Dear Producers,

A sure way to tell that spring is on the way is when the phone starts ringing and the soil samples start pouring into our office. Many producers are trying to get a jump on winter and spring weeds by applying herbicides. Questions about fertilizers and what to grow to replace bermudagrass are coming in.

The need for a soil test cannot be over emphasized. Applying blanket applications of mixed fertilizer and liming without a sample recommendation is dangerous territory. It is like walking into the drug store and telling the pharmacist to give me one of everything. The bottom line is most pastures and hay meadow sample results will only need nitrogen (urea or ammonium nitrate). So ask yourself! Why would I apply something I don’t need? Or what good does it do to throw up your hands and not apply anything? Many producers seem to have that attitude. So for ten minutes in each pasture or hay meadow, randomly drive or walk to 5 to 10 places and go 4 to 6 inches deep, place the soil in a bucket and mix well. Put a pint of the mixture in a soil sample box and bring it to our office. There is still plenty of time. Why? Because you do not apply fertilizer until a couple of weeks after green up.

Warning!!!! The low analysis soil additives and amendments are back. Do not waste money that could be spent on real fertilizer. The University of Arkansas Division of Agriculture has tested many products and in combination with Urea and Ammonium Nitrate, they are not cost effective!

Evaluation of nontraditional fertilizers for bermudagrass yield

<table>
<thead>
<tr>
<th>Treatment</th>
<th>July*</th>
<th>October</th>
<th>Total Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Nitrate</td>
<td>3229 A</td>
<td>4244 A</td>
<td>7474 A</td>
</tr>
<tr>
<td>Urea</td>
<td>2872 AB</td>
<td>3722 AB</td>
<td>6595 AB</td>
</tr>
<tr>
<td>Liquid Urea (23% N)</td>
<td>2877 AB</td>
<td>3546 B</td>
<td>6423 AB</td>
</tr>
<tr>
<td>Urea + Monty's Plant Food</td>
<td>2919 AB</td>
<td>3412 B</td>
<td>6332 B</td>
</tr>
<tr>
<td>Urea + Fish Emulsion</td>
<td>2619 B</td>
<td>3670 AB</td>
<td>6289 B</td>
</tr>
<tr>
<td>Urea + Sea 90 Mineral</td>
<td>2913 AB</td>
<td>3300 B</td>
<td>6212 B</td>
</tr>
<tr>
<td>Monty's Plant Food</td>
<td>928 C</td>
<td>1526 C</td>
<td>2455 C</td>
</tr>
<tr>
<td>Fish Emulsion</td>
<td>965 C</td>
<td>1307 C</td>
<td>2273 C</td>
</tr>
<tr>
<td>Sea 90 Mineral</td>
<td>847 C</td>
<td>1178 C</td>
<td>2025 C</td>
</tr>
</tbody>
</table>
Untreated Check | 745 C | 1127 C | 1873 C

* July: treatments applied 6/27/08 and harvested 7/28/08; October: treatments applied 8/7/08 and harvested 10/17/08.

** Treatments followed by the same letter are not significantly different at the 0.05 level.

**Results:** Bermudagrass dry matter yield for both harvests was significantly increased by application of N as ammonium nitrate, urea and liquid urea compared to the untreated check treatment (Table 2). Urea and liquid urea were not statistically different than ammonium nitrate but produced 10% to 16% less dry matter. Dry matter yield for Monty’s Plant Food, Sea 90 Mineral or Fish Emulsion applied alone was not different than the untreated check treatment for either harvest. Addition of 75 lb/acre urea with these products did not increase dry matter yield over urea alone. The urea/fish emulsion combination yielded statistically less (19%) on the July harvest than ammonium nitrate, but the reason for this difference is not known. Results show that the nontraditional fertilizers (Monty’s Plant Food, Sea 90 Mineral and Fish Emulsion) did not improve bermudagrass dry matter yield when applied alone or in combination with urea. Liquid urea and urea were effective for improving dry matter yield but produced 10% to 16% less bermudagrass dry matter than ammonium nitrate.

**Weed Control of winter and Spring Weeds!**

Many pastures and hay meadows have weed growth that is thick enough to prevent bermudagrass growth. These weeds will have to be killed before re-growth of the bermudagrass can occur. Most can be controlled with straight 2-4D but fields with thistles and curly dock will need stronger applications. Consult you MP44 (Arkansas Recommended Chemicals for Weed and Brush Control) to determine your needs. You can pick up a copy at our office our access online at [http://www.uaex.edu/Other_Areas/publications/PDF/MP44/MP44.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/MP44/MP44.pdf).

**Bermudagrass, Summer Annuals and Natives!**

Bermudagrass seed is in short supply and high in price. Many producers will have to apply fertilizer to existing thin stands of bermudagrass and hope for rain to help spread and fill in the bare spots. The recovery will be slow and will mean cattle will have to be removed until recovery occurs. Summer annuals such as sorghum sudan hybrids can help fill in the gap on grazing and hay production. Publication Fact sheet 2032 Summer Annual Grasses is available at our offices or online at [http://www.uaex.edu/Other_Areas/publications/PDF/FSA-2032.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/FSA-2032.pdf).

Much talk is being made about native grasses. Producers must realize however that native grasses are managed differently than our current grazing systems. The bottom line is if you are having trouble being successful with our current systems of warm and cool season grass combinations then native will prove even more of a challenge. Dr. John Jennings, State Forage Specialist released the following to give us some guidance on native grasses. The article is included in its entirety.
Native Warm-season Grasses - Drought-Proof or Drought-Tolerant?

John Jennings – Professor, Extension Forages

Many of you are being bombarded with questions about native warm-season grasses. Native warm-season grasses (for forage) are defined as switchgrass, big bluestem, little bluestem, and indiangrass. An article in a recent agriculture magazine had a quote claiming that you can drought-proof pastures by planting native grasses and producers are excited at that possibility. Drought-proof and drought-tolerant are not the same thing. Many warm-season forages are drought tolerant. No forage is drought-proof. Drought tolerance implies that a forage can tolerate effects of drought and survive. It doesn’t mean that the grass will thrive during drought. All forages need water and an optimum temperature range to grow well. Drought-proof means the grass suffers no ill effect of drought and keeps on growing as if weather conditions were normal. A field of native grasses where this observation of drought-proof status was made was cut for hay in late summer last year. It produced a good yield, but it had never been cut before and had never seen a cow. At the same time we had johnsongrass in fields at Batesville that was large enough to cut for hay. Native grasses can be part of a forage program and can be cost effective, BUT they must be managed differently and they are NOT drought proof.

The University of Tennessee has done a lot of work recently with native warm-season grasses through their biofuels program. Many producers had switchgrass established under biofuel contracts, now expired, and now needed to know how to use these grasses for forages. Dr. Gary Bates has headed up the forage management effort. Gary provided several points at the recent Forage and Legume Management Conference in Harrison. He pointed out that native grasses require less fertilizer for good hay yield than bermudagrass. Hay quality is only moderate at best and can be very poor if allowed to get mature before harvest. Yield can be 4-6 tons per acre. Under grazing, these grasses can be stocked at a high rate during the first 6 weeks of the growing season but the stocking rate must be reduced later in summer to avoid stand damage. Stocker calf gains can be quite good, exceeding 2 lbs/hd/day, under good management. Two big factors that must be accounted for in managing these grasses is that they should never be cut or grazed shorter that 8-12” and the grazing or hay season is about only 100 days at most. Native grasses should not be harvested or grazed past mid-August at all. Any late season growth must be left to allow the plants to store reserves for winter. Grazing too late, grazing during winter, and grazing too early in spring will damage stands. Winter annuals like wheat or rye grass should not be overseeded into native grasses or the competition and grazing will damage stands. Under hay management, these grasses should never be cut more than twice in a year.
To avoid weakening stands, hay should only be cut once the year following a two-harvest year. Late cut hay will produce high yield but very poor quality hay.

Establishment is tricky and should not be undertaken without patience. Native grasses are notorious for poor seedling vigor. Very little topgrowth is produced the seeding year. Most growth is directed toward root growth. That means weed control is critical during the seeding year. With good weed control, native grass yield the second year will be about half to two thirds of a fully established stand with top yields not occurring until the third year after planting. Herbicide options are available but differ for the different species. Seeding rates are generally 5-6 lbs of Pure Live Seed per acre as pure stands. This rate can be adjusted in mixtures so the total seeding rate of mixtures is 10 lbs PLS/acre. The PLS of many natives may only be 30% so it may take 3 lbs bulk seed to get 1 lb PLS.

The best fit for most producers that understand the management requirements would be for hay production with occasional grazing. Natives are promoted heavily for their benefit to wildlife, especially quail and rabbits. However, optimizing forage production from native grasses will not optimize wildlife habitat. Hay harvest or grazing must be deferred until forage is poor quality to protect the major quail nesting period of mid-summer. Switchgrass is usually planted alone. It is a good choice for hay and grazing but poor for quail. Big bluestem is a good choice for hay or grazing and has good wildlife benefit under deferred forage harvest management. Mixtures should not include switchgrass. Big bluestem and indiangrass mixtures are more compatible, although big bluestem alone is easier to manage and maintain stands.

So for most producers that struggle with managing fescue or bermudagrass, native grasses will not likely be a good option. Planting these grasses without realistic expectations will lead to disappointment and stand failures. For grazing, rotational grazing and use of good fencing is critical to control grazing height. For hay, harvesting once or twice yearly, and leaving a tall stubble are required. These grasses can be effective additions to a forage program, but in no way are replacements for all other forages. The articles of “sounds too good to be true” are just that. Native grasses have been around since before settlers. Overgrazing took them out before. Good management must be part of a program to make them work now. More information will be coming out on native grasses this spring.

For more information of pastures, hay meadows or beef production then give us a call at 479-968-7098

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Staff Chair