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Forage

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Upcoming Field Days

West Florida REC, Jay, FL, Thurs., May 22
To register: www.miltongators.com or call (850) 983-5216 X 113

An example of improper storage of pesticides that could cause blunders. (Not at UF, of course!)
Photos on this page: Fred Fishel
In times when Nitrogen fertilizers and fertilizers in general are escalating in an almost vertical trend, the idea of using forage legumes is an attractive and almost necessary proposition. Forage legumes, if harvested and allowed some growth for later use as cover crops, function as a slow release fertilizer. They may partially substitute chemical fertilizer use and may also sustain/enhance soil organic matter content. Their use is beneficial for many Florida soils, especially for sandy soils which typically have low natural soil fertility, do not retain much water or nutrients, and are often prone to excessive nutrient leaching losses.

How much Nitrogen Do they Fix? And When Is the Nitrogen Available?

Legumes have the ability to associate with certain soil bacteria (rhizobia) that fix atmospheric nitrogen. They may add between 20 to 150 lbs N/acre per season (see table below), depending on the legume type, growing conditions and symbiotic N-fixing bacteria present in the soil. Their herbage also tends to be richer in proteins with no nitrates, and decomposition is more rapid compared to grass/grain crops. Legumes when used as green manure decomposes rapidly when incorporated with moist soil. Nitrogen is available after decomposition in four to six weeks depending on weathering conditions; in hot summer rainy conditions it may be even less than four weeks. Nutrients released should be used immediately by the planted crop or warm-season grass, or it will be lost to leaching or escaping in the air as gas.

<table>
<thead>
<tr>
<th>Legume</th>
<th>Yield - Biomass (lbs/acre)</th>
<th>Yield N (lbs/acre)</th>
<th>Seeding rate (lbs/acre)</th>
<th>Seeding Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Summer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aeschynomene</td>
<td>2000 - 4000</td>
<td>50-100</td>
<td>6-8^2</td>
<td>Mar. 1 - June 30</td>
</tr>
<tr>
<td>Alyce clover</td>
<td>1500-3500</td>
<td>20-65</td>
<td>15-20</td>
<td>Mar. 1 - June 30</td>
</tr>
<tr>
<td>Cowpeas</td>
<td>2000 - 4500</td>
<td>50-90</td>
<td>6-8^2</td>
<td>Mar. 1 - June 30</td>
</tr>
<tr>
<td>Hairy Indigo</td>
<td>4500-9000</td>
<td>80-150</td>
<td>6 - 10</td>
<td>Mar. 1 - July 15</td>
</tr>
<tr>
<td>Velvetbeans</td>
<td>2200 - 4000</td>
<td>50-85</td>
<td>30-50</td>
<td>Mar. 1 - June 30</td>
</tr>
<tr>
<td><strong>Perennial Summer</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Rhizoma Peanut</td>
<td>2000-6000 (12-months)</td>
<td>50-130</td>
<td>80-100^3 (bs. rhizomes)</td>
<td>Jan. 15 - March 15 and July</td>
</tr>
<tr>
<td><strong>Annual Winter</strong></td>
<td></td>
<td></td>
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<tr>
<td>Crimson Clover</td>
<td>1500-4500</td>
<td>35-120</td>
<td>30-45</td>
<td>Oct. 1 - Nov. 15</td>
</tr>
<tr>
<td>Hairy Vetch</td>
<td>1500-5500</td>
<td>35-150</td>
<td>20-30</td>
<td>Oct. 1 - Nov. 15</td>
</tr>
<tr>
<td>Lupine</td>
<td>2000-4500</td>
<td>45-120</td>
<td>30-45</td>
<td>Oct. 1 - Nov. 15</td>
</tr>
<tr>
<td>Red Clover</td>
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</tbody>
</table>

Dr. Yoana Newman  
Forage Specialist  
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Head Smut on Oats and Wheat

There were many calls about head smut on oats and wheat this year. Smut is mainly a problem on small grains if they are taken out of a bin and planted without seed treatment of fungicides. Once heads start to emerge and you see smut, it is too late for treatment. Fungicides applied at flag leaf on wheat will have little impact on smut. In most cases only a low percentage of the heads are affected and it may lead to lower quality hay or off-flavor forage but does not produce toxic compounds. Be aware of seed stored in the bin that had a fairly high percentage of smut when taken out of the bin for next year’s planting since it will have more smut if seeds are not treated prior to planting.

Dr. David Wright, Extension Agronomist
North Florida REC, Quincy,
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Calendar Dates

Upcoming Field Days

May 22
West Florida REC, Jay, FL
8:30am - 3:00 pm, Preregistration by 5/19 $25 includes catered lunch
Topics include: Herbicides and weed control; Native Plants/Shrubs; and Managing Bobwhite Quail
For more information: http://erec.ifas.ufl.edu or call (561) 993-4702

Professional Society Meetings

May 12-14
Southern Pasture and Forage Crops Improvement Conference
Knoxville, TN

June 1-4
Florida State Horticultural Society and Crop Science
Society of Florida Meeting, Marriott North, Ft. Lauderdale, FL
Visit www.fshs.org or call Eric Simone, at (352) 392-1928, ext. 208 for information.

June 17-19
2008 Florida Cattlemen’s Association Convention
Marco Island, FL

July 7-11
2008 American Society of Animal Sciences and American Society of Dairy Science Annual Meeting. Indianapolis, IN

July 13-17
Caribbean Food Crops Society Meeting.
Miami, FL ~ Hosted by UF/IFAS

July 13-15
Southern Peanut Growers Conference
Edgewater Beach Resort, Panama City Beach, FL
Soybean acreage is expected to double or triple in Florida in 2008. Across the U.S. acreage is expected to increase by more than 10%. This demand has caused short seed supply of varieties that have been tested in the region. Variety tests eliminate varieties that do not perform well. Growing untested varieties can lead to problems with diseases, nematodes or other factors that result in poor performance. However, if growers find that they have to grow varieties that have not been tested in the south, they should consider maturity groups from late 4 through group 8. The optimum planting date for soybean is May 15 to June 15. Soybeans can be planted earlier and later than this date but yields are usually lower and there may be more pest problems.

Dr. David Wright, Extension Agronomist
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Chilling hours or Vernalization of Wheat

Wheat varieties need a certain amount of chilling hours to head out or flower. Heading of some varieties is also influenced by photoperiod. The number of hours below 50 degrees F is critical for all varieties, however, it varies greatly depending on where the variety was developed. The farther the variety is grown from where it was developed, the less likely it will respond as expected.

Many wheat varieties are bred north of Florida and require a longer vernalization period to flower. It is important to plant those varieties early. Our normal recommended planting date for wheat for grain in Florida is November 15 to December 15. Varieties requiring high chilling hours should be planted in the first part of the planting season. Plant only early maturing wheat varieties in mid December and do not plant any variety after that date for grain. Most adapted wheat varieties will head out during the last days of March or the first week of April. Varieties that head out in Mid April are filling the head in hot weather and the test weight will normally be low as well as yield.

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Dr. Ron Barnett,
Professor Emeritus Small Grain Breeding
Early Season Nutsedge Control in Cotton

Nutsedge is one of the most common weeds across the Southeast. This weed is particularly troublesome in cotton since it establishes early in the season. However, there are no effective preemergence or early postemergence herbicides to control nutsedge. Glyphosate, at 0.75 lb ae/A will commonly provide only 70 to 80% control. A glyphosate/MSMA combination is highly effective, but MSMA has recently been refused re-registration by EPA. The implications are that when existing stocks of MSMA are exhausted, this herbicide will no longer be available. Envoke is a postemergence herbicide that has proven to be extremely effective on nutsedge, but Envoke cannot be applied before cotton reaches the 5-leaf stage of growth or severe cotton injury will result.

If nutsedge is control is necessary prior to cotton reaching the 5-leaf stage, a two-shot herbicide program will be required. In this situation, the best solution is to spray glyphosate first which will kill smaller nutsedge plants and essentially stop larger plants from growing for a period of several days. The glyphosate will hold the nutsedge “in check” while the cotton continues to grow. After cotton reaches the 5-leaf stage, Envoke can then be applied.

It is important to note that the glyphosate and Envoke applications should be separated by at least one to two weeks. Control with Envoke may be reduced if applied to nutsedge that is still injured (not actively growing) due to the glyphosate application.

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Top Pesticide Blunders

On occasion, accidents and problems associated with pesticide use in Florida are reported to the PIO. Accidents are going to happen, but these reports from California top anything that we have heard. According to the California Department of Pesticide Regulation’s Illness Database, the following selected blunders were reported during 2006-07.

1. When Orange County residents complained of a raccoon problem, a friend overseas sent them a black, granular pesticide. The wife mixed it with meat as bait for raccoons. The raccoons did not eat it, so she labeled and froze the meatballs. Some time later, her husband cooked and ate the meatballs. He became seriously ill and drove to a hospital (Suspected pesticide-poisoning victims should never drive themselves to treatment, since they may be impaired by the toxin). This victim survived both his mistakes. Later analysis of the pesticide showed that it was nine percent aldicarb, a highly toxic insecticide; one teaspoon of the pure ingredient could kill five healthy adults.

2. In Los Angeles County, a woman put some insecticide into a soft drink bottle and gave it to her sister to take home. The sister left the bottle on a table, where her husband and four-year-old daughter drank from it. They recognized their mistake and made themselves vomit before going to an emergency room; both recovered (However, some liquid pesticides pose a risk to the lungs from induced vomiting. Pesticide labels provide treatment instructions, but these victims did not have a labeled container. Fortunately, they had no further health problems from their pesticide exposure).

3. In San Joaquin County, an apartment dweller set off a "bug bomb" sitting on top of his gas stove. When the aerosol came in contact with the stove's pilot light, the resulting blast blew out the apartment's windows, pushed out walls and raised the roof. A neighbor's windows also blew out, according to firefighters who responded to the scene. "Bug bombs" should never be used in any structure until all ignition sources, including gas pilot lights are turned off.

4. A Monterey County apartment resident poured three cleaning products into a toilet bowl - an inappropriate mix, and then left the bathroom, and returned a short time later. When she entered the room, she inhaled the vapors from the chemical reaction, began to experience breathing problems, and had to call 911 for assistance.

The moral of all of these blunders is that pesticide label directions must be read and followed. All of these accidents could have been prevented; and fortunately, the outcomes were not fatal.

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