Does your winter feeding program need to include supplements?

The greatest cost by far to any animal operation is feeding costs. Foundational biology lessons gave us the knowledge that protein builds muscle and muscle means money. So how do we trim the budget yet maximize our marketable yield? With a smorgasbord of supplemental feeds available, the task of deciding which is best for your operation can be daunting.

Most Arkansas cattlemen rely on forages as the main source of protein for their herds. Therefore, the first step is knowing what nutrients your forages are providing via a forage analysis. Since many factors contribute to forage quality, never assume the supplement that works for your neighbor will work just as well for you.

The nutrient and level of deficiency of a forage dictate the type of supplemental feeding program needed. In general, self-fed supplements are better suited for correcting crude protein and mineral/vitamin deficiencies than an energy deficiency. This is because many self-fed supplements are designed to limit supplement intake to 1-1.5 lbs per day. Many times the question is not if the supplement of good quality, but rather is it possible for livestock to intake enough supplement to balance their needs (Table 2).

This leads to the next question of how frequently should supplements be provided. The answer hinges on the status of the cow. Nutritional requirement for a gestational and lactating cow differ greatly (Fig. 1). Offering supplement every 6 days could be sufficient for a cow in gestation, yet a lactating cow could require supplementation 2 or 3 times a week. A good rule of thumb for growing cattle is if supplement is offered at less than 0.5% body weight, feeding every other day is acceptable. Controlled methods such as lick tubs, liquid feed, and blocks often provide the quality, but not the quantity need for TDN.

Toxicity concerns can exist with any self-fed supplements. Urea toxicity would result from a mixing error. The Merck Veterinary Manual indicates that urea should not exceed 3% of the concentrate portion or 1% of the total diet. In conclusion, producers should determine if the supplemental feeding rate and management complement or complicate with self-fed options. To learn more about choosing self-fed supplements for beef cattle, visit uaex.edu and search for FSA3131 or visit the Pike CO CES Office.

Table 2. Predicted intake and performance response for moderate quality hay without supplementation and with two levels of supplementation

<table>
<thead>
<tr>
<th></th>
<th>Hay Only</th>
<th>Hay and 1 lb/day Supplement</th>
<th>Hay and Supplement Balanced for Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hay Intake, lb/d</td>
<td>28</td>
<td>27.2</td>
<td>25.9</td>
</tr>
<tr>
<td>Supplement Intake, lb/d</td>
<td>0</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Protein needs met, %</td>
<td>122%</td>
<td>129%</td>
<td>148%</td>
</tr>
<tr>
<td>Average daily gain, lb</td>
<td>-0.7</td>
<td>-0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Days to lose 1 BCS</td>
<td>106</td>
<td>140</td>
<td>Infinite</td>
</tr>
</tbody>
</table>

1 Hay: 12.4% CP and 56% TDN.
2 Supplement: 30% CP and 78% TDN self-fed supplement.
Cattle Lice and Grubs

Lice are potential wintertime pests of several livestock species, especially stressed animals. Producers should be aware of potential louse infestations on their cattle this upcoming winter. In some cases, severe direct economic losses in cattle production caused by biting or sucking lice may occur. Heavy louse infestations add to the stress of cold weather, shipping, poor nutrition and internal parasite load. Lice are generally most abundant on animals during the period of greatest winter stress and continue through early spring. Lice are winter pests because, generally, they do not survive well in the summer because hot temperatures are lethal. However, one or two percent of animals may serve as chronically infested “reservoir” animals. A few lice on the reservoir animals survive on cooler areas of the body such as the ear tips. As temperatures cool, lice may move onto uninfested animals. Crowded conditions that often occur at winter feed troughs exacerbate this spread. Lice are small (1/10 to 1/8 inch), wingless, species-specific external parasites of livestock and poultry. In cattle, one species of biting lice, the cattle biting louse (Bovicola bovis) and three species of sucking lice; the short nosed cattle louse (Haematopinus eurysternus), the long-nosed cattle louse (Linognathus vitula), cattle tail louse (Haematopinus quadripilusus) and the little blue cattle louse (Solenoptes capillatus) occur. Sucking lice pierce the skin and suck blood while the biting lice move about on the animal chewing hairs, skin and secretions. Both types of lice are problems during the winter and early spring but as mentioned earlier reproduce year-round at least on some animals. Lice are spread from animal to animal by direct contact such as shipping or feeding. Animals infested with lice will have an unkempt coat, scaly skin and possibly raw areas on the skin. Infested animals will scratch and rub to relieve the itching caused by lice. Often in heavy infestations, clumps of hair will fall off. Weight loss or reduced weight gain can occur with heavy louse infestations. Lice can produce multiple generations per year, thus allowing numbers to become high if uncontrolled. All louse stages (egg, nymph and adult) are found on the animal. Adult female lice glue eggs (called nits) to hairs, eggs hatch into nymphs in about 10 to 15 days, and after three molts, nymphs become adults. It requires about 1 month for an egg to develop into an adult. In cattle, light louse infestations are easily overlooked. Heavier infestations are easier to recognize by animals’ rubbing and loss of hair. A louse population on cattle can be estimated by examining five one inch square areas on the face, face, dewlap, neck, back and base of the tail. Lice populations on cattle are usually categorized as very slight (less than 5 per square inch), slight (5-10 per square inch), moderate (10-20 per square inch), severe (20-50 per square inch) and very severe (over 50 per square inch). Good nutrition usually reduces the negative effects of lice infestations on livestock and is the foundation of a louse control program. Sufficient nutrition will allow the animal to better deal with blood loss and irritation. Another very important component of lice prevention is to assume that all purchased or “new” animals are infested. With this said, new animals should be isolated from the rest of the herd until a full course of louse treatment is completed. Before treating louse infested cattle, one very important question must be asked and answered. Were your cattle treated for cattle grubs between Aug. 1 and Oct. 15? The answer dictates which products should be used to control lice in the winter and late spring. If cattle were treated at the appropriate time (between Aug. 1 and Oct. 15) with systemic insecticides (primarily endectocides containing doramectin, ivermectin or moxidectin to control cattle grubs), then systemic insecticides can be used to treat cattle for lice. If not, non-systemic insecticides must be used to control lice in the winter and early spring. Treatment with systemic insecticides after Oct. 15 in cattle that were not treated for cattle grubs can result in toxic reaction to dying grubs. When common cattle grubs die in the esophagus, cattle will have difficulty breathing and may vomit, salivate and die. If northern cattle grubs die in the spinal cord, cattle may exhibit posterior paralysis and weakened back legs but usually recover. Insecticides used for louse control are divided into two major categories; systemic products and nonsystemic products. For winter treatment of lice on cattle, selection of the right insecticide is crucial. If cattle were treated with systemic products (endectocide) containing doramectin, ivermectin or moxidectin at the appropriate time for cattle grubs, then endectocides can be used to control lice in the winter. Pour-on endectocides will kill both biting and chewing lice while injectable insecticides kill only sucking lice. However, if cattle were not treated with a systemic insecticide for cattle grubs at the appropriate time, then non-systemic products should be used. Non-systemic insecticides effective against lice include the pyrethroids such as permethrin, cyfluthrin, zeta-cypermethrin, gamma-cyhalothrin, and lambdacyhalothrin. Pour-on pyrethroids effective against lice include those containing permethrin, permethrin and biflubenzuron (an insect growth regulator), cyfluthrin, lambdacyhalothrin and gammacyhalothrin. In addition, dust bags containing pyrethroids have shown efficacy against lice. Although organophosphate products containing coumaphos, fenthion, phosmet and trichlorfon kill lice, they can exhibit systemic activity in treated animals. Remember to follow label directions and that not all insecticides labeled for use on beef cattle are registered for use on dairy cattle. To see a listing of insecticides available for louse control, consult the animal section of MP144, Insecticide Recommendations for Arkansas.

Article by: Kelly M. Loftin, UAEX Entomologist
GIVE COOL SEASON WEEDS THE BOOT

From Thanksgiving to Valentine’s Day, cool season weeds chill out as a seemingly non-threatening green patch in the pasture. After the temperature begins to rise in March, they show their full potential to be a big pest. From Buttercups to Wild garlic, these early weeds waste valuable nutrients from soils, take up precious real estate, and have the potential to lead to respiratory infections. The slower winter days should give producers ample opportunity to spray cool season weeds and prepare for a more nutritious, weed free first cutting in early spring. Spraying weeds such as thistles while they are in the rosette stage greatly increases the chance of good control. Bermuda pastures can benefit greatly from a spraying of glyphosate. This will get the majority of the cool season weeds that Pike Co pastures host. Tank mixing with a 2,4-D product should take care of the other weeds in the pasture. When the redbuds begin to bloom, producers should take note and stop spraying glyphosate on Bermuda pastures as dormancy should break soon after. Most modern chemical formulations only require about 2 hours before they are considered rainfast on a plant.

PLANTING COOL SEASON FORAGES CAN BE A WIN-WIN SITUATION

Those cold, winter rains can be harsh during hay feeding season. The soupy mess that is often left behind can take days, if not weeks to dry up. In times like these, stockpiled pastures of fescue can be a luxury. Its not to late to plan for a late winter or early spring forage crop. Typical cool season forages include cereal rye, oats, triticale, and annual ryegrass. Most cool season forages can be interseeded into existing Bermuda pastures. A lite disking and broadcast planter are sufficient if a no-till drill is not an option. Commonly, these forages are planted in early September and can be grazed as early as Nov 1. February plantings will still give a viable stand in late winter or early spring. Your best bet is planting annual rye as it will reseed and provide some forage next fall. “Marshall” ryegrass is a time tested variety with good results throughout the state. “Ozark” and “Bob” oats also provide quick growth but do not tolerate cool temperatures very well. Though cool season forages can be baled, it is recommended that they be used for grazing in the pasture. The amount of moisture in south Arkansas springs makes it difficult to dry small grains to the correct moisture content. To learn more about grazing cool season grasses visit uaex.edu and search for FSA3064 or visit the Pike Co CES Office.

PRIVATE PESTICIDE APPLICATOR TRAINING

February 27 @ Kirby High School Library, 6PM
February 28 @ Pike Co CES Office, 6PM
LAST CHANCE OF THE SEASON
Can’t get away from your chores? Don’t have time to drive to our office? Join us for our first ever online program!

We will proudly present our program “Invasive and Poisonous Weeds” on January 16 at 2:00 PM via Zoom live conferencing. Simply go to uaex.zoom.us and click “join meeting”. Enter meeting number 731-705-6377 and join our meeting on your computer, smartphone, or tablet. We will record the program and it will be posted to our website uaex.edu/pike for later viewing.

Financial Planning Series Kicks Off in February

Pike and Montgomery County Family and Consumer Science Agents are teaming up to provide a great Financial Planning Series. Keynote Speakers will be Dr. Laura Hendrix, Assistant Professor of Family and Consumer Sciences with UAEX and Mr. John Ross, Attorney and Senior Partner with Ross, Shoalmire, Elder Law Attorneys. The series is planned for Tuesday, Feb 21 and Tuesday, Feb 28th at the Glenwood CADC Sr Citizen Center from 5:30-8:30. A meal will be provided. For more information call the Pike Co CES Office at 870-258-2161 or email elangley@uaex.edu

Homeowner Gardening Series Coming up in March

Join us on Thursdays throughout the month of March for our Gardening Series. Each week we will discuss a new topic to help your garden grow a little better. These free programs will be offered twice a day (10 AM and 7PM) so you can choose which time works best for you. So come on down to the Pike Co CES Office and join us for this informational series! Call 870-285-2161 for more info.

March 2– Soils and Nutrients
March 9– Weed Control in Gardens and Lawns
March 16– Landscape Design and Flower Selection

UAEX Horticulture Specialists to Offer Blackberry School

UAEX Specialists Amanda McWhirt and Jackie Lee has organized the 2017 Blackberry School for commercial blackberry operations. If you are interested in learning more about blackberry orchards, this series would provide a wealth of information. The first class will be February 9 from 1-4 at the Clarksville Research Station. If you are interested or would like more information, contact ANR Agent Terrell Davis or visit the UAEX Fruit and Vegetable Production Facebook page.

We would like to say thank you to all of our producers, homeowners, and other clients for entrusting us for solutions to your problems. We have several programs planned throughout the year. Most of our programming is absolutely free and open to the public. We invite you to join us and learn a few new practices. We hope you always find our services helpful, efficient, and personal.

Terrell Davis, Staff Chair/ANR Agent