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FORAGE NEWS



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August 1999

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

CHOOSE VARIETIES WISELY

"Moisture permitting", many Kentucky farmers will be seeding cool-season grass pasture or hay fields during the next six weeks. Many factors are important in successful establishment, including: soils, fertility, moisture, quality seed, seed-soil contact, pest control and varieties. Before choosing a variety of Tall Fescue, Orchardgrass or Timothy, check the U.K. Forage Variety Test Results. In addition to variety trials conducted for yield and reported annually in U.K. Variety Trial Progress Reports, U.K. also tests many grass varieties under grazing conditions. Results of the Cool-Season Grass Grazing Tolerance Varieties are available in Progress Report Number 416.

ECONOMICS OF BALED SILAGE

Over 600 people attended the University of Kentucky Agronomy/Horticulture Field Day at Spindletop on July 15. The Forage Tour featured four stops regarding grass breeding, red clover varieties, grazing variety trials and baled silage. The following comments were made by Dr. Mike Collins at the Round Bale Silage Stop:

Over more than 20 trials during the past 5 years, the round bale silage system (when properly done) results in storage losses that are consistently below 5% of the initial crop dry matter. This compares with typical losses for hay rolls of about 25% when stored outside on the ground without covers.

As far as economics goes, the baled silage system costs about \$5 per bale to do. The cost is about \$3 per bale for stretch wrap plastic and about \$2 per bale for the machine. This would be for a platform-type wrapper with loader arm which costs about \$12,000. For smaller producers where the total number of bales might be 300 or so, it might be more economical to go the custom route. Custom wrapping rates we are hearing are \$6-8 per bale including the plastic.

Another big consideration is the higher quality and palatability of baled silage compared with hay. With alfalfa, we found that silage baled at 50% moisture had 22% crude protein just after it was baled. Hay left from the same field till it reached 18% moisture had lost

enough leaf to reduce crude protein to 18%. Well preserved silage also reduces the loss in quality during storage compared with hay stored outside.

I think baled silage even has some advantages over dry hay stored in a shed. One of the major benefits of the very short field wilt needed for silage is that it allows us to harvest the crop very close to the optimum maturity stage for the type of livestock being fed. With hay, producers usually end up waiting one or two weeks (or more) beyond the optimum maturity stage trying to avoid rain damage on the crop. With silage about the only thing that can keep you out of the field would be conditions so wet that ruts or soil compaction was a big concern.

Of course, these statements assume well made silage. The biggest factors in insuring success seem to be:

- (1) 4 layers of plastic (2 are not adequate),
- (2) bales need to be wrapped on the same day they are baled and not left to the next day,
- (3) good tight bales that are somewhere between about 45 and 65% moisture, and
- (4) don't make holes in the bale once it is wrapped (wrap at the storage area or more with a squeeze unit). (Mike Collins)

STOCKPILING BEGINS IN AUGUST

Nutrients in the form of pasture are usually the cheapest that we can provide to our livestock in Kentucky. Nutrients in the form of pasture are often only ¼ to ½ the cost of nutrients in hay or silage. Practices such as "stockpiling" to extend our pasture through late fall-early winter can help extend our pasture season, reduce the amount of hay needed and lower the cost for wintering cattle.

Studies at Ohio State University have shown that amount (cost) of hay fed is usually a good predictor of potential profitability in the average beef cow herd. Workers in Missouri used stockpiled tall fescue to extend the grazing season and reduce the amount of hay fed. In the studies, grazing stockpiled tall fescue reduced annual feed cost by \$50/hd.

Stockpiling in its simplest definition is growing pasture during August-October for later use in November-January. In Kentucky, we have two near ideal grasses for stockpiling, Kentucky bluegrass and tall fescue.

Nitrogen and water are keys to success when stockpiling grasses. Apply nitrogen (40-80 pounds) in mid-August on closely grazed or mowed tall fescue or Kentucky bluegrass pastures. Use other pastures on the farm during the stockpiling period. Once other pastures are used, move to the stockpiled fields. Kentucky data shows that if water is available during the stockpiling period, yields can be very good. Tall fescue can produce two tons of dry matter from mid-August to late November. Efficiency of 25 pounds of dry matter for each pound of nitrogen can be achieved when water is adequate.

To get the most from stockpiled pastures, use a temporary electric fence across the field dividing it so the area to be grazed first has a source of water and minerals. Once the area is used, move the wire and repeat the process. Missouri workers found that offering animals a three day vs. a 12-day supply of stockpiled pasture resulted in one-third more grazing days per acre.

DO DOMESTIC ANIMALS HAVE MINDS AND THE ABILITY TO THINK?

A Provisional Sample of Opinions on the Question

ABSTRACT: Faculty, staff, and graduate students in a number of departments, students in an undergraduate course, and some groups outside the university were polled to obtain their perceptions about whether domestic animals have minds, the ability to think, and differing degrees of intelligence (the surveys focused only on horses, cows, sheep, dogs, chickens, pigs, cats, and turkeys). A clear majority of all groups surveyed (except the Department of Zoology) said yes, they believe animals have minds, but a substantial number of those in animal sciences and zoology (17 to 25%) said no. A number of others in animal sciences, zoology, and philosophy (11 to 37%) refused to answer the question because the concept of mind was not defined. From 80 to 100% of respondents in other groups said yes to the question of minds. From 67 to 100% of all participants said yes, they perceive that animals have the ability to think, but a substantial number of animal scientists, zoologists, veterinarians, and English faculty said no, animals don't think (6 to 33%). On the question Do domestic animals differ in relative intelligence?, the responses varied from 88% in animal sciences to 100%. Surprisingly, when asked to rank different animal species by intelligence, there was a remarkable degree of similarity across all groups regardless of background; the overall ranking from highest intelligence to lowest was dog, cat, pig, horse, cow, sheep, chicken, and turkey. Most of the respondents believed that the possession of minds, thought, and intelligence were relevant factors in how animals should be treated and the prevalent concept was that we should not be cruel to animals, but should treat them humanely.

The results of this limited study suggest that a majority of the biological and social scientists surveyed

believe that animals have minds and mental capabilities. Therefore, the results don't agree with the claim by Rollin that most "respectable" scientists today don't agree with the statement by Darwin that "animal minds differ from human minds only in degree, not in kind." Furthermore, of the non-scientists surveyed, more than 80% perceive that animals have mental capacities. We believe that these results suggest that factors such as mental capacity should be important factors to consider in the development of new animal husbandry practices. (SOURCE: Davis and Cheek, *J. Anim. Sci.* 1998. 76:2072-2079)

AFGC LEADERSHIP CONFERENCE

Kentucky was well represented at the leadership conference sponsored by the American Forage & Grassland Council in Des Moines, Iowa July 21-23. Larry Jeffries, past President of KFGC and current president of AFGC, Jimmy Henning, KFGC Secretary and I attended along with about 30 others from across the U.S. The group discussed ways to improve state forage councils and do a better job of promoting forages. We came back with several ideas to try in Kentucky.

We also toured the Pioneer facilities in Johnston and ABI Alfalfa in Ames. Pioneer is using the most modern methods of genetic manipulation to develop new varieties of corn, soybean and alfalfa. Their Johnston campus is very impressive. At the ABI Alfalfa field test site in Ames, Warren Thompson and Jim Moutray showed how they are selecting alfalfa varieties under actual grazing conditions. Their new grazing varieties must be able to survive at least three years of almost continuous grazing. They are also tested for yield and disease resistance. (*Monroe Rasnake*)

UPCOMING EVENTS

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| OCT 12-14 | KY Grazing School, U.K. Research & Education Center, Princeton |
| OCT 31-
NOV 1 | American Society of Agronomy, Salt Lake City, Utah |
| 2000 | |
| FEB 24 | 20 th Kentucky Alfalfa Conference, Cave City |

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