

## **Need Forage? Check Out HayNet**

In response to the drought and shortage of forages for Pennsylvania farmers, Penn State has started a world wide web site to help locate forages. Penn State HayNet provides people wishing to sell or buy hay a free list of potential sellers and buyers. This WWW site can be accessed through your county extension office or directly via www.cas. psu.edu/docs/cashome/drought.

### **Fall Harvesting Alfalfa** After A Drought

Dry conditions this summer caused a shortage of forage throughout Pennsylvania and the eastern part of the U.S. Consequently, many producers who normally wouldn't consider a fall alfalfa harvest are rethinking the issue. Here are the basic things to consider when deciding to take a fall harvest or not.

Alfalfa harvest schedules which do not allow the alfalfa plant to flower once during the season, predisposes the plant to winter injury. However, in a drought year, alfalfa stores abnormal amounts of sugars in its crown and root. This generally improves its chances of surviving a fall harvest.

Older alfalfa stands are more likely to winter kill or suffer winter injury following a fall harvest than younger alfalfa stands.

Alfalfa varieties with moderate resistance to several diseases and sufficient winterhardiness have greater tolerance to stress from fall harvesting than less disease resistant or winterhardy varieties.

Adequate soil pH and fertility minimizes the risk of fall harvesting by allowing alfalfa plants to develop properly and be healthier.

Alfalfa on well-drained soils is less likely to suffer winter injury than alfalfa on poorly-drained soils.

Leaving six to eight inches of stubble when taking a fall harvest will reduce the risk of winter injury. Dr. Marvin H. Hall,

#### Penn State

#### **Preserving High Moisture Hay:** Is it Economical?

The following conclusions about the economics of using preservatives to store high-moisture hay were recently presented at the American Society of Agricultural Engineers.

1. Hay treatments with normal effectiveness (similar to propionic acid) must be applied at a total cost of less than \$7.26 per ton DM in order to provide economic return with limited use. When treating most or all hay, the cost must be less than \$3.63 per ton DM. If this treatment is used only when it prevents rain damage to the crop (considering perfect knowledge of future weather), the cost can be as high as \$21.79 per ton DM with a net economic gain. 2. Hay treatments with excellent effectiveness (losses in treated highmoisture hay are similar to dry hay storage losses) have a breakeven cost of \$8.17 per ton DM when used on most hay and up to \$13.62 per ton DM for limited use to reduce the

probability of rain damage.

3. Hay treatments with ideal effectiveness (eliminates all storage loss) provide breakeven costs of \$11 to \$16 per ton DM when applied to all hay. When the treatment is used on less of the hay, the cost can be as high as \$21 per ton DM and still result in a net economic gain.

4. The breakeven costs of a preservative of normal effectiveness cannot be greatly improved through realistic changes in management.

> C.A. Rotz, D.R. Buckmaster and L.R. Borton

#### **USDA-ARS** and Penn State **Fenceless Grazing**

Research being conducted at Oregon State University involves the use of radio transmitters and receivers to control livestock movement and distribution. The concept of the transmitters and receivers is similar to a shock collar used for training dogs. The cattle wear a radio receiver ear tag that is the size of a small transistor radio. When an animal approaches an area it is not supposed to be in it receives an audio signal. The animals soon learn how to stay within the invisible boundaries and avoid receiving the audio signal.

To date, research indicates that this technology has substantial potential in discouraging livestock use of riparian areas. The electronic ear tags have been shown to effectively change grazing patterns. Research suggests that this technique does not adversely stress animals.

The future use of this technology is encouraging. Fenceless livestock control has significant advantages to exclusion fencing particularly related to other uses of public lands (i.e., recreation and wildlife, esthetics, etc.). The advent of global positioning technology and its potential use in technology such as electronic diversion may open up even greater potential in the near future.

Dr. Tim DelCurto Oregon State

**Grazing Horses On Alfalfa** Sixteen yearling horses were grazed on alfalfa under two different grazing treatments. Eight horses were continually grazed on 5.2 acres and eight were grazed on a rotational system consisting of six paddocks of .9 acres each.

the continually grazed horses and 1.3 pounds per day for the rotationally grazed horses. No digestive disorders were detected in any of the horses. Results suggest that if managed correctly, moderate growth rate may be reached in yearling horses grazing alfalfa without additional supplementation. From visual observation, it is suggested that a controlled grazing system may be the most efficient method for forage utilization under the conditions of this trial.

D.W. Freeman and others at Noble Foundation

#### **Drought Doesn't Hurt PFGC** Hay Show

The drought of 1999 certainly reduced the amount of hay that was made in Pennsylvania, but you wouldn't have known it by looking at the number and quality of samples entered in the PFGC Hay Show at Ag Progress Days. The 137 samples in this year's show was seven more than entered last year. Many people who entered hay in this year's show commented that they didn't have much hay but what they had was very good quality. They attributed the high quality to ideal weather conditions for hav curing.

People's perception that the quality of hay was very good was confirmed by the NIRS quality analyses of the samples. The hay quality was the best it has been in ten years. Averaged across all samples crude protein = 18.7 percent; acid detergent fiber (ADF) = 31 percent; neutral detergent fiber (NDF) = 50 percent; and relative feed value (calculated from ADF and NDF) = 125.

The champion in the "Field Cured" division was Brian Fulmer from Pen Argyl in Northampton county with an entry of later cutting alfalfa. The champion in the heat dried division was R.M. Klein Hay & Straw Farms from Northampton in Northampton county with an entry of pure alfalfa. Mark Pifer from Reynoldsville in Jefferson county was the champion in the "Preservatives Added" division with a later cutting of pure alfalfa.

#### The PFGC Needs Your Help!

Do you have an interest in helping develop some of the activities of PFGC? Do you have some good ideas you'd like to share with others about the future direction of PFGC? Would you like to assist in evaluating farms for selection of the Outstanding Pasture Producer Award? If you answered "yes" to any of the above questions, then the PFGC needs your help! The standing committees of the PFGC (Awards, Publications, Picnic, Finance and Budget, Research & Education, Membership, Fall Conference, Constitution and By-Laws, and Legislative) need people who have ideas. These committees are made up of and chaired by volunteer members of the PFGC such as yourself. If you would like to be in on the planning of PFGC activities and direction, then give one of the committees a try! If you're interested in serving on a committee, just call Ed Ritz at (717) 734-3745 or Marvin Hall at (814) 863-1019 to discuss where you can help.



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The horses were allowed 24-hour access to alfalfa throughout the trial, and they received no additional protein or energy supplementation. The continually grazed treatment lasted 25 days before the grazing pressure removed available forage. Those horses on the rotation treatment grazed a total of 37 days. Forage yields revealed that the horses on rotation had access to more forage per acre due to yield variations in the field and to the systems design of restricting grazing to smaller sections of the grazing area. Visual observation revealed a higher incidence of spot grazing in the continually grazed treatment.

Animal gains at 25 days of grazing averaged .5 pounds per day for

