Feeding the Easy Keeper
Dr. Mark Russell, Assistant Professor

If you’re fortunate enough to ever own an “easy keeper,” consider yourself one of the lucky horse owners. Most horses do not fall into this category. Easy keepers are horses that usually maintain or gain weight on a minimum amount of feeding and require less management from horse owners.

But there is a downside to owning or caring for the easy keeper. Unfortunately, the easy keeper can potentially develop obesity, laminitis and metabolic issues. Overfeeding an easy keeper can:

- be hard on his musculoskeletal system,
- decrease his athletic stamina,
- interfere with heat dissipation and can contribute to metabolic syndrome,
- cause insulin resistance and
- cause laminitis.

There are various aspects of feeding the easy keeper that horse owners should think about and that can aid in management.

1. Owners of easy keepers should routinely perform body condition scoring (BCS) and modify feeding regimens to ensure these horses maintain a healthy body weight. Horses at an appropriate body weight should have rib and hip bones that are not visible but are easily felt. In contrast, a horse is considered overweight if:
   - His ribs are difficult to feel with firm digital pressure.
   - He has a “cresty” neck.
   - His withers are rounded and covered in fat.
   - The saddle and girth make indents in his fat when positioned.
   - His shoulder blades are not easily seen.
   - The area surrounding his tailhead is bulging or feels soft.
   - His inner thighs are in contact more than a quarter of the way down the inner thigh region when he is standing square.

2. Offer free-range mineral blocks in the pasture or stall. This should be both salt and mineral blocks. There are also “all-in-one” blocks available.

3. An easy keeper may need forage alone to meet all dietary requirements. Thus, concentrates can possibly be eliminated.
   - A horse owner can offer forage either free-choice or as a daily ration. If offered as a daily ration, there will be less waste and the bale of hay will be fully maximized.
A healthy adult horse requires 1.5%-2.5% of his body weight in hay per day. Easy keepers generally require only 1.5% of their body weight in hay each day. Thus, an average 1,000-pound easy keeper only needs 15 pounds of hay daily. This can be fed in either square bale form or round bale form. While round bales are more difficult to move, they are a cheaper form of feeding. Hay should be weighed prior to making any change. Simply estimating weight will not provide complete accuracy.

This amount also varies greatly on quality and quantity of grazing in pasture or turnout area.

The quality of hay is also an important factor in determining nutritional requirements for horses. The most reliable way to determine nutrient content is to have your hay tested. Contact your county extension agent to learn more about this option.

Make any and all hay feeding changes gradual. Start with a handful during the first feedings and increase slowly. You can also mix with existing hay.

Easy keepers who are overweight are also susceptible to developing equine metabolic syndrome (EMS) and/or insulin resistance (IR). EMS is associated with obesity, abnormal fat deposits, and chronic insulin resistance. IR is a condition in which an increased production of insulin is required in order to maintain (or attempt to maintain) circulating blood sugar levels within normal limits. Horses with EMS/IR have a higher chance of developing laminitis than non-EMS/IR horses.

- Rather than controlling EMS/IR through pharmaceutical drugs, it should be controlled through the horse’s diet as well as instituting exercise into the horse’s daily routine.

5. Speaking of diet, the easy keeper’s pasture access should be somewhat limited.

- Turnout time during the spring and fall should be restricted to just a few hours a day, if possible.
- Also, the grass length should be 3-4 inches tall (fully mature, lower calorie content).
- Grazing muzzles can also be used. However, they should only be used in an environment where they are not likely to get caught on something.
- Low sugar content hay is recommended. Have hay tested to ensure levels are 10%-12%. If sugar levels are high, the hay can be soaked in water for approximately 60 minutes.

6. Exercise should be part of the easy keeper’s daily routine. It can be in the form of:
  - Lounging
  - Hand-walking
  - Riding
  - Ponying
  - Hot walker
  - Driving

Though all these factors of having an easy keeper are important, there is no substitute for a good working relationship with your veterinarian. When purchasing a horse, weigh all factors that are part of responsible ownership.

**Sources**


Oke, S. Cushing’s Disease or Equine Metabolic Syndrome. www.TheHorse.com/16042


Ralston, S. L. Maintenance of the Easy Keeper Horse. www.esn.rutgers.edu/publications/factsheets/nutrition

**National Goat Conference Update**

Dr. David Fernandez, Extension Livestock Specialist

The 2013 National Goat Conference was held September 15-18 in Greensboro, NC. The conference is held every three years and is sponsored by USDA’s Southern Sustainable Agriculture Research and Education (SARE) program. The conference provides the latest information on goat production and management to livestock producers and agricultural professionals. Much of the information also applied to sheep production. This year’s conference was hosted by North Carolina A&T University.

The majority of those present were goat producers, many of whom had years of experience raising goats. Others are brand new to goats or are interested but have not yet taken the plunge. The conference provided them with an opportunity to discuss among themselves what works and what doesn’t. Producers also had many opportunities to talk with recognized experts who could answer their questions. University researchers were just as eager to talk to producers about their needs and how they can be addressed by future research. One area about which many producers seemed to want to hear more and have more research results is alternative or herbal dewormers.

Attendees at the conference heard speakers from the USDA Agriculture Research Service, colleges and universities from across the south, practicing veterinarians, representatives of state departments of agriculture and people directly involved in the sale and marketing of goat meat products. Topics covered by the speakers included parasite control and management, genetic selection and breed improvement, meat production, quality and marketing, emergency management for livestock producers, reproductive technologies and management, legal and regulatory issues, herd health and diseases, computers and technology.
in livestock production, dairy goat management and milk quality, and pasture management and nutrition. A panel of veterinary, academic and industry experts was on hand on the last day to answer questions and provide their insights into issues facing goat producers.

One of the problems faced by most of the producers in attendance is finding a veterinarian who knows goats and goat medicine. Dr. Joan Bowen from Mobile Veterinary Practice in Wellington, Colo., addressed this concern as the keynote speaker. She asked the producers to think about how intimidating it might be for a veterinarian to hear a producer call and say “I know you don’t know anything about goats, but…” Dr. Bowen noted that regardless of your veterinarian’s experience or inexperience with goats, he or she still has a wealth of knowledge about anatomy, physiology, pharmacology and disease management. The issue is putting that knowledge to work in a particular species. Then she challenged the audience to help their veterinarian become a good “goat vet.” By sharing your knowledge and respecting your veterinarian’s, you will both form a rewarding professional relationship and grow each other’s knowledge in caring for your animals.

The conference was capped by a farm tour and hands-on demonstrations by North Carolina A&T faculty and staff.

Winter annuals are a key component to achieving 300 days of grazing. However, with an abundance of hay this year, many producers are scratching their heads trying to decide whether or not to plant winter annuals. Some producers may even ask the question “Why would I plant winter annuals in a year like this?” To help answer this question, let’s review the information collected from 2012-13 winter annual demonstrations.

Demonstrations were planted either as a pure stand of brassica or brassica was planted in combination with ryegrass and grazed by either small ruminants or beef cattle. Annuals were broadcast seeded onto disked sod and fertilized with 30-50 units of N and P and K according to soil test recommendations in the fall. Two farms in Faulkner County applied additional N fertilizer in the spring. Fertilizer cost was based on 100 percent of the N cost and 15 percent of the cost of P and K. Only 15 percent of the cost of P and K was used because these were grazing demonstrations. Eighty-five percent of the P2O5 and K2O that plants accumulate for growth passes through the animal and is cycled back into the soil. Dry matter yield per acre was estimated based on the herd’s dry matter requirement for the grazing period and then divided by the number of acres planted. The cost per ton of dry matter was calculated by dividing the dry matter yield per acre by the total cost of seed and fertilizer per acre.

Table 1 summarizes the cost per acre for establishing winter annuals, the dry matter yield produced per acre and the cost per ton of dry matter. The average cost per acre for establishing winter annuals was $20 for the seed, depending on variety or species planted and the seeding rate. Fertilizer cost per acre averaged $25.75 for a single application in the fall or $68.06 for a fall and spring application. The average dry matter yield per acre produced from brassica or brassica and ryegrass combined was 1,150 and 6,045 pounds, respectively. The average cost per ton for producing one ton of dry matter yield was $25.95.

Cost savings were calculated by comparing the cost of establishing the annuals to the cost of feeding hay and supplement. Forage production was calculated as animal unit (AU) grazing days per acre based on the number, weight and nutrient requirements of the animals on each farm. The cost savings and the number of grazing days varied depending on planting date, variety or species.

**TABLE 1. Cost per acre for establishing winter annuals**

<table>
<thead>
<tr>
<th>County</th>
<th>Seed Cost Per Acre</th>
<th>Fertilizer Cost Per Acre</th>
<th>Total Cost Per Acre</th>
<th>Dry Matter Yield (lbs/ac)</th>
<th>Cost Per Ton of Dry Matter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Faulkner - 1</strong></td>
<td>$23.00</td>
<td>$75.30</td>
<td>$98.30</td>
<td>7,150</td>
<td>$27.50</td>
</tr>
<tr>
<td><strong>Faulkner - 2</strong></td>
<td>$27.75</td>
<td>$60.80</td>
<td>$88.55</td>
<td>5,945</td>
<td>$29.80</td>
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<tr>
<td><strong>Fulton</strong></td>
<td>$15.25</td>
<td>$23.20</td>
<td>$38.45</td>
<td>5,915</td>
<td>$13.00</td>
</tr>
<tr>
<td><em>Sebastian</em></td>
<td>$19.60</td>
<td>N/A</td>
<td>$19.60</td>
<td>900</td>
<td>$43.55</td>
</tr>
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<td><strong>Yell - 1</strong></td>
<td>$17.60</td>
<td>$28.35</td>
<td>$45.95</td>
<td>5,175</td>
<td>$17.75</td>
</tr>
<tr>
<td><strong>Yell - 2</strong></td>
<td>$16.80</td>
<td>N/A</td>
<td>$16.80</td>
<td>1,400</td>
<td>$24.00</td>
</tr>
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</table>

*Brassica planted as a pure stand
**Brassica planted in combination with ryegrass
species planted, fertilization and grazing method. The greatest cost savings and the most grazing days were from farms that planted brassica in combination with ryegrass, fertilized according to soil test recommendations and used rotational grazing.

Table 2 summarizes the number of animal units, the number of acres planted, the cost savings per AU per day and the cost savings per AU, the total savings, and the number of AU grazing days per acre. The average cost savings per AU per day and the savings per AU were $2.06 and $243.30, respectively. The average savings per farm was $7,092. The average number of animal unit grazing days per acre was 154.75.

Fuel is an additional expense associated with planting winter annuals as well as fencing for controlled grazing. If using a 2wd 50 hp tractor, it is estimated that about $7 per acre will be spent on fuel for establishing the winter annuals. Assuming three passes across the field for site preparation, one pass for planting and then one pass for fertilizing. Fuel usage per acre will vary depending on the tractor size and equipment used, as well as the number of passes across the field. A temporary electric fence kit, with a five-year life span, used for controlled grazing on 40 acres will cost around $600, $15 per acre over the useful life of the fence kit or $3 per acre per year.

The cost of feeding hay includes much more than just the production cost or purchase price of the hay. Additional expenses associated with hay feeding may include fuel cost for handling and transporting the hay from the field to a storage area and then back to the feeding area, the cost of rings or feeders and the cost associated with the dry matter loss of the hay depending on the storage and feeding method. Supplemental feed may be necessary to balance the animal’s diet, which could add significantly to the cost of hay feeding.

In 2012-13, 228 AU grazed 134 acres of winter annuals for a total savings of $42,550. In addition to the cost savings associated with grazing winter annuals vs. feeding hay, the quality of winter annuals selected and eaten by grazing animals should be higher than that of hay and usually meets livestock requirements for energy and protein. Grazing is the most cost-effective way of harvesting forages. Therefore, anything that extends the grazing season and reduces hay feeding tends to make good financial sense. Winter annuals should be a part of the management plan to achieve a 300-day grazing season. The only thing that might change from one year to the next is the number of acres planted.

**TABLE 2. Number of animal units, total savings and number of AU grazing days per acre**

<table>
<thead>
<tr>
<th>County</th>
<th>AU</th>
<th>Acres</th>
<th>Savings/AU/D</th>
<th>Savings/AU</th>
<th>Total Savings</th>
<th>AU Grazing Days/Acre</th>
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<tbody>
<tr>
<td><strong>Faulkner - 1</strong></td>
<td>27.4</td>
<td>15</td>
<td>$2.23</td>
<td>$436</td>
<td>$12,959</td>
<td>357</td>
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<tr>
<td><strong>Faulkner - 2</strong></td>
<td>36.0</td>
<td>65</td>
<td>$2.55</td>
<td>$542</td>
<td>$19,519</td>
<td>142</td>
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<td><strong>Fulton</strong></td>
<td>16.5</td>
<td>4</td>
<td>$2.92</td>
<td>$123</td>
<td>$2,018</td>
<td>173</td>
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<tr>
<td><strong>Sebastian</strong></td>
<td>56.9</td>
<td>10</td>
<td>$1.01</td>
<td>$6</td>
<td>$345</td>
<td>34</td>
</tr>
<tr>
<td><strong>Yell - 1</strong></td>
<td>23.4</td>
<td>25</td>
<td>$2.06</td>
<td>$276</td>
<td>$7,110</td>
<td>138</td>
</tr>
<tr>
<td><strong>Yell - 2</strong></td>
<td>67.9</td>
<td>15</td>
<td>$1.57</td>
<td>$24</td>
<td>$1,599</td>
<td>85</td>
</tr>
</tbody>
</table>

* Brassica planted as a pure stand  
** Brassica planted in combination with ryegrass

**Enrollment Open for the Arkansas Beef IQ Program**

Dr. Shane Gadberry, Associate Professor

Beef IQ is a program offered by the Cooperative Extension Service through participant paid registration and financial support of industry partners including Farm Credit of Western Arkansas, Arkansas Beef Council, Arkansas Cattlemen’s Association and Arkansas Farm Bureau. Additional sponsors have included Farm Credit Ag Heritage, Boehringer Ingelheim and Alltech.

Beef IQ is being relaunched this fall as a county-based program. Through a grant provided by Farm Credit of Western Arkansas, Beef IQ resources are web-based (www.arbeefiq.com) and include video presentations, video demonstrations, spreadsheet and web-based decision-aides and a library of reading material.

Multi-county groups that are currently enrolling or will be enrolling soon include Boone, Newton and Searcy counties; Baxter, Fulton and Marion counties; and Conway, Faulkner and Van Buren counties.

Participation in Beef IQ requires registering through a county Extension office offering the program. Registration costs $75 per person to cover county expenses such as meals, refreshments and handouts. Participants of the program will be provided a username and password to access the members area the Beef IQ web site. Participants will receive a maximum of 18 hours of classroom and a minimum of 8 hours of field day exercises. To be officially recognized as completing the Beef IQ course, participants must complete 12 of the 18 hours of classroom instruction and 4 of the 8 hours of field day instruction.

For more information, visit with your county Extension agent or contact Shane Gadberry (sgadberry@uaex.edu).
Plant Winter Annual Forages for Wintering Beef Cattle Even When You “Have Plenty of Hay”

Dr. Paul Beck, Professor

In the last three years, record acres of winter annuals (small grains like wheat, brassicas like turnips and/or annual ryegrass) have been planted by producers for wintering beef cattle due to hay and forages shortages related to the drought. Benefits identified by producers include reduced hay use, no need for concentrate supplements, improved cow body condition, stronger, faster growing calves and reduced total cost of wintering the herd compared to past years.

Summer this year has been kinder to us, at least in Southern Arkansas, and hay crop yields have been excellent. So, many producers have decided against planting winter annuals...because “they have plenty of hay.” If you notice, the list of benefits of winter annual forages includes several other benefits along with reducing hay needs...these benefits are just as real and just as important when you have plenty of hay.

The hay harvested in Arkansas generally is more deficient in digestibility and energy content than protein content. Analysis of over 500 hay samples from across Arkansas over the last three years indicates that crude protein is deficient for dry pregnant cows in only 10% of hays sampled, yet energy is deficient for dry pregnant cows in 25% of hays sampled. For lactating cows, 40% of hay samples are deficient in crude protein and 75% are deficient in energy. This is because hays produced in Arkansas are usually introduced forage species that naturally contain moderately high protein levels but also have naturally high fiber content that decreases digestibility and thus energy content.

Winter annual pastures contain very high crude protein content (20% to 30%) and are very high in digestibility (75% to 90%). Although the protein of these forages is not usually required by our cows, the energy content can be used to supplement the low energy in our hays to meet the cows’ requirements.

When we just need to supplement beef cows fed low-quality hay, we can plant 1/3 to 1/2 acre per cow of winter annuals and limit graze cows on these pastures two to three days per week while also providing free choice hay. As forage production increases in the late winter and early spring and cow requirements increase, cows can be allowed to graze more frequently to meet requirements and utilize extra forage. By early April, cows can be allowed full-time free access to winter annual pastures and hay feeding can be discontinued. This program can meet the requirements of lactating cows with very high nutrient requirements even if fed low-quality hay. This will decrease total hay needs by about 25% and save $30/cow.

Management of cows in this program is surprisingly easy. Cows get the idea quickly. When you show up in the morning and open the gate to the winter annual pasture, they will often be waiting for you. In the afternoon when you want to remove them from pasture, the cows will readily leave the pasture when hay is offered and very little ‘cowboying’ is required. Winter annual pastures are very high in moisture and low in fiber, and cows will crave dry hay in many cases. Cows’ grazing behavior also changes with limit grazing. As cows learn they are on pasture for a short time, they will start grazing as soon as they enter a pasture and graze as rapidly as possible with very little selectivity of grazing.

Even with plenty of hay, there are still multiple benefits to planting winter annuals. Cost is usually much less than for purchased supplements...and you don’t have to drive a pickup into pastures to deliver it to the cows.