



Agronomy Notes

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Reducing drought stress in cotton

Most of the Deep South has been under drought conditions for the past two years with little relief in sight in the near future. Many non-irrigated growers have tried to get cotton planted early to take advantage of remaining moisture from limited winter rains to establish stands. Growers are optimistic with the new varieties of cotton showing excellent yield potential with limited rainfall over the past couple of years.

Data from the past 4 years following winter grazing shows that root systems of cotton following winter grazing are 50-80% larger than where the winter forage was used as a cover crop only. We think the larger root systems in the non-irrigated fields is the main reason that we are seeing 150-400 lbs/A more lint following winter grazing vs. non grazing while the irrigated areas are only slightly higher yielding with grazing. We believe that cattle grazing can increase yields of following cotton crop especially under non irrigated conditions and can reduce the fertility requirements significantly from recycling of nutrients in the manure. Our data would also indicate that less irrigation water is needed since the larger root system is exploring a larger soil volume. Growers should try this on part of their farm or work with a nearby livestock producer to plant cotton after winter grazing.

Small grain harvest

Small grain harvest may be a couple of weeks earlier this year due to the warm conditions during most of the growing season and earlier heading. Small grain normally heads out the last week of March or the first of April. Much of the small grain planted on time was headed out by the 15th of March this year. This will help for double cropping purposes since most growers would like to plant peanuts and cotton in the first half of May if possible.

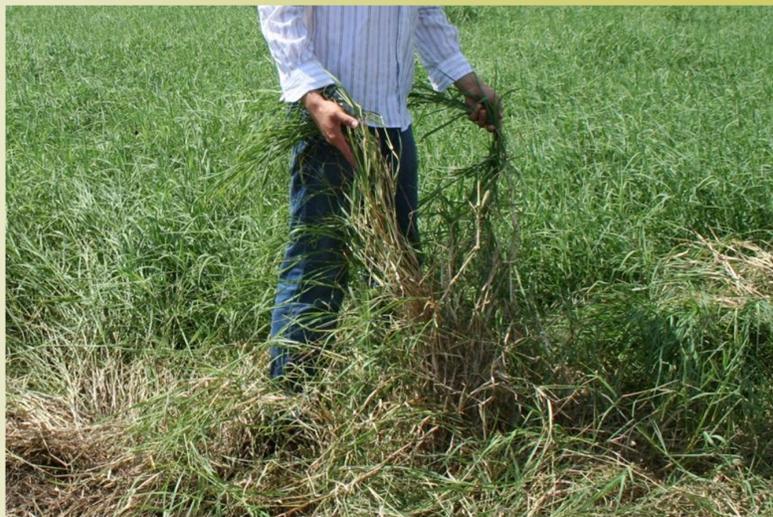
It is critical to get small grain planted timely as some of the wheat varieties that were planted late did not vernalize and did not head out or headed out very poorly. The figure below shows wheat on the left that did not have enough chilling hours (vernalization) and wheat on right on the 20th of April which is close to harvest due to earlier than normal heading.



Things to consider for forage summer planting

Vegetative planting—conditioning of vegetative planting material

As we are approaching the summer planting season, make sure to condition your bermudagrass planting material by making a complete fertilization of the nursery stand following the soil test recommendations. In addition to 40-50 lbs of nitrogen/acre and the recommended phosphorus and potassium make sure to include a mineral mix. Allow the material enough time to grow and mature. New shoots are not good planting material. Let the tops grow for a couple of months by which time the buds (or embryonic shoot) will be fully mature and ready to develop new shoots. Two weeks before planting follow up with additional 30 lb of N/acre. This conditioning plan will provide vigorous tops with buds that should root readily. Planting tops should be done with summer rains only or if there is irrigation available as this material tends to desiccate very rapidly.

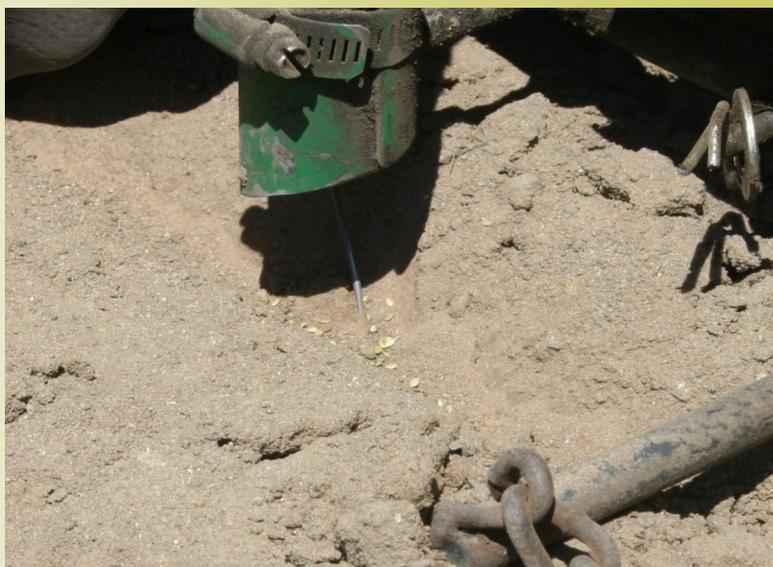


Bermudagrass tops that have been conditioned and are ready to be cut for planting .
Photo: Y. Newman

Seeded planting

If planting grasses by seed use certified seed only as this is the only guarantee to acquire the varieties that you want. In the case of bahiagrass, buying certified seed will guarantee that you are obtaining improved varieties such as Tifton 9, TifQuik, or UF-Riata, and will keep you from buying Pensacola at the price of these improved varieties.

Follow the planting depths guidelines and do not plant the seeds too deep as this is a mistake common to many planting failures. Planting depth for bahiagrass, browntop millet, or crabgrass is less than 1/4 inch, while for pearl millet and sorghum planting depth is between 1/4 to 1/5 inch.



Bahiagrass seed placed at less than 1/4 inch.

Photo: Y. Newman

Planting by sexual seed or vegetative material always should be done into a well prepared seedbed. Planting into a seedbed that is weed free shortens the time the grass will take to cover the planted area and the time to utilization of the grass.

Cressleaf Groundsel/Butterweed Infestations on the Increase in Pastures

During the past couple of years we have seen an increase in the number of calls of a succulent plant that produces many yellow flowers. In some cases, the infestation has been so high that the pasture looks like a sea of yellow. In row crops we think of wild radish when we see a sea of yellow, but the plant infesting pastures is commonly known as butterweed or cressleaf groundsel.

Butterweed is a winter annual, with emergence beginning as early as November in some areas of the state. It tends to prefer moist soils, so presence of the weed in low lying areas in pastures is quite common. It first grows as a rosette, with leaves oppositely arranged on the stem, but it may appear to have whorled leaves as the internode length on the stems tends to be fairly short (Figure 1). Leaves of this plant tend to be deeply lobed, except at the seedling stage when the leaves are nearly entire. As the flowering stalk elongates, the stems are ribbed with streaks of red or purple (Figure 2). The leaf arrangement becomes alternate on the succulent and hollow stems.

Butterweed is toxic to both cattle and horses. It is known to cause liver disease with cattle symptoms including listlessness, decrease of appetite, and photosensitization in extreme cases. Horses tend to appear uncoordinated after ingesting the plants and often become entangled in fences and awkwardly bump into objects.



Control of butterweed is successful with 2,4-D during the rosette growth stage. We have observed excellent control of butterweed with GrazonNext or Milestone during any growth stage. Currently, many of these plants are maturing, and the wind-blown seeds will likely result in an increase in butterweed infestations next spring. Since it is likely too late to begin a control program this year, it is best to take note of these infestations and scout the pastures next spring before stem elongations occurs to achieve the most effective control.

Figure 1. Butterweed rosette in a bahiagrass pasture. This size of rosette is commonly observed in late December to early January.

EPA Denies Petition on 2,4-D Pesticide

In a petition filed on November 6, 2008, the Natural Resources Defense Council (NRDC) requested that EPA cancel all product registrations and revoke all tolerances (legal residue limits in food) for the pesticide 2,4-dichlorophenoxyacetic acid, or 2,4-D. After considering public comment received on the petition and all the available studies, EPA is denying the request to revoke all tolerances and the request to cancel all registrations. By way of background, in 2005, as part of the regulatory process to ensure pesticides meet current regulatory standards, EPA completed a review on the registration and on the safety of the tolerances for 2,4-D. EPA determined that all products containing 2,4-D are eligible for reregistration, provided certain changes were incorporated into the labels and additional data were generated and submitted to the EPA for review.

During the recent review of the petition from NRDC to revoke the tolerances, EPA evaluated all the data cited by NRDC and new studies submitted to EPA in response to the reregistration decision. Included in the new studies is a state-of-the-science extended one-generation reproduction study. That study provides an in-depth examination of 2,4-D's potential for endocrine disruptor, neurotoxic, and immunotoxic effects. This study and EPA's comprehensive review confirmed EPA's previous finding that the 2,4-D tolerances are safe. EPA also carefully reviewed NRDC's request that the Agency cancel all 2,4-D product registrations. Based on studies addressing endocrine effects on wildlife species and the adequacy of personal protective equipment for workers, the Agency concluded that the science behind our current ecological and worker risk assessments for 2,4-D is sound and there is no basis to change the registrations.

2,4-D is a phenoxy herbicide and plant growth regulator that has been used in the U.S. since the 1940s. It is currently found in approximately 600 products registered for agricultural, residential, industrial, and aquatic uses. There are 85 tolerances for 2,4-D. EPA published the NRDC petition for public comment on December 24, 2008. (Source: EPA Pesticide Program Updates, 4/9/12).

Weed Science

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Palisade® 2EC – A New Plant Growth Regulator for Sugarcane

A new plant growth regulator (PGR), Palisade® 2EC, was recently labeled for use in sugarcane. It is formulated as an *emulsifiable concentrate* and contains 2 pounds of trinexapac-ethyl per gallon. Palisade acts as a PGR in sugarcane by shortening internodes which improves standability of the crop and mitigates risk of lodging from strong winds, thereby improving seed piece production. When used prior to harvest as ripener, it increases and/or maintains the sugar content for an extended harvest window.

Palisade can be applied aerially or by ground at a minimum spray volume of 2 and 10 gal/A, respectively. Application rates for internode shortening for seed piece production range from 4 to 12 fl oz/A (0.07 to 0.2 lbs a.i./A). Two split applications can be made for internode shortening. The first application of 4 to 12 fl oz/A should be made when 6 fully developed full size leaves have appeared (bottom leaf should be feeding internodes above the soil). The second application of 4 to 12 fl oz/acre should be made when 6 additional fully developed full size leaves have appeared. However, the total amount of Palisade applied per acre/crop/season in sugarcane should not exceed 19 fl oz. For ripening in sugarcane, Palisade application rates range from 11 to 19 fl oz/A (0.18 to 0.31 lbs a.i./A) applied 28 to 60 days prior to harvest to increase sugar content and/or extend the harvest window. Palisade should not be applied to sugarcane under stress from lack of water, poor fertilization, abnormal temperatures, or disease. Some varieties may be more sensitive to Palisade and exhibit symptoms such as stunting. However, affected plants will resume growth under normal agricultural conditions.

Calendar of Events

To follow the link, press “Ctrl” and put cursor over link, and “click.”

- May 2-4** **61st Annual Florida Beef Cattle Short Course**, Gainesville, FL
<http://animal.ifas.ufl.edu/extension/beef/BCSC/BCSC2012/short.shtml>
- May 7-10** **Aquatic Weed Control Short Course**, Fort Lauderdale, FL
<http://conference.ifas.ufl.edu/aw/hotel.html>
- May 10** **5th Annual Biomass Supply Chain & Logistics Conference**, Tone Mountain, GA
<http://www.biomasssupplychain.com/>
- May 16** **Cool Season Workshop—by Cool-season grass initiative**, Rogers, AR
<http://www.afgc.org/docs/2012TentativeAgenda.pdf>
- May 24** **UF/IFAS Corn Silage and Forage Field day**, Citra, FL
<http://animal.ifas.ufl.edu/extension/CSFD/CSFD/>
- May 20-26** **Caribbean Food Crop Society meeting**, Mexico
<http://cfcs.eea.uprm.edu/>
- June 3-8** **9th Intecol International Wetlands Conference**, Orlando, FL
<http://www.conference.ifas.ufl.edu/intecol/>
- June 6-8** **2012 Southern Pasture and Forage Crops Conference**, San Juan, PR
<http://spfcic.tamu.edu/>
- June 18-22** **FL Cattlemen Association Annual Convention and Allied Trade Show**, Marco Island, FL— <http://www.floridacattlemen.org/events.html>
- July 27-29** **Florida Small Farms Conference**, Kissimee, FL
<http://smallfarms.ifas.ufl.edu/>