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...Happy Holidays !!

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Testing your forage, testing your hay

As we approach winter months, feeding of hay will increase for some producers. Hay quality is affected by several factors such as plant specie, variety, presence of weeds, insect damage, diseases, weather at time of harvesting, and harvest technique. Once a hay field is established hay quality will be affected mostly by factors under the control of the grower, which are mainly the level of fertilization used and the maturity stage of the forage at harvest.

A visual inspection is useful to identify moldy hay, which has a distinct smell. However, a visual estimation can only evaluate physical appearance and cannot estimate the quality of hay. The correlation between physical appearance and nutritive value of hay is not strong. Spring hay is usually very high quality and many times is the worst looking hay. On the other hand, forages that are very mature may be green in color but still have high lignin that is very indigestible rendering low quality hay.

The only way to assess your forage is to have it tested!

For additional information please check the following publication

“Factors Affecting Forage Quality” http://edis.ifas.ufl.edu/pdffiles/AG/AG16100.pdf
Weed control in overseeded pastures

Many cattle producers plant temporary grazing areas with ryegrass, wheat, oats, or other small grain varieties since summer pastures are now dormant. A successful winter pasture can be a highly productive and somewhat inexpensive way to improve animal performance during the winter months. However, many winter pastures do not consider weed management as part of the production strategy and often have rampant infestations of wild radish (aka wild mustard), geranium, and other winter weeds.

Control of winter weeds is relatively inexpensive and easy if it is done in a timely manner. Wild radish seeds begin to germinate when soil temperatures reach 65 F. At the time of this writing, soil temperatures are already below this mark, meaning that wild radish is actively germinating right now. It is important to begin scouting the winter pasture areas to determine your level of winter weed infestation and plan your herbicide application timing.

For wild radish control, the first step is to start clean. This means either a tillage operation or a good herbicide burndown. If using herbicides, realize that glyphosate is not effective on wild radish and other herbicides should be included to improve control. After the crop is planted, the key is to catch the radish when it is small. For small wild radish, 1 pint of 2,4-D will provide good control. By small, I mean the plants should be about the size of your hand. If you wait until the plants are large and flowering, control will usually range between 50 and 0%. Other herbicides such as Banvel and Weedmaster may be used, but these will also be ineffective on large weeds.

Timing the herbicide application relative to the winter pasture should also be considered. Applications made soon after emergence will cause significant leaf rolling and yellowing. Applications made too late can cause lodging and additional injury symptoms. Therefore, herbicides should be applied after the plants have fully emerged and begun to tiller, but prior to head formation. Additionally, application rates of 2,4-D, Banvel, or Weedmaster should not exceed 1 pt/A. But if the weeds are appropriately small, 1 pt/A will be more than enough herbicide to provide effective control.

Plan to start scouting your winter pastures now and planning the herbicide application. Properly timed, the herbicide will provide excellent weed control and dramatically improve forage yield.

Calendar of Events


Feb 2-4 American Society of Agronomy—Southern Regional Branch https://www.agronomy.org/membership/branches/southern

Feb 3-6 Weed Science Society of America Annual Meeting. Vancouver, BC, Canada http://www.wssa.net
If you remember from the September issue of Agronomy Notes, we introduced four weed species that we felt needed some awareness. This is the last installment of some of the less frequent weeds in found in pastures. Since these less frequent weeds are often seasonal, or regional, our knowledge of them is often much less. But since we constantly test products and look to expand our control recommendations, we will discuss some new insights about these weeds and their control.

**Bushmint (Hyptis verticillata).** Bushmint (Figure 1) is a woody perennial species that typically grows in partially shady areas and can grow to 10 ft in height. Stems of this plant are typically hairless or sparsely haired, branched, and contains opposite leaves. As it is a mint species, it has a very unpleasant mint odor when leaves are crushed or when the stems are mowed. The most promising treatments for this woody plant include either triclopyr (Remedy Ultra, others) at 2 pt/A or Pasturegard HL at 16 to 24 oz/A. Timing appears to be important for control of this plant as we have observed greater control in the spring when the plan is more herbaceous in nature. Retreatment will be necessary, regardless of the herbicide used, but control should range in the 70 to 80% range within one year of a single treatment.

**Whitehead broom (Spermacoce verticillata).** Whitehead broom (Figure 2), also known as shrubby false buttonweed and southern larrflower, is a non-native species that appears to be increasing in south Florida pastures, and it is common along roadsides and other disturbed areas. It is a fine-stemmed herbaceous to woody shrub with square to rounded stems. Leaves are opposite, with two or a cluster of smaller leaves in whorls at the nodes. The small white flowers grow in round heads in both terminal and lateral positions on the stem. The terminal part of the stem continues to grow through the center of the flower so that the seeds develop at nodes in mid-stem.

*Continues next page...*
This species is a very important nectar source for the larra wasp, one of the most important biocontrol agents for the mole cricket. However, if this plant is common on your property, care should be taken to contain it within its current location as we have found that hexazinone (Velpar, Velossa) at 1 lb/acre is the only herbicide that has activity on this species.

Before using hexazinone, it is essential to realize that this herbicide is relatively mobile in soil and highly active against oaks. So applications on slopes above desirable hardwoods should be considered with great caution.

Ragweed parthenium (Parthenium hysterophorus). Ragweed parthenium (Figure 3) is a relatively new weed to pastures in south Florida. It appears to be increasing, especially where cull vegetable crops have been fed to cattle in pasture. Whereas common ragweed leaves are opposite at the base of the stem, ragweed parthenium leaves are always alternate. Ragweed parthenium can grow to 6 ft in height.

It can be toxic to livestock, and has resulted in death of cattle when it was 5-10% of the diet. However, it is usually sparingly eaten by cattle and other livestock. Control of this species in pastures, unlike in other cropping systems, appears to be relatively easy. Herbicides such as 2,4-D (2 qt/A), 2,4-D + dicamba (2 qt/A), GrazonNext HL (24 oz/A), PastureGard HL (24 oz/A) have all been shown to provide 90 to 100% control of 20 to 36-inch tall plants. Aminocyclopyrachlor premixes containing either 2,4-D or triclopyr (Remedy Ultra, others) are also effective. Since this plant can be toxic to cattle and is known to contain allelopathic substances, it is best to get a handle on this species before it becomes a large scale problem in your pastures.

We realize that there are many more uncommon weeds than we have described to date. Luckily most of these uncommon weeds are fairly easy to control with existing herbicide programs.
Endosulfan now illegal for most Florida crops

The insecticide endosulfan, which can be labeled as Endosulfan, Thiodan, Drexel Endosulfan or Thionex7, has been undergoing a phase-out for end-users. The phase-out began on July 31, 2012 for many Florida crops such as broccoli, Brussels sprouts, cabbage, celery, cucumber, lettuce, summer melon (cantaloupe and watermelon), summer squash, non-bearing and nursery stock citrus, collard greens, eggplant, kale, kohlrabi, mustard greens, strawberry, sweet potato, Christmas trees, and leatherleaf fern. July 31, 2012 was the last date of legal application to these crops, which have for the large part been harvested by 2013.

The use of this product is now illegal for all Florida crops except apple, blueberry, pepper, potato, pumpkin, sweet corn, tomato and winter squash. Floridian end-users are able to use endosulfan on these crops (apple, blueberry, pepper, potato, pumpkin, sweet corn, tomato and winter squash) until December 31, 2014. If these same crops are grown in other states, endosulfan may be used in those states until July 31, 2015. Livestock ear tags and some vegetable crops grown for seed have an end-user date of July 31, 2016. Currently, there are tolerance expiration dates that are the same as the end-use date, leaving no time between a possible last application and the tolerance expiration. Under such circumstances, it is possible that a lawful application of endosulfan could result in residues in a crop for which the tolerance has been revoked. In the case of a lawful application, the product would not be in violation if the grower could provide written spray records demonstrating the application occurred before the end-use date.

It is clear that if endosulfan is applied on a crop after the labeled expiration date, the applicator would be in violation even if the applicator is applying product purchased before the end-use date.

In Florida, endosulfan may now only be applied to the crops whose use ends 12/31/2014.
Early postemergence weed control in sugarcane on muck soil

There are different weed control programs that sugarcane growers on muck (organic) soil can use on plant and stubble cane for early postemergence weed control. In plant cane mechanical cultivation or scratching is still widely used by many growers. However, to minimize subsidence of muck soil due to practices such as cultivation, these growers will have to rely more on herbicide programs for weed control. Weed control using herbicides enable sugarcane to have an initial competitive advantage against weeds. The predominant herbicides used for early postemergence weed control in sugarcane on muck soils include ametryn, atrazine, metribuzin, mesotrione, halosulfuron, and 2,4-D. However, use of 2,4-D is limited early in the season because of potential spray drift to sensitive vegetable crops. These herbicides can be tank-mixed to broaden the spectrum of weed control in order to ensure early season sugarcane advantage over weeds. The most common tank-mixes for early postemergence weed control in sugarcane are listed in Table 1. Selection of the ideal herbicide program should be based on weed species present in a particular field. Atrazine and metribuzin should be used for broadleaf weed control. Mesotrione should also be used for broadleaf weed control particularly in fields dominated by common lambsquarters, which has been reported by many growers not to be effectively controlled with triazines (particularly atrazine). Ametryn and halosulfuron should be used when fields have grass and yellow nutsedge pressure, respectively. It is important to remember that these herbicides will be effective on actively growing small sized weed species. Also, use of these herbicides should be according to label instructions.

Table 1: Herbicide program, rate, and cost per acre for early postemergence weed control in sugarcane

<table>
<thead>
<tr>
<th>Herbicide programa</th>
<th>Rate per acre</th>
<th>Cost per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ametryn Atrazine NIS</td>
<td>0.25 lb 1 gal 1 qt/100 gal</td>
<td>$11.22</td>
</tr>
<tr>
<td>Ametryn Metribuzin NIS</td>
<td>0.25 lb 1.25 lb 1 qt/100 gal</td>
<td>$12.95</td>
</tr>
<tr>
<td>Ametryn Atrazine Mesotrione NIS</td>
<td>0.25 lb 1 pt/A 3 fl oz/A 1 qt/100 gal</td>
<td>$13.49</td>
</tr>
<tr>
<td>Ametryn Metribuzin Mesotrione NIS</td>
<td>0.25 lb 1.25 lb 3 fl oz 1 qt/100 gal</td>
<td>$23.41</td>
</tr>
<tr>
<td>Ametryn Atrazine Halosulfuron NIS</td>
<td>0.25 lb 1 gal 1 lb 1 qt/100 gal</td>
<td>$35.04</td>
</tr>
<tr>
<td>Ametryn Metribuzin Sandea NIS</td>
<td>0.25 lb 1.25 lb 1 lb 1 qt/100 gal</td>
<td>$34.80</td>
</tr>
<tr>
<td>Metribuzin Halosulfuron NIS</td>
<td>1.25 lb 1 lb 1 qt/100 gal</td>
<td>$33.07</td>
</tr>
<tr>
<td>Halosulfuron NIS</td>
<td>1 lb 1 qt/100 gal</td>
<td>$21.98</td>
</tr>
</tbody>
</table>

aNIS, nonionic surfactant.