uky.edu/Agriculture/Entomology/entfacts/trees/ef423.htm>

For the latest information on the Mare Reproductive Loss Syndrome, see the UK College of Agriculture web site: <http://www.uky.edu> (Jimmy C. Henning - University of Kentucky Department of Agronomy)

AERATING Pasture and/or Hay Fields

We have received many inquiries over the past few years about "Pasture Aeration". We have shared limited data in past issues of Forage News. During the American Forage & Grassland

Conference, three papers were presented on this subject. Below are summaries of their results:

Aerating Bahiagrass Hay Fields—Are There Any Benefits?—

--Aeration is a means of alleviating soil surface compaction thus increasing water infiltration and improving forage production. Many livestock producers in Southeast Louisiana use a tractor-pulled spike-tooth aerator to provide soil aeration on perennial pastures and hay fields. This implement is also utilized to establish sod-seeded cool season annual forages. Limited research data has generally been response neutral with some research showing increased forage production while other work has shown no or negative responses to forage yields. Forage producers mistakenly utilize aeration to compensate for mismanagement. This study was undertaken to evaluate the effect of the spike-tooth aerator on an established stand of bahiagrass. The data were analyzed for forage yield and quality factors. Aeration improved forage yields by 25 lb. per acre but had little or no effect on CP concentration, NDF, and IVTD. In this study, aeration had no significant effect on forage yield and quality factors. Results suggest that aerating bahiagrass hay fields provide little benefit to producers and is likely not economically viable. (J.E. Devillier, E.K. Twidwell, D.D. Redfearn, and A.F. Guttzeit, Jr., Louisiana State Univ. & Oklahoma State Univ., IN AFGC Proceedings, Vol. 10, 2001)

Effect of Fall Soil Aeration on Bermudagrass Hay Yield—

The use of aeration implements is widely promoted in Arkansas as a means to improve forage production by reducing soil compaction and improving water infiltration into the soil. However, little objective information is available to help producers make assessments regarding the economic value of this practice. Most information available regarding field aeration is from promotional testimonials offered by aeration implement manufacturers. Few controlled side-by-side comparisons have been made and fewer replicated trials have been conducted to determine the effect of soil aeration on forage yield. Replicated experiments were conducted in two bermudagrass fields in central Arkansas to determine effect of field aeration during fall on hay yield during the following season. Total hay yield was lower in aerated field plots than in non-aerated in one experiment and was not significantly different in aerated plots compared to non-aerated plots in a second experiment. Based on results of these experiments, use of field aerators is not an effective method for improving hay production under conditions of these studies. (J. Hawkins, J.A. Jennings, M. Andrews, G. Huitink, and S. Gadberry, Coop. Ext. Service-Univ. of Arkansas, IN AFGC Proceedings, Vol. 10, 2001)

The Effect of Spike-Tooth Aeration on Tall Fescue Yield—

Over the last several years, spike-tooth aerators have been promoted as a tool to increase the yield of grass pastures and hayfields across the Southeast. A two-year research project was conducted at two locations in Tennessee to evaluate the effect of aerators on the yield of tall fescue. At the Knoxville Experiment Station (east Tennessee) and the Middle Tennessee Experiment Station (southern middle Tennessee) tall fescue plots were aerated either once in spring or before and after first harvest. Plots were fertilized according to Extension service recommendations, and plots was harvested when forage height reached 8 to 10 in. Results from both locations showed that aeration had no effect on tall fescue yield. During 1999 in Knoxville, summer rainfall was more than 200% above the 3-yr average. Any improvements in water infiltration and decreased soil compaction should have resulted in increased yield from the growth during that period. However, there was no difference in dry matter yield due to aeration during this period. Results from this study indicate that using a spike-tooth aerator on tall fescue does not produce any measurable benefits. (G. Bates, P. Denton, L. Ellis and R. Thompson, Univ. of Tennessee, IN AFGC Proceedings, Vol. 10, 2001)

KFGC SUMMER FIELD DAY SET FOR JUNE

19

Mark Tuesday June 19 as the day for the KFGC Summer Field Day, beginning at 4 PM Central. The field day will feature the grazing system in place on the farm of Jerry and Mary Rich, near Tompkinsville in Monroe County (Directions below).

Program

- 4:00 Registration and visit trade show.
- Stop1 Using new and different forages to extend the grazing system. *Dr. David Ditsch*
- Stop 2 Water development for grazing systems. *Ken Johnson*
- Stop 3 Weed control in pastures and hayfields. *Dr. J.D. Green*
- Stop 4 Getting cows fed and bred. *Dr. Les Anderson*
- Stop 5 Taking the next step in your grazing system. *Dr. Jimmy Henning*

Ribeye steak sandwiches will be served at the end of the field day, compliments of the Kentucky Forage and Grassland Council, the Monroe County Conservation District, and the Monroe County Extension Service.

Directions: Take Highway 163 North from Tompkinsville for 6 miles. Turn west on 678 and follow the signs.

MONROE COUNTY HAY SHOW AWARDS

John Nowak, a hay producer from Christian County, won the legume-grass class at the American Forage and Grassland Council's National Hay Show and that hay was selected as one of the Best of Show Awards. CONGRATULATIONS JOHN!!!

MAILING LIST UPDATE REMINDER

We want to remind you that the **July 1 deadline** is fast approaching. If you have an e-mail address we would like to send this newsletter to you electronically. If you do not have e-mail and would like to continue receiving this newsletter, please fill out the form which was provided with the May issue of Forage News and return as soon as possible. If you do not have that form, please send your name and address to Christi Forsythe, U.K. Research & Education Center, P.O. Box 469, Princeton, KY 42445; E-MAIL cforseyth@ca.uky.edu; or FAX 270-365-2667 requesting that your name remain on the mailing list. Beginning with the July issue, only those persons who have furnished either their postal mailing address or e-mail address will receive further mailings of this newsletter. All county Extension offices in Kentucky will receive an e-mail version unless you specifically request that we send you a copy through the mail.

UPCOMING EVENTS

- JUN 19 KFGC Grazing Field Day, Monroe County
- JUN 12-14 Grazing School, Mason County
- JUL 19 UK Field Day, Quicksand
- OCT 16-18 Grazing School, Princeton
- NOV 27 Kentucky Grazing Conference
- 2002
- FEB 21 XXII Kentucky Alfalfa Conference, Cave City

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