Results from 300-Day Grazing Demonstrations
Kenny Simon, Program Associate-Forages

The 300-Day Grazing Program was developed to help producers reduce the expense of winter feeding and to help maximize use of their greatest resource – forages. The program emphasized on-farm demonstration of eight practices including improving grazing management, adding complementary forages such as summer or winter annuals, adding legumes, stockpiling bermudagrass or fescue and reducing hay losses by improved storage and feeding practices.

Pastures don’t have to be renovated and planted with new forages to achieve a longer growing season. Many farms have the forage base for building a 300-day grazing season. The program is a team effort including Animal Science faculty, county agents and producers.

Results are very positive with over 90 demonstrations in 42 counties across the state. In 2009, savings from stockpiling fescue and stock-piled bermudagrass averaged $54 and $42 per animal unit, respectively. The greatest savings documented was $83.50/AU, which came from a farm that stockpiled fescue/white clover and did not apply N fertilizer. Savings from using winter annuals averaged $62 per animal unit.

Improving grazing management demonstrations allowed increased forage utilization, thus extending the grazing season. Research documented increasing the pasture rotation frequency from twice a month to twice a week increased the number of grazing days by 40%.

The hay storage demonstrations showed the importance of proper hay storage. Dry matter losses for barn-stored hay ranged from 8-13%, but losses for hay stored outside and unprotected ranged from 20-32%.

The results of a hay feeding demonstration showed that hay fed unprotected resulted in the greatest amount of waste, 49%. Unrolling and feeding in a ring limited the amount of loss 24% and 13%, respectively. Hay that was fed in protected feeders reduced the amount of hay loss to 1.0%.

Seasonal Forage Options for Extending the Grazing Season*

<table>
<thead>
<tr>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fescue/clover</td>
<td>Bermudagrass</td>
<td>Bermudagrass</td>
<td>Winter annuals</td>
</tr>
<tr>
<td>Ryegrass</td>
<td>Crabgrass</td>
<td>Crabgrass</td>
<td>Stockpiled fescue</td>
</tr>
<tr>
<td>Orchardgrass</td>
<td>Lespedeza</td>
<td>Johnsongrass</td>
<td>Protect hay in storage</td>
</tr>
<tr>
<td>Winter annuals</td>
<td>Johnsongrass</td>
<td>Fescue/clover</td>
<td>Protect hay during feeding</td>
</tr>
<tr>
<td>Clover</td>
<td>Stockpiled bermudagrass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer annuals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Improved grazing management makes each forage option more effective.
Arkansas 4-H State Horse Show Wrap-Up
Mark Russell, Equine Instructor

On July 6-9, 2010, over a hundred Arkansas 4-H’ers gathered at the White County Fairgrounds in Searcy to compete in the 2010 State Horse Show. With everything from roping to dressage and jumping to barrel racing, there was certainly something for everyone. The show boasted 432 total entries for the 44 classes offered.

Each year, the State 4-H Horse Show serves as an opportunity for the youth of Arkansas to display their hard work over the previous year. In order to qualify for the state show, each participant must have competed at his or her district show. In Arkansas, there are four district shows, allowing the youth to compete for a spot at the state show.

Also part of the state show were leadership contests that included Horse Judging, Hippology, Horse Bowl, Team Demonstration, Individual Demonstration and Public Speaking. The greatest benefit of the leadership contests is youth can participate without owning or having possession of a horse. Understanding that not every youth in Arkansas has the opportunity to have their own horse, we want to make sure everyone has the opportunity to be involved in the 4-H Horse Program.

These contests allow youth the opportunity to learn and display their knowledge of the horse. In the horse-judging contest, students are asked to place horses in classes of four. These classes include halter, western pleasure, western horsemanship and reining. The participants’ placings are compared to a panel of official judges’ placings to determine scores.

The demonstration and public speaking contests allow participants to speak to a panel of judges and their peers about a topic of their choosing. In the horse bowl competition, teams of four are matched up against one another and go head to head in a game show setting, answering questions with buzzers that deal with all horse-related topics.

In the hippology competition, the contestants judge two classes in the horse-judging contest, visually identify tack, feedstuffs and equipment, and complete a written exam. The top two placings in each contest are eligible to represent Arkansas at the Southern Regional Horse Show held each year at the end of July. This year, the Southern Regional horse show was held in Clemson, South Carolina.

At the completion of the show, six saddles were given away to junior and senior high-point winners in the divisions of Speed, Roping and Judged Performance. Also awarded at the show were 45 belt buckles, one to each of the class winners.

I would like to give a HUGE thank you to the generous donors and sponsors of this year’s show. Without your kind generosity and belief in our program, we certainly wouldn’t be able to have such a high quality show each year. Pictured below are four of the saddles awarded during the state 4-H horse show.

High Point Winners:
- **Roping:** Junior – Britt D+; Senior – Seth D+
- **Speed:** Junior – Lacey L+; Senior – Elissa B+
- **Judged Performance:** Junior – Marianne C; Senior – Jessica L+
- **Pony:** Jaydon Jarnagan

Leadership Contests – Champions:
- **Hippology:** Senior Team – Faulkner County; Junior Team – Faulkner County
• **Horse Judging:** Senior Team Champion – Washington County; Junior Team Champion – Benton County
• **Horse Bowl:** Champion – Faulkner County
• **Public Speaking:** Champion – Jacob C.

**Individual Demonstration:** Senior Champion – Savannah C.; Junior Champion – Marianne C.

**Team Demonstration:** Champions – Angela J. and Hannah H.

If you’re interested in learning more about the Arkansas 4-H Horse Program or are interested in donor or sponsorship opportunities, please contact University of Arkansas Extension Horse Specialist Mark Russell at 501-671-2190 or email at mrrussell@uaex.edu.

---

**What to Do When Hay Is Short: Stretching Hay in Times of Drought**

Paul Beck, Ph.D., PAS, Associate Professor

Recently, parts of Arkansas have undergone a severe summer drought. Summer droughts are not something that would normally be considered unusual, but with temperatures topping over 100 for weeks on end and very limited rainfall from June through August, this year’s drought was especially severe.

Hay for winter feeding is in short supply and, in some cases, is already being fed to livestock on short pastures. This is coupled with the fact we are coming out of a cold, wet winter with many producers having very little hay carried over from last year.

In talking to area producers, there have been several whole herd liquidations in the area because of the hay shortage. This is a possible, although extreme, solution to the problem of “how to feed these cows through the winter,” but producers who have put a lifetime of selection and management into building a cow herd may never be able to rebuild their herd to former production levels. So, how can you make it through the winter with an intact cow herd with only a fraction of your normal hay resources?

Selling older and less productive cows is the obvious first step in reducing the amount of feed resources needed to carry the cow herd through the winter. Open cows and cows that don’t have many more productive years ahead of them will reduce feed requirements without limiting the future productivity of the herd. In fall-calving cow herds, early weaning calves will decrease forage intake, because not only will calves likely be sold at auction, but also because cows carrying a calf consume 10% more forage than dry cows, and their nutrient requirements are lower, reducing cost of supplementation.

In order to stretch forage resources, first your ideas about supplementation may have to change. When you have limited forage resources, self-limited liquid or tub-type supplements should not be fed. The mode of action of these supplements is to supply additional protein and energy to the rumen, increasing digestibility and passage rate of hay and other low-quality forages. The increased digestibility and speed of clearance through the rumen increases intake of forages…this is exactly the opposite of what you are likely to want if you don’t have enough hay to make it through the winter as it is. In addition, these supplements are not as effective when crude protein of your hay is greater than 8% (which most of our hay in Arkansas is!), and drought-stricken pastures and hay fields are actually usually higher in quality than hay and pasture grown in “normal” conditions.

In order to stretch hay resources through supplementation, you will need to feed higher levels of supplement to replace or substitute for hay. Supplementation levels over 0.5% of body weight (6 pounds for a 1,200-pound cow) will replace 12% of a cow’s daily hay intake, down to 21 pounds from 24 pounds per day normally, about ½ pound reduced hay intake per pound of supplemental feed. As you increase the supplementation rate to 1% of body weight (12 pounds/cow/day), the replacement of feed for hay increases to about a ⅔-pound decrease in hay intake per pound of supplement. Additionally, if these high supplement levels are being fed, hay could also be limited to about one-third of normal intake, because the
supplements are meeting a substantial portion of the cow’s nutrient requirements. Twelve pounds of supplement is a lot of feed, and care should be taken to limit the amount of grain being fed to beef cows as a supplement because of digestive upsets that can occur.

Digestible fiber byproduct feeds such as corn gluten feed, soybean hulls and distillers grains can be fed in place of grains and are substantially safer because of their low starch content. If a producer wants to feed these high supplement levels but does not feel comfortable limiting hay access to the cowherd, a cheap, low-quality feed like rice mill feed can be included as a portion of the supplement to serve as a “bulk limiter,” stretching the feed resources while not adding additional nutrients to the supplement. An even more management intensive option is to limit feed high-concentrate mixed diets to cows, completely deleting hay from the winter feeding equation. Feeding these feedlot-type diets must be exactly in the right mixture, exactly at the right time and exactly in the right amount, but cows can be maintained on 40% of full feed intake with gains in body weight and body condition score.

Small grains and ryegrass are an excellent source of pasture for times when our permanent warm-season forage base is dormant. Producers generally only utilize this resource during the spring flush of growth from these grasses from March through April. With the cool temperatures and recent rainfall, small grains (rye, wheat and oats) and ryegrass can easily be planted into the drought-shortened pastures. If these pastures are adequately fertilized during the fall and they are allowed to grow to 6 inches in height before grazing, these pastures can be used to make up for the shortage of hay on some ranches, a shortage of hay that has already been implemented on many ranches across the state.

There are several factors to consider when dealing with insufficient pasture forage and a shortage of hay.

• Plan for cool-season grass production and winter annual establishment. Fertilize fescue pastures to stimulate fall production. Setting aside additional acreage for stockpiling may be hard to budget; however, stockpiled fescue quality is greater than the quality of an average fescue bale of hay. Spring calving herds are close to weaning and the beef cow’s nutritional requirement is low, so consider weaning calves early and confining cows to hay until pasture conditions are restored to a grazeable state. The short canopy of warm-season grasses creates a good environment for planting wheat, rye and ryegrass. As the hours of daylight become shorter and nights cooler, warm-season forages will not be as competitive with the establishment of the annual grasses. One of the most common mistakes with managing the establishment of cool-season forages is turning cattle in too soon.

• Plan to wean early. Adequate condition (body fatness) at calving is vital for a cow to be able to produce a calf each year. Weaning reduces the beef cow’s nutritional requirement and gives her more time to recover body condition from weaning to calving. Early-weaned calves respond well to nutrient dense diets, so when planning a winter feeding program, partial budget the cost and returns of backgrounding early-weaned calves this winter.

• Plan to compensate for hay deficiencies. Feeding hay not only leads to energy and protein deficiencies but also vitamin A deficiency when fed long term (> 3 months). Forage testing is the best method of managing protein and energy supplementation strategies. Use a free choice mineral supplement that contains vitamin A and consider a vitamin A injection if cattle are run through a chute this fall.

• Plan to stretch hay supplies with alternative feedstuffs. Due to the shortage of hay on some ranches, various methods to stretch hay supplies are being considered. Planting winter annuals (0.1 acre/cow) and grazing twice per week reduced hay consumption by 13% at the Southwest Research and Extension Center in 2005.
Research in Ohio and Arkansas demonstrated limit feeding high concentrate diets to cows can maintain performance but reduce winter feed cost. If you are interested in this concept, acquire FSA3036, *Substituting Grain for Hay in Beef Cow Diets*, from a local county Extension office. Mixtures of broiler litter and corn or soybean hulls may also be considered; however, check with the poultry feed mill to ensure nothing is being fed to the chickens that cannot be fed to beef cattle. Research in Alabama successfully demonstrated the use of rice mill feed balanced with soybean hulls as an alternative to poultry litter in growing cattle diets.

- Plan to choose alternative feedstuffs wisely. During periods of short hay supplies, some cattle producers make the mistake of trying to stretch low-quality hay with cheap feed such as rice mill feed. Cheap feeds are cheap because of their lower nutritional content, and the end result is cattle sacrificing body condition, which ultimately affects reproduction. While these feeds can be effectively formulated into a complete diet, they are not effective as sole substitutes. Beware of grain choices if choosing to use grains to stretch hay supplies. Aflatoxin is being reported in the Arkansas corn crop. Purchasing corn directly off a farm comes with the danger of high moisture content and aflatoxin. Request information regarding both of these items before making the purchase. Breeding beef cattle are restricted to no more than 100 ppb aflatoxin in the diet.

Many will opt to purchase hay or baled crop residue. Baled crop residue should be avoided due to its extremely low nutritional value. In addition, residues from chemicals that are routinely used on crops, such as fungicides, are not labeled for pasture or hay use. Local hay for sale often becomes scarce quickly. Hay markets in Oklahoma and Kansas are reasonable; however, shipping cost must be considered. Round bales that weigh on the light side (< 1,000) will result in a payload much lighter than grain or byproduct.

There are numerous options available for managing the herd besides reducing cow numbers when hay supplies are scarce. For assistance regarding any of these management strategies, contact a local county agricultural agent.

**Milk Prices Have Improved**

Wayne Kellogg, Professor

It has been a long, difficult financial path for dairy producers throughout the United States. It certainly affected Arkansas producers as their price dropped from above $20/hundredweight (cwt) during 2008 to a low point of $11.71/cwt in July 2009.

A hoped-for ‘quick recovery’ simply did not occur, but the price did increase slowly to $16.87/cwt by February (2010). Unfortunately, the recovery stalled for a few months. Finally, the prices increased to $17.48/cwt in July and $18.13/cwt in August. This is the highest monthly price received by dairy producers since the Arkansas Dairy Stabilization Program became operational during July 2009. The monthly price plus an August stabilization grant of $2.00/cwt will provide a total of $20.13/cwt. This is the first time producers have received more than $20.00/cwt since 2008.

To put the crisis in perspective, the current estimated average cost to produce milk in Arkansas is about $21.50/cwt, and the costs averaged $20.13/cwt during the previous 12 months. While grants have not raised income to a profitable level, the grants have allowed payment of many critical expenses. The stabilization grants have improved revenues of Arkansas milk producers by 13% (July 2009 until June 2010). This has been a significant factor in keeping many in business.

The goal of the program, planned long before the recent crisis, was to stabilize the industry and improve the local supply of milk. The program is administered by the Arkansas Agriculture Department and is limited to Grade “A” milk producers (other than state agencies and institutions). Monthly milk production data is supplied by authorized milk handlers (three cooperatives). The monthly grants cannot exceed $2/cwt and are determined by the difference between the estimated monthly costs of producing milk in Arkansas compared to the estimated monthly average price received for milk, calculated from data provided by authorized milk handlers.

The Stabilization Program became available at a critical time and can continue to provide an important role in encouraging milk production in Arkansas.