UNIVERSITY OF FLORIDA
IFAS EXTENSION

Okaloosa Field and Livestock Report

Issue 131

July-August 2005

Okaloosa County Extension | 5479 Old Bethel Rd. | Crestview, Florida 32536-5512

Inside This Issue:

Dates to Remember

August 9 ***Grape and Small Fruits Field Day***
Tallahassee
Contact 850-599-8685 for more information.

August 18 ***2005 NFREC Beef Cattle/Forage Field Day***
Marianna—$5.00 Registration
Contact 850-482-9904 for more information.

August 24 ***Peanut Field Day***
Marianna
Contact 850-482-1242 for more information.

BEEF CATTLE MANAGEMENT CALENDAR

July

- ☑ Cut corn silage.
- ☑ Control weeds in summer pastures.
- ☑ Apply nitrogen to warm season pastures, if needed.
- ☑ Check mineral feeder.
- ☑ Check pastures for army worms and mole crickets, and treat if necessary.
- ☑ Wean calves and cull cow from herd.
- ☑ Watch for evidence of foot rot and treat.
- ☑ Consider preconditioning calves before sale including vaccination for shipping fever and IBR at least 3 weeks before sale.
- ☑ Check dust bags.
- ☑ Update market information and plans.
- ☑ Revaccinate calves at weaning for blackleg.

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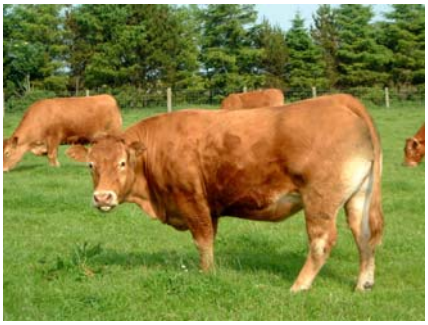
August

- ☑ Treat for liver flukes as close to August 15th as possible, if they are in your area.
- ☑ Cut hay.
- ☑ Apply lime for fall and winter crops.
- ☑ Harvest Bahiagrass seed.
- ☑ Check mineral feeder.
- ☑ Update market information and marketing plans.
- ☑ Check for army worms, spittlebugs, and mole crickets, and treat if necessary.
- ☑ Check dust bags.
- ☑ Wean calves and cull cow from herd.
- ☑ Watch for evidence of abortions.
- ☑ Observe animals regularly for signs of disease.
- ☑ If cattle grubs were found on cattle last winter or heel flies were observed in the pasture, treat for cattle grubs this month.
- ☑ Pregnancy test and cull open heifers from replacement herd.

Source: Animal Science Newsletter, June 2005

DIET AFFECTS BODY TEMPERATURE OF CATTLE



It has long been debated that body temperature is affected when feeding a roughage versus a grain based diet. Most of the debate centers around the attempt to increase the body heat production through diet during periods of cold weather. When digested and metabolized by the body, roughages do produce more heat per unit of metabolized energy than do grains. Heat cannot be used for productive purposes (growth, lactation), and this difference in heat production is one of the reasons that grains have a higher energy (TDN) value than roughages. Because of this difference in heat production during digestion and metabolism, it is sometimes recommended to increase hay and reduce grain in the diet during a period of cold stress. However, this practice is controversial because feeding more grain usually increases total energy intake versus feeding only hay. To provide answers to the debate, a trial was conducted at the University of Nebraska to evaluate body temperature between cattle fed a corn versus a hay/silage based diet.

Heifers were fed either an 80% corn based diet or a diet consisting of 60% silage and 40% hay. Body temperature was recorded over a 24 hour period. Tympanic, rectal, vaginal, and ruminal temperatures were recorded. Overall, feeding the corn based diet increased body temperature compared with feeding the roughage diet. The normal range of body temperature for cattle is 100.4 to 103.1°F. Body temperature averaged approximately 102.0°F for heifers fed the roughage based diet and 102.6°F for heifers fed the corn based diet. Time of day also affected body temperature with temperatures being highest in the afternoon and evening hours. Temperatures were higher in the rumen than in the other locations tested. For practical purposes, rectal temperatures are used to measure body temperature in cattle.

Feeding a high grain diet will increase body temperature by approximately one-half degree. One explanation for this effect is that more total energy is being metabolized when cattle are fed grain versus roughage because grain is much more digestible than forage. During periods of cold stress, additional energy supplied by grain rather than increased forage should be used to maintain body temperature. Cattle with a dry winter hair coat become cold stressed once the temperature falls below freezing. However, when they have a wet hair coat, cold stress begins to affect the animal when the temperature falls below 59°F. In addition, wind has a significant effect on cold stress and cows in poor condition will have a harder time staying warm due to

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less insulation from fat. Unless cattle are protected from the wind, use the wind chill temperature to determine when additional supplementation is needed to overcome cold stress. The old rule of thumb is to increase TDN by 1% for every degree below the critical temperature. A variety of high energy grain and grain by-products can be used to increase energy intake during periods of cold stress.

Source: Dr. Johnny Rossi, Extension Animal Scientist, Tifton

COST OF RAISING REPLACEMENT HEIFERS

The objective of this demonstration project conducted at Southeast Missouri State University was to determine the cost of raising replacement heifers from weaning to first parturition. It involved Angus or Angus cross heifers born in fall of 2000, weaned in April of 2001, bred in November of 2001, and calved in fall of 2002. Costs consisted of pasture, harvested and purchased feedstuffs, labor, vaccinations, prebreeding reproductive tract exam, estrus synchronization, artificial insemination (AI), clean-up bull, pregnancy exam, and value of weaned heifer calf. Prebreeding exam indicated that 100% of heifers reached puberty and were cycling prior to breeding season. Firstservice AI pregnancy rate was 71%. Pregnancy rate after breeding season (A.I. and clean-up) was 94%. Cost of raising the heifers was $400.23 per heifer. Total cost, including heifer value at weaning time, was $889.32. Average sale price of the bred heifers sold in the 2002 Missouri Show-Me Replacement Heifer Program was $1125, yielding a net profit of $235.68 over the total cost of heifer development (Ellis. 2004. J. Animal Science [Suppl. 1]:288).

QUALITY DIFFERENCES BETWEEN GRASS HAY STORED AS DRY ROUND BALES OR WET WRAPPED ROUND BALES

High humidity in the Appalachian region of the eastern U.S. requires producers harvesting hay as large dry round bales (DRB, 80-85% DM) to wait 2 to 3 days between mowing or baling. Storing hay as wet wrapped round bales (WRB, 40-60% DM) can reduce time between mowing and baling to one to two days. Reduced time increases leaf retention and decreases field losses. In this study, seven West Virginia forage producers harvested grass hay as either DRB or WRB that was cut from the same field on the same day.

- WRB hay contained significantly higher levels of crude protein (12.1 vs. 10.79%), soluble protein (6.0 vs. 2.2%), and net energy maintenance (.51 vs. .42 Mcal/lb), than DRB.
- WRB also tended to contain higher levels of available protein (11.1 vs. 9.7%), TDN (56.8% vs. 52.2%), net energy gain (.26 vs. .17 Mcal/lb), digestible protein (68.8 vs. 55.4% of CP), and lower levels of lignin 7.2 vs. 8.5%) compared to DRB.
- Unfortunately, the economic impact of the improved quality of WRB only covered the cost of the plastic wrap.
- To maximize the value of wrapping high moisture hay, it is necessary to harvest at earlier stages of growth so that improvements in forage quality will pay for the additional machinery, labor and material cost.

The authors concluded that WRB could be a cost-effective way to improve the nutrition of hay-fed animals only if the production state of those animals require additional nutrients (Rayburn et al. 2004. J. Animal Science 82[Suppl. 1]:34).

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PEANUT FERTILIZATION

New peanut growers need to know that peanuts do require good nutrition to obtain high yields and quality. However, fertilization needs of peanuts are less than for many crops that are commonly grown in Florida. Calcium (Ca) needs are especially high for peanuts and the fruit develops from nutrients absorbed directly from the soil rather than from nutrients transported from roots to shoots and back to the fruit which is the case for most crops. Calcium deficiency results in high incidences of pod rot and unfilled pods called "pops". This results in low yields, low grades, and poor germination. Relatively high concentrations of Ca are needed in soil solution and the critical Ca absorption period begins about 20 days after the entrance of the peg into the soil and may extend for up to 2 months. Since peanuts are often grown on sandy soils, which are drought prone, there is a limited ability of these soils to replenish the soil solution Ca. Heavier soils and irrigated soils are better able to supply the needed Ca for proper uptake. The Ca needs are primarily for pod and seed development and not for growing a healthy plant. Test soils and apply the needed amounts of Ca for good yields and quality.

Source: Agronomy Notes, University of Florida, May 2005

USING GRAMOXONE IN PEANUTS

Gramoxone is a virtually non-selective herbicide that has been used to control weeds in peanuts for many years. Although generally considered a burndown herbicide, peanuts possess a great amount of tolerance to Gramoxone applied directly to the crop. The peanut crop will show foliar burning after treatment, but full recovery will occur within 1 or 2 weeks after application.

New herbicides have been labeled in peanuts in recent years that provide high levels of weed control without causing foliar burn on the peanuts. The lack of peanut injury from these herbicides has led many producers to stop using Gramoxone all together. However, it is my opinion that Gramoxone is still an excellent herbicide that possesses many advantages.

By eliminating Gramoxone from the weed control program, Cadre applications are made much earlier in the growing season. Although Cadre possesses a great amount of soil residual activity, we commonly see weed escapes by the end of the season. This is why I believe Gramoxone still fits into a weed control program. By using Gramoxone within 28 days after peanut emergence, you often control all weeds present. This allows the Cadre to be applied 6 to 8 weeks after planting, rather then 3 to 4 weeks after planting if Gramoxone is not used. Delaying the Cadre application will allow more residual control later in the growing season and may prevent some late season weed escapes.

Another advantage of Gramoxone is the cost of application. Gramoxone applied at 5 oz/A will cost approximately $1.35 per acre. This is extremely cost effective for the amount of weed control provided. Some have routinely added Basagran when applying Gramoxone to lessen peanut injury. However, Basagran will reduce the level weed control on many species while dramatically increasing herbicide cost. Research has shown that the reduced peanut injury obtained from the addition of Basagran will not improve peanut yield. This means that in the long-run, there is rarely an advantage to using Basagran with Gramoxone.

Gramoxone can be a useful herbicide for early season weed control. The amount of weed control obtained and the low cost of Gramoxone make it one of the most cost effective herbicides on currently on the market.

Source: Agronomy Notes, University of Florida, May 2005

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ROTATION, ROTATION, ROTATION

Good rotations are one of the keys to high yields, low pest pressure, reduced risks, and farm profitability. Rotations usually become limited due to high prices for a commodity or ease of growing crops such as with Roundup Ready technology. We have learned over the years that crop yields for legume crops like soybean and peanut decline rapidly if planted for more than one year without rotation. Cotton and corn yields decline also without proper rotation but maybe a slower pace than for the legumes. Good rotations have always been a key to good production practices and will reduce pests (diseases, insects, and nematodes) if proper crops are used in the right sequence as well as legumes supplying nitrogen for grass crops.

Source: Agronomy Notes, University of Florida, May 2005

MIXING ORDER FOR PESTICIDE COMBINATIONS

The trend these days is for growers to combine herbicide/fungicide/insecticide applications in order to save time and money. There are some instances when tank-mixes can result in problems such as antagonism or physical incompatibility. Classic examples of two chemicals that are not physically compatible are oil and water. Physical incompatibility problems can be prevented by using compatibility agents (Blendex, Embrece, E-Z Mix) when needed and by mixing materials in the proper sequence. When one or more different types of pesticides are to be tank-mixed, the suggested mixing order is a follows:

1. ½ tank of water + agitation
2. Water Soluble Packets (WSP)
3. Wettable Powders in slurry (WP)
4. Dry Flowable (DF) or Water-Dispersible Granules (WDG)
5. Liquid Flowables (L or F)
6. Emulsifiable Concentrates (EC)
7. Adjuvants (NIS/COC/AMS/UAN) – *AMS should be added to spray tank before using glyphosate
8. Remaining water

Source: Peanut Pointers, The University of Georgia—Cooperative Extension Service, Volume 42 No. 35, June 2005

GEORGIA-01R

As expected, there have been some cases of slow emergence of Georgia-01R. Not every field of Georgia-01R has had this problem, but of all the cultivars that have been planted it is the one that is having some problems. I have yet to hear of a complete stand failure of any field of Georgia-01R. In my trials thus far, Georgia-01R has been the slowest to emerge and has the weaker stand thus far. However, there is plenty of time for the plants to catch up in growth. In our trials last year, Georgia-01R performed very well.

If you have a producer that planted Georgia-01R and is concerned about their stand, they need to be patient and give it some time to catch up in growth. Most every seed supplier had growers sign a waiver against making a seed germination and emergence claim if they purchased Georgia-01R. Therefore, if a grower is concerned about their stand, they have very little recourse with the seed supplier.

Source: Peanut Pointers, The University of Georgia—Cooperative Extension Service, Volume 42 No. 35, June 2005

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PEANUTS LOOKING YELLOW: WHAT NEEDS TO BE DONE?

I've had a few calls concerning peanuts that are looking more yellow than they should. The concern is if there should be some nitrogen added to supplement the inoculation. If a field has been inoculated or if it has not been inoculated and it has been less than five years since peanuts were planted in that field, then adding nitrogen this early should not be considered. Sometimes the early season growth is more rapid than the root system can pump the nitrogen from the nodules to growing extremities. My best advice is to give the plant some time (a week to 10 days) to see if the more normal green appearance returns. This will especially be the case with late May planted fields that now have adequate moisture and warm temperatures for rapid growth.

Source: Peanut Pointers, The University of Georgia—Cooperative Extension Service, Volume 42 No. 35, June 2005