Craighhead County Beef & Forage Newsletter

ASU Farms, Craighead County Extension Office, and NRCS Host Beef and Forage Field Day June 24th

An interactive tour of rotational grazing fields and a step-by-step how-to on tire tank watering systems are among the activities on tap Monday, June 24, for the Delta beef and Forage Field Day at Arkansas State University Farms.

The agenda also includes presentations on stockpiling Bermuda grass, planning cool season annuals and the EQIP program. The meeting is a presentation by the Craighead County Extension office in cooperation with Arkansas State University Farms and the Natural Resources Conservation Service.

Participants will be taken on an interactive tour of ASU Farms beef cattle rotational grazing fields to learn about system setup and implantation; as well as the benefits of, and how to install tire tank watering systems.

The field day runs 6 p.m.-8 p.m., with dinner included. Beef cattle producers throughout the Delta region are encouraged to attend. This field day is free of charge, but producers are asked to RSVP to ensure there’s enough food for all participants.

Please RSVP by contacting Brittany Carwell at 870-933-4565 or brcarwell@uaex.edu

Making Pre-breeding Vaccinations a PRIORITY

By Dr. Jamey Powell D.V.M.

Healthy cows are essential for reproductive success. The earlier a cow can become pregnant during the breeding season, the earlier she will calve the following year, and an earlier calving date usually corresponds with a more valuable calf at weaning. Vaccinating the whole herd this time of year will not only protect the cows against reproductive diseases prior to the breeding season but will also provide protection to the spring-born calves against potential disease risks. Selecting the correct vaccines is a critical element in developing a herd health program.

Although herd health needs may vary among operations, there are a few standard vaccines that will protect against reproductive loss and poor efficiency in a cow herd that should be included for most herds.

For cows and bulls, vaccinate with:
- 4- or 5-way viral vaccine (IBR, BVD, PI3, BRSV)
- Leptospirosis
- Vibriosis
- 7-way clostridial (Blackleg)

Another focus for the vaccination program should be to limit overall calf illness. Some operations should give consideration to the case history of diseases in the herd. If your herd has encountered problems with pinkeye, calf scours or respiratory pneumonia in the past, there are vaccines for these problems that will help limit future outbreaks.

However, the standard annual vaccines recommended for calves should include:
- 4- or 5-way viral vaccine (IBR, BVD, PI3, BRSV)
- 7-way clostridial (Blackleg)

If you plan to vaccinate replacement heifers, then consider:
- Brucellosis (Bang’s) vaccine between 4 and 12 months of age
- 4- or 5-way viral vaccine (IBR, BVD, PI3, BRSV)
- Leptospirosis
- Vibriosis
- 7-way clostridial (Blackleg)

Your vaccination program should be viewed as an important part of an effective health management plan that would also include proper nutrition, parasite control and a simple biosecurity plan for your operation. The objective is to maintain a high level of herd immunity to minimize disease outbreak and improve profitability for the operation. Since vaccine needs vary from herd to herd, consider visiting with your herd veterinarian to get input regarding vaccine selection for your operation.

One concern that some producers may question: Is the cost of implementing a vaccine program justified? You should consider that avoiding a potential health disaster in your cattle operation easily validates the cost. Keep in mind the motto: “An ounce of prevention is worth a pound of cure.” In other words, the expense of a disease outbreak will far exceed the cost of disease prevention.
True Army Worms Found in Searcy County

By Kelly Loflin

True army worms that were above treatment threshold were located in a forage field in the Searcy County, Arkansas on May 10th. Below are helpful tips to use this year when scouting on your farm.

**Tips for Scouting**

True armyworms primarily feed at night and remain hidden in ground litter by day (be sure and look in the ground litter and thatch). They feed on a variety of forage crops but the most common are fescue, oats, rye, wheat and other cool-season grasses. This is because these forage species are actively growing in the spring when armyworms are most active. When scouting examine at least 10 different one square foot samples at random across the field.

Female armyworm moths prefer to lay eggs in areas of abundant growth, be sure to include a few of these areas in your 10 samples. Chemical control is usually needed when 3 or more worms per square foot are found. Read label instructions and follow harvesting and grazing restrictions.

Scouting for army worms is highly encouraged to ensure crops are not lost. If army worms are found above treatment threshold please notify the Craighead County Extension Office. More information can be found in the following publications:

"Managing Armyworms in Pastures and Hayfields" [http://www.uaex.edu/Other_Areas/publications/PDF/PSA-7083.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/PSA-7083.pdf)

"Insecticide Recommendations for Arkansas (Forages Section)" [http://www.uaex.edu/Other_Areas/publications/PDF/MP144/C_forages.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/MP144/C_forages.pdf)

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Photos of Craighead County 4-Hers During the Buffalo Island Junior Livestock Show Beef Cattle Show

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Making the Most of This Unplanned Pasture Improvement Opportunity

By Dr. John Jennings

Forage problems resulting from the 2012 drought will extend into 2013. However, many of those problems could be disguised as unplanned pasture improvement opportunities. Not all farms have the perfect forage or livestock system in place. After assessing the drought's damage to pastures and to livestock herds, producers should seriously think about possible changes and improvements. Does that field need to be reseeded and if so does it need to be the same forage species or variety? Could the grazing and hay systems be made better to avoid such disastrous effects in the next drought? All good questions, but the answers will be unique for each farm. Good assessment of actual damage and weed pressure will be critical. Soil tests for all pastures will be extremely helpful. The following options can help direct forage improvement efforts.

**Options:**

1. Do nothing and let the surviving forages regrow
2. Try to thicken the thin pastures with more of the same species
3. Add legumes to thin fields
4. Renovate damaged pastures and convert to other forage species or varieties
Option 1 – Do Nothing:
Success with this option will be dependent on severity of
drought damage, the existing forage species, and willingness of
the operator to nurse the field back to health. Tall fescue fields
are resilient and often produce enough seed in summer to re-
populate a drought-thinned stand. However, armyworms in
spring ruined seed production in many fields. Prolonged grazing
during drought reduced plant populations further. Careful field
observation in early spring will reveal how much reseeding took
place. Some thin fescue and bermudagrass fields will eventually
fill in, but this make take a year or more. Clover died out in a
majority of fields. White clover is a prolific reseeder and that seed
should volunteer. Common bermudagrass produces seed and
any surviving rhizomes will re-grow next season. Any fields left
“as-is” to regenerate on their own will need to be managed like
new seedings. This means good management of fertility, weed
control, and use of deferred grazing.

Option 2 – Try to thicken pastures with the same species
Adding seed to fill in a thin pasture can prove beneficial, but it
should be managed like a new seeding. Fall rains have stimu-
lated a lot of weed growth that can hinder seedling forage establish-
ment. Guessing at a seeding rate based on percent damage is diffi-
cult. It is best to use a full seeding rate on damaged areas to
make this option effective. Simply spreading a little seed over a
weedy field hoping something good will happen has a high
chance of failure. Spring oats can be planted as a nurse crop with
fescue or orchardgrass although these grasses are best planted in
fall. Do not plant annual ryegrass with fescue and orchardgrass
seed. Ryegrass will crowd out most other forages and will pro-
duce seed that can continue to be a problem. Plant bermu-
dagrass in late spring.

Option 3 – Adding legumes
Thin pastures provide a great opportunity to interseed leg-
umes. Legumes improve forage quality and reduce N fertilizer
need. Fall or late winter seeding is recommended for fescue pas-
tures. Fall seeding is recommend for bermudagrass and other
warm-season grass pastures.
White and red clovers are popu-
lar perennial clovers and ar-
rowleaf and crimson clovers are
popular annual clovers. Control-
ling weeds this season and re-
planting clover in fall would be a
good approach.

Option 4 – Renovate damaged pastures and convert to other forages
Converting damaged fields to different forage species can help
extend the grazing season, improve forage quality, or reduce fescue toxicity. Make sure the
new forage fits the operation because renovation is an expen-
sive and time-consuming pro-
cess. Pick a new forage based on seasonal forage need. For ex-
ample, warm-season grasses should be considered in fescue-
dominant systems. Cool-season grasses should be selected in
bermudagrass or bahiagrass-
dominant systems.

Diversity of seasonal forage spe-
cies on the farm improves forage production throughout the year. Both cool-season and warm-
season forages should be includ-
ed. In north Arkansas the ratio of
cool-season to warm-season forage should be about two-
thirds cool-season and one third
warm-season forage. In south
Arkansas this ratio may be re-
versed due to a longer growing
season. At the simplest level, a
perennial cool-season grass like
fescue and a perennial warm-
season grass like bermudagrass
should serve as the forage
base. Adding more species
makes the forage program more
stable and dependable over time.

Individual pastures can be single forage species or simple mix-
tures. It is not necessary to have complex forage mixtures in each pasture. In fact, complex multi-
seasonal forage mixtures within individual pastures are not desir-
able for all pastures because it complicates management during
weather extremes. However, a
robust combination of warm-
and cool-season forage species in
different pastures across the
farm is desirable to improve forage availability during weather
extremes. This separation simpli-
fies management practices such as fertilization, weed manage-
ment, and planning seasonal
grazing or hay harvest. The tran-
sition of grazing cool-season
forages to warm-season forages can also be accomplished more
easily.
Understanding Your Hay Test Results

By Dr. Shane Gadberry

Hay season is fast approaching. Hay sample analysis is a valuable tool to use to ensure your cattle’s nutritional requirements are met while feeding hay this winter. Here are a few tips to help explain the numbers on a forage analysis report to aid you in making harvest management; hay pricing or purchasing; and supplemental feeding decisions.

**AS FED BASIS vs. DRY MATTER BASIS**

As fed basis refers to the sample’s nutrient values before adjusting for water content. Since samples vary in water content, deducting the amount of the total sample weight contributed to water allows samples to be compared more accurately.

Dry matter basis refers to the nutrient values after the water was deducted from the sample’s weight.

When comparing values between forages, compare them on a dry matter basis. When comparing values to an animal’s requirement, compare them on a dry matter basis.

**MOISTURE**

An accurate analysis of moisture is important for estimating total forage intake. Ideal moisture is < 15% for hay, 50 to 60% for haylage, and 60 to 70% for silage. Handle haylage and silage samples to avoid excessive evaporative losses between sampling date and submission to the laboratory.

**CRUDE PROTEIN (CP)**

Crude protein is determined by measuring the nitrogen content of forage (N x 6.25 = CP). Excessive heat generated in bales with high moisture can cause protein to bind to fiber, reducing protein digestibility. If hay was baled wet, request an ADIN—adjusted crude protein. Deducting this nitrogen from the total plant nitrogen will yield a better estimate of available protein.

**FIBER**

Neutral Detergent Fiber (NDF)

- This represents the portion of the forage made up of cell wall (hemicelluloses, cellulose, and lignin).
- This portion of the forage affects feed intake. As plants mature, NDF increases and forage intake is reduced.

Acid Detergent Fiber (ADF)

- This represents fiber (cellulose and lignin) that is poorly digested by the animal.
- As plants mature, ADF increases and digestibility decreases.

**NUTRIENT AND ENERGY VALUE**

Total Digestible Nutrients (TDN)

- Total digestible nutrients is an expression of energy
- For most classes of livestock, the TDN (%) listed at the bottom of the report is the most useful number in comparing forages.
- This number estimates the protein, fat, and carbohydrate (sugar) in the forage that can be digested by the animal.
- TDN is predicted from equations developed for different classes of forages: legumes, warm season grasses, and cool season grasses. As a result, it is very important to correctly identify the forage species type on the submission form. TDN is commonly predicted from CP and ADF. Monitoring TDN can help determine if forages need to be harvested earlier to increase digestibility and energy supply.
NITRATE - NITROGEN
Nitrates can be detrimental to animal health. Values below 700 ppm are considered safe, 700 to 1400 may be hazardous to pregnant or very young animals, 1400-2100 ppm may affect production and should be limited to less than half of the total ration, forages with values over 2100 ppm should not be fed.

RELATIVE FEED VALUE (RFV)
Relative feed value can be calculated upon request. It is commonly used to compare forages and price forages based on their nutrient content.
RFV is calculated from NDF and ADF. The table below shows RFV values for different levels of NDF and ADF. For example a sample that contains 35% ADF and 65% NDF will have an RFV of 88. This sample is of lesser quality than an RFV of 104.

For more information, or to submit a hay sample for analysis, contact the Craighead County Extension Office.

**REQUIREMENTS OF COMMON LIVESTOCK SPECIES**

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<tr>
<th></th>
<th>CP (%DM)</th>
<th>TDN† (%DM)</th>
<th>(Ca %DM)</th>
<th>P (%DM)</th>
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**TABLE OF RELATIVE FEED VALUES**

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*ADF/NDF expressed as percent dry matter

†TDN (total digestible nutrients) is an expression of energy supply.
As the Temperature Rises, So Do Water Requirements
By Jeremy Powell, PhD, D.V.M.

Water is the most important nutrient for general animal wellbeing. If water intake drops below required levels, then decreased feed conversion, stressed cattle and dehydration will result. Keep in mind that, as the approaching summer temperatures continue to rise, your cattle’s daily water intake will also continue to rise.

Water requirements for cattle can vary widely due to factors such as environmental temperature, humidity, precipitation, body weight, breed, feed intake, pregnancy status, milk production and water content of feedstuffs. The table below contains some estimates of daily water intake for a number of cattle categories. It is for estimation purposes only, and each estimated intake has a wide variation under normal circumstances.

Some water sources may contain contaminants such as bluegreen algae, nitrates and heavy metals that could be harmful to cattle. Water contaminated with dead animals, feces or other noxious materials may be a potential source of toxins or disease contaminants that could threaten the health of cattle.

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<tr>
<th>Estimated Daily Water Intake for Cattle* (gallons/day per animal)</th>
<th>Ambient Temperature</th>
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<td>1,300 (45 lb milk/day)</td>
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