Winter Feed Meeting Program in Miller County

Dr. Shane Gadberry and Dr. Paul Beck are offering a Winter Feed Meeting Program in Miller County on Tues., November 14, 2017. Cost is $5 per forage sample ($3 per sample is submitted to SWREC lab along with the samples (the remaining $2 per sample stays here for refreshments, etc.).

The meeting format will be group presentations with time for one-on-one consultation or Q&A with a limit of 5 samples per producer at the reduced rate.

There is a participant limit of between 8 and 12 producers for each county. If we do not get enough producers, we will have a joint meeting with a nearby county. If you are interested in attending, we need for you to pre-register by calling 870-779-3609 as soon as possible. Space is limited (8-12 producers).

No hay shows or cattlemen’s meetings at this meeting as they have a different format.

Forage samples & payment must be submitted to SWREC by October 31st. This is to ensure the lab can schedule work in advance and get samples processed in a timely manner.

There will be a survey questionnaire required as part of this program. This will include questions related to the numbers and management of livestock, equipment used in hay production, the bales produced, length of feeding season, supplementation type and amounts fed, etc. We will require these surveys at the time of hay submission.

Fall Armyworm Demonstration Update

Fall armyworms made an early appearance in Arkansas’ bermudagrass this year and we are currently seeing another round of significant infestations. We may end up battling these worms for several more weeks. Fall armyworms started off in mid-June at populations well above treatment threshold and with mixed worm sizes, indicating overlapping generations. With overlapping generations, frequently re-infestation is common and may result in significant yield losses or the need to make multiple insecticide applications. Last year some of our producers had to make three and rarely four insecticide applications to make their hay crop. Pyrethroids, such as lambda-cyhalothrin, are effective and frequently used to control fall army-worms in pastures and hay fields. Their lower per-acre cost is desirable, but unfortunately, they provide very little residual activity. To show product differences, we conducted demonstrations to compare the residual activity of the widely used pyrethroid insecticide –
residual activity of the widely used pyrethroid insecticide – lambda-cyhalothrin and the insecticide Besiege® that contains chlorantraniliprole plus lambda-cyhalothrin. A brief summary of the evaluation is provided below.

**Demonstration Summary**

**Application date:** July 7, 2017  
**Demonstration area:** 6 acres (2 acres per treatment)  
**Crop:** Bermudagrass pasture  
**Treatments:**  
- Untreated Control  
- Besiege® - 6.0 oz. product per acre  
- Generic lambda-cyhalothrin – 3.2 oz. product per acre

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Average # of fall armyworms per square foot.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-treat</td>
</tr>
<tr>
<td>Untreated Control</td>
<td>5.0</td>
</tr>
<tr>
<td>Besiege®</td>
<td>10.4</td>
</tr>
<tr>
<td>Generic lambda-cyhalothrin</td>
<td>6.6</td>
</tr>
</tbody>
</table>

*On the 14 DAT evaluation numerous newly hatched fall armyworm larvae were present in all experimental plots.  

*DAT = Days After Treatment

Results demonstrated that both treatments – Besiege® and generic lambda-cyhalothrin – provided excellent initial control. However, the chlorantraniliprole/lambda-cyhalothrin combination product was the only treatment to provide 21 days of effective control. In this specific case, one spray application would have been eliminated by using a product with long residual activity. When choosing a treatment option to control fall armyworms in pasture, always consider the product cost per acre, the labor and fuel cost per acre, grazing and/or harvest restrictions and maturity of the hay crop. The cost in labor and fuel (estimated at ~$5.00/A) is often overlooked when choosing treatment options. Stay tuned – additional evaluations will be made at 28 and 35 DAT.

**Control for Armyworms**

Proper timing of insecticide applications result in better control. In most cases, insecticide control is warranted when an average of three or more worms per square foot occurs. However, other factors, such as the size of the caterpillars and maturity of the hay crop, should be considered before making an insecticide application.

For example, if a hay field is heavily infested and the grass is ready to harvest, consider cutting and baling as soon as possible rather than making an insecticide application. If the field is not ready to cut and you have more than three very small (⅛ to ¼ inch) caterpillars per square foot, do not treat before necessary. Instead, get the equipment ready to spray and monitor the field closely, because natural enemies could possibly reduce the population below treatment threshold within a short period of time. If the population is not reduced, then treat when the caterpillars reach ½ inch. Caterpillars larger than ¾ inch are difficult to kill, resulting in poor control. Fully grown caterpillars (1 ½ inches) are close to pupation and may have already caused most the damage, thus an insecticide application may not provide an economic benefit.

The best type of equipment to apply insecticides for armyworm control is a properly calibrated boom sprayer. If a boom sprayer is not available, a properly calibrated cluster nozzle sprayer can be used but only if it has a consistent spray distribution along the entire swath width. In general, the absolute mini mum spray solution volume per acre is 10 gallons. Higher volumes of spray solution usually result in better and more even coverage.

Insecticide choices for armyworm control are more numerous today than in past years. When choosing insecticides, producers should consider grazing or harvest restrictions, local availability, cost and residual activity. Several of the
Pasture Weed Control – Impregnated Fertilizer Demo Field Day

Here is what we have from the impregnated fertilizer weed control demo results in fescue pasture. These treatments were applied on May 22 after the fescue had already been grazed off the first go around and cattle moved off of the field. Overall, all foliar applications provided better control than the Grazon-Next impregnated fertilizer for the weeds present (common ragweed, lanceleaf, ragweed, croton, daisy fleabane, & some bitterweed).

Eight treatments were replicated 3 times. The chart below provides the cost per acre and the overall average rating for the treatments (0-10 with 10 being 100% control). A couple of takeaways regarding the impregnated fertilizer were: excellent control of common and lanceleaf ragweed, fair control on daisy fleabane, overall poor control on wooly croton, especially for those that germinated after the application. Plots received frequent and ample rainfall from application to 4 weeks after treatment, roughly 6-8 inches.

<table>
<thead>
<tr>
<th>Trial ID:</th>
<th>Fertilizer/Next</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Agnos</td>
</tr>
<tr>
<td>Treatment Date:</td>
<td>22-May-17 Rate control every 2 weeks</td>
</tr>
<tr>
<td>Plot size:</td>
<td>10 x 30 3 reps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trt #</th>
<th>Treatment / Name</th>
<th>cost/ac</th>
<th>rate / ac</th>
<th>mix (2 L)</th>
<th>3 WAT avg. rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>control</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>GrazonNext (foliar only)</td>
<td>$7.97</td>
<td>1.5 pt.</td>
<td>24 ml</td>
<td>8.33</td>
</tr>
<tr>
<td>3</td>
<td>GrazonNext (foliar only)</td>
<td>$10.63</td>
<td>1 qt.</td>
<td>32 ml</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Fert + 2,4-D amine</td>
<td>$3.25 + $34 = $37.25</td>
<td>1 qt. + 200 lb./ac 27-0-0</td>
<td>32 ml + 626 g 34-0-0</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Fert + GrazonNext</td>
<td>7.97 + $34 = $41.97</td>
<td>1.5 pt. + 200 lb./ac 27-0-0</td>
<td>24 ml + 626 g 34-0-0</td>
<td>8.66</td>
</tr>
<tr>
<td>6</td>
<td>Fert + Graslan</td>
<td>$7.13 + $34 = $41.13</td>
<td>1.5 pt. + 200 lb./ac 27-0-0</td>
<td>24 ml + 626 g 34-0-0</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Fert + Brash</td>
<td>$6.38 + $34 = $40.38</td>
<td>1 qt. + 200 lb./ac 27-0-0</td>
<td>32 ml + 626 g 34-0-0</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>Impregnated Fert</td>
<td>$13 + $34 = $47</td>
<td>1 qt. + 200 lb/ac 27-0-0</td>
<td>6.5 ml + 626 g 34-0-0</td>
<td>7.66</td>
</tr>
</tbody>
</table>

Conditions: 34-0-0 = $340/ton
Weeds Present: common ragweed, lanceleaf ragweed, daisy fleabane, croton
1 WAT rating (0-10 with 0 being no control and 10 being 100% control)
1 week notes: yellowing and epinasty on common lespedeza, lanceleaf and common ragweed, fleabane, and croton
Impregnated fertilizer had poor effect on croton at 1 week, fair on ragweed
Overall Results: Impregnated less effective than all the other foliar treatments. 95-100% control on common and lanceleaf ragweed. Initially, fair control on croton post emergence. Poor control as pre-emerge on croton. Fair control on daisy fleabane.
Ag Lime versus Pelletized Lime

Pelletized lime is developed through the process of granulating finely ground ag lime. These small, fine particles are then “glued” together with lignosulfonates. As in the case of ag lime, pelletized lime is used to raise pH levels of soil in order to accommodate plant life. Pelletized lime offers some advantages in handling as it spreads more uniformly and can be blended with fertilizers for row or broadcast application. It can be spread with fertilizer spreaders, which are capable of applying lower rates of material than lime spreaders. Another advantage is that less material is required to balance the soil than with traditional ag lime.

Although less material is required when using pelletized lime, the price on a per ton basis is considerably higher than bulk ag lime, so its use has mainly been confined to specialty markets, with little use in production agriculture. Some questions have been raised about recommended rates of this material & the speed at which it reacts compared to standard ag lime.

A general recommendation could be that when using pelletized lime, you can use 40% less of the recommended ag lime quantity (1,200 lbs. pelletized lime = 1 ton ag lime). Keep in mind, however that there are variables that affect this number. One variable in particular is the percent calcium carbonate and mesh size. Vendors are required by law to supply this information to the consumer. A 60-100 mesh size is desirable when applying ag lime.

Since pelletized lime costs 3-4 times more than ag lime, the important question is: “Are low rates of pelletized lime more effective than ag lime?” Since the pellets are composed of fine particles, pelletized lime would be expected to react quickly in the soil to neutralize soil acidity. Contrary to popular belief, the speed of reaction of pelletized lime is no faster than that of bulk ag lime. Thus, when comparing the two materials, less pelletized lime is needed to raise the soil pH to the desired level, but the increase in pH is no faster than with ag lime if both are applied on the basis of their neutralizing values.

Agricultural lime is seemingly a better choice for most situations in field crop production due its distribution of particle sizes for quick and long lasting reaction, lower cost and lasting benefits.

Forage Lime Demonstration Results

Two demonstration plots are currently ongoing. One is the multi-year lime demonstration plots where we are measuring the difference in soil pH changes with various lime materials from different sources and the application rate/acre.

Rain is the most limiting factor for forage growth in area with pH being perhaps the 2nd most limiting factor. But, unlike precipitation, it is one we can actually control, and doing so in an effective economical way is one of the foundations of a good farm forage program. Quality liming is a big investment, so we want to get it right.

These plots initially sampled out to an average pH of 5.3 back in January 2016, and the soil test recommended 2 tons lime/acre. This is for lime with an ECCE % of 47% (average Arkansas lime quality). As you can see, treatments 2-8 are very close to that; 9-15 were applied with significantly higher quality lime.

A soil pH of 5.3 is below what would be ideal for grass growth, & well below what we would like it to be for forage legumes. So, it was an ideal spot for some test plots. The lime applications (table below) were made in late January 2016, and to date, follow up sampling has been done at 3 weeks, 3 months, 6 months, & 12 months after the initial lime application. Since lime can take 3-6 months to fully break down & actually change the pH in the soil, we sample these plots at 3 weeks after treatment, 3 MAT (months after treatment), 6 MAT, 9, 12, 18, 24 & 36 MAT. The current results are in Chart 1 (Page 5).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Lime rate (lbs./acre)</th>
<th>Cost/Acre</th>
<th>Treatment</th>
<th>Lime rate (lbs./acre)</th>
<th>Cost/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check – no lime</td>
<td>0</td>
<td>n/a</td>
<td>9. Pelletized lime (64% ECCE)</td>
<td>100</td>
<td>$10.00</td>
</tr>
<tr>
<td>2. Pelleted lime (46% ECCE)</td>
<td>100</td>
<td>$11.20</td>
<td>10. Pelletized lime (64% ECCE)</td>
<td>500</td>
<td>$50.00</td>
</tr>
<tr>
<td>3. Pelleted lime (46% ECCE)</td>
<td>500</td>
<td>$56.00</td>
<td>11. Pelletized lime (64% ECCE)</td>
<td>1000</td>
<td>$100.00</td>
</tr>
<tr>
<td>4. Pelleted lime (46% ECCE)</td>
<td>1000</td>
<td>$112.00</td>
<td>12. Ag lime (77% ECCE)</td>
<td>2000</td>
<td>$40.00</td>
</tr>
<tr>
<td>5. Ag lime (53% ECCE)</td>
<td>2000</td>
<td>$10.30</td>
<td>13. Ag lime (77% ECCE)</td>
<td>4000</td>
<td>$80.00</td>
</tr>
<tr>
<td>6. Ag lime (53% ECCE)</td>
<td>4000</td>
<td>$20.60</td>
<td>14. Ag lime (77% ECCE)</td>
<td>6000</td>
<td>$120.00</td>
</tr>
<tr>
<td>7. Ag lime (53% ECCE)</td>
<td>6000</td>
<td>$30.90</td>
<td>15. Ag lime (77% ECCE)</td>
<td>8000</td>
<td>$160.00</td>
</tr>
<tr>
<td>8. Ag lime (53% ECCE)</td>
<td>8000</td>
<td>$41.20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued on page 5
Now, at 12 months after application, the soil pH is about where we’d expect it to settle, but there can be a few takeaways this early.

The pelletized lime, at the rates applied, does not match the neutralizing power of the ag lime. One of the claimed benefits of pelletized lime is that it works faster. Thus far, this study does not support that.

Pelletized lime plots have, thus far, failed to reach the optimum pH of 5.8. The only exception is the highest rate of 1000 lbs./acre with the higher quality pelletized lime (64% ECCE). The pH was raised to 5.8 at the 3 week mark but had fallen back down to below 5.5 at the 12 month mark. It should be noted that the 1000 lbs./acre rate of pelletized lime would also come at a cost of $100/acre.

The 46% ECCE ag lime treatment at the soil test recommendation of 2 tons/acre, at the 12 month mark, tested out to just below the recommended 5.8 pH. All treatments have rebounded from the dip they exhibited at the 6 month mark. Those samples, indicated by the purple bars were taken in August when soil moisture was low, when we might expect to see soil pH test somewhat lower.
Control for Armyworms

Continued from Page 2

newer products have little to no grazing or harvest restrictions. Per-acre insecticide cost will vary from as low as about $3.00 up to over $10.00. When calculating cost, always consider the cost per acre and not the cost per gallon of product. For example, a gallon of some products may treat over 100 acres, while others may only treat less than 10 acres. Generally, products with longer residual activity will cost more per acre. When armyworm pressure is high, longer residual activity may be worth the extra expense and save one application.

Also remember, grass that has been cut, grazed or is growing very fast following an insecticide application may not have much insecticide residue left. Pyrethroid insecticides are faster acting than insect growth regulators and work well on small and medium-sized caterpillars. In general, insect growth regulators will have longer residual activity than pyrethroids. However, because insect growth regulators are slower, they should be used when the caterpillars are small. Most insecticide labels will provide a rate range (low to high). Consider using the higher rate if the armyworms are large because they are harder to kill. Products available to control both armyworm species in forage are updated annually and listed in MP144, Insecticide Recommendations for Arkansas, available at http://www.uaex.edu/Other_Areas/publications/PDF/MP144/C_Pasture.pdf.

Forage/Grazing Management Tips

► Rotate pastures on a weekly basis to keep grass in a growing stage.
  • This will be worthwhile if drought sets in during late summer. (Savings from improved grazing management = 2-3 weeks more grazing when drought hits)

► Stockpile one or two bermudagrass or bahiagrass pastures to be stockpiled for fall grazing.
  • Clip or graze off old bermuda/bahiagrass forage to a 2 to 3-inch stubble.
  • Apply 50-60 lbs./acre of nitrogen fertilizer between August 1 and 15. (August 15 and 30 for southern Arkansas.)
  • Defer grazing until October. (Savings from grazing stockpiled forage instead of feeding hay = $25-$50 per animal unit or $50-$75 per acre of forage stockpiled.)
  • For more information, refer to fact sheet 3133 “Grazing Stockpiled Forages to Reduce Hay Feeding During Fall & Winter http://www.uaex.edu/publications/PDF?FSA-3133.pdf

► Pick a tall fescue field to stockpile for winter grazing
  • Clip or graze off old fescue forage to a 3-inch stubble by the end of August.

► Pick a bermudagrass field or a field to be renovated and prepare it for planting a forage brassica and/or ryegrass.

► Brassica planted in late August or early September on a pasture will be ready to graze by mid to late October.
  • Savings from forage brassica/ryegrass = $25 to >$100 per animal unit.

► Forage brassica varieties are more productive and have better cold tolerance than common food plot varieties used to attract wildlife.

► Secure a seed source.

► Local farm stores may not carry the recommended forage variety, but may be able to order.

Tips for Fall Calving Herds

► It is important for the cows to maintain a good body condition (5 to 6) as they enter the fall calving season.

► It is important to be prepared for the fall calving season. Check calving supplies. Supplies may include bucket, disinfectant (Nolvasan), antiseptic soap (Nolvasan scrub), calf puller & OB sleeves, lubricant, chains, handles, etc.

► Heifers should weigh 65% of their mature weight before their first breeding.