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Late Boll Set On Cotton

Cotton sets fruit over an eight week period normally. If cotton is planted timely in late April or early May, it will begin blooming near July 1 through the end of August. Almost 3/4 of the yield is from bolls set during the first three weeks in the first and second position along the main stem. Management of cotton for late season bolls is often not a good decision as they often contribute less than 5% of the yield and jeopardize the remainder of the crop. Bolls on the upper nodes seldom mature if they bloom after early September and contribute little to the total weight of the cotton crop.

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Replacing DPL555 With Bollgard II

Expiration of DPL 555 Cotton and Transition to Bollgard II

DPL 555 cotton has been grown on about 90-95% of Florida acreage over the past several years. It is a one protein Bt gene cotton called Bollgard and is to be replaced by Bollgard II (two Bt protein) cotton after this season.

- ⇒ This gives the cotton less likelihood of getting insect resistance to the Bt proteins than a single protein.
- ⇒ All Bollgard cotton has to be purchased by the expiration date (for original Bollgard) of September 30, 2009 and can be planted in the 2010 season.
- ⇒ Seed treatment will be applied by DP&L and will be their standard seed treatment.
- ⇒ All seed will be sold in 250,000 seed count bags only.
- ⇒ Seeds will be shipped by February 28, 2010 and all seed sales are final.
- ⇒ Growers will be invoiced \$25/bag for seed cost at time of purchase and trait fees will be invoiced in July of 2010.
- ⇒ Price of the technology will be flat with 2009 for the BGR technology in DPL 555. There will be no credit or returns.
- ⇒ There will be a replant provision but it will be with BGII variety if a replant is needed.

There is currently about 24% of the amount planted for the last several years of DPL555 seed available for 2010. Seed supplies will be tight and will be on a first come, first served basis as I understand it. There will be no restrictions on how much an individual grower can get except supplies are limited.

***Any unplanted BG seed in 2010 must be returned to Monsanto
or destroyed including partial bags.***

If there are any updates to this, we will try to get this information out before the end of September.

Dr. David Wright

Late Planted Soybeans



Symptoms of Asian Soybean Rust on underneath side of the leaf. Note that there are no yellow halos around pustules.

Photo: D. Wright

Many growers planted soybeans late this year due to weather. **These soybeans should be scouted closely for insects and diseases.** Most of the late planted soybeans will be subject to being infected with Asian soybean rust since it has been identified in most counties across the panhandle. Consider a preventive fungicide application on late planted soybeans as it gets into full bloom (R2 stage) especially if tropical storms and hot, humid conditions continue. Normally soybeans lose about ½ bu/A yield potential for every day that planting is delayed past June 15. However, planting in narrow rows after July 15 and having irrigation can compensate for some of that yield potential loss.

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The New Turf Block: Dwarf Bahiagrass and Perennial Peanut

There's a new turf block at the North Florida Research & Education Center in Quincy. Environmentally friendly dwarf bahiagrass and novel perennial peanut have taken the high road at the NFREC. Gary Knox, Cheryl Mackowiak, Ken Quesenberry, Kevin Kenworthy, and Ann Blount, along with county faculty Clyde Smith and Doug Mayo, are collaborating on evaluating plant introductions and breeding lines of bahiagrass and perennial peanut (rhizomatous types) for use in landscape settings and roadsides. This is just one example of the multi-disciplinary research, education and extension activities that go on at the center.

Reduced fertilizer costs and reduced mowing requirements are just two of the many traits that dwarf bahiagrass and perennial peanut offer.

Ann, Ken and Kevin are establishing over 100 perennial peanut ecotypes and a dozen dwarf bahiagrass lines at the Center. Gary will focus his efforts on the beauty and utility of these plants, while Cheryl will address the plant nutrient and water requirements. Clyde and Doug are promoting these species through extension work with clientele and hosting field days. In addition to agronomic and horticultural evaluations, resident entomologists, Russ Mizell and Charlie Riddle will monitor insect species that may be associated with these plants.

We are planning a field day and tour of the new NFREC-Quincy Turf Block next summer. This collaboration will result in new utility turf for our Florida highways and recreational areas. It will also provide a lucrative enterprise for our local producers. The Turf Block will soon provide another reason to visit all that grows at the NFREC.

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Fall and Coping with Pasture Mole Crickets

Mole crickets can substantially reduce forage and hay production in pastures and hay fields in Florida by tunneling of the sod. They feed on leaves and stems of bahiagrass but mainly on the root system. Roots damaged by mole crickets cannot provide the necessary support and cannot take up water and nutrients to nourish the plant, causing death of the roots and over time the affected bahiagrass stand. The most harmful of the three pest species is the tawny mole cricket, *Scapteriscus vicinus*, and the notes below refer to that species.

With the beginning of the spring, usually in March, the female insects fly while the males make tunnels and sing to attract females. The females lay eggs in April and May. Eggs incubate for three weeks, whereupon nymphs (which look like tiny adults but have no wings) start hatching and developing. The nymphs feed and develop from May through early September, whereupon many of them become adults (a few spend the winter as large nymphs). In cold weather, mole crickets become inactive deep underground, but they will still move close to the surface and feed during warm spells.

What mole cricket pasture damage to look for in the fall?

In September, look for galleries (horizontal tunnels just below the surface), churned up soil, and patches of yellow grass that later turns brown before completely dying--caused by the new adults and the developing nymphs.



Chisel rig to apply the beneficial nematodes.

Photo: H. Frank

The only commercial control available and recommended at this time is to treat using beneficial nematodes (Nematac is the commercial product from Becker Underwood) that kills pest mole crickets. The product Nematac is best applied subsurface using a chisel rig when the soil is wet. (see extension publication EDIS # ENY 663/ IN413). Or, a boom sprayer may be used when the soil is completely soaked, or during rain. The nematodes should be applied in strips (apply one strip, skip seven, apply one, etc.) across a mole-cricket-infested pasture, because the nematodes are alive and will fill in the untreated strips in about six months.

A parasitic wasp called *Larra bicolor* that was first released in Alachua County has now spread to almost all counties in central and northern Florida. This wasp provides some level of free biological control of pest mole crickets wherever it occurs, and eventually should spread everywhere in Florida. The wasp gets its energy by feeding on nectar at flowers of certain plants. These plants include *Spermacoce verticillata* (shrubby false buttonweed or larrflower) and *Chamaecrista fasciculata* (partridge pea). Propagation of these wildflowers will benefit the wasp (see extension EDIS publication EENY-268).

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Operation Cleansweep Pickup Request

Operation Cleansweep provides for a contractor to come directly to a farm or pesticide application business for pickup and disposal of pesticides when there is a sufficient quantity in a defined area. There is no cost charged to those who participate in the program.

Operation Cleansweep is a mobile collection program that provides agricultural producers, nursery and golf course operators, and pest control services a safe and economical method of disposing of cancelled, suspended and unusable pesticides. Proper disposal can be expensive and place a regulatory burden on small agricultural producers and companies. *Operation Cleansweep* offers an opportunity to avoid these barriers and to promote safe and environmentally sound pesticide use, handling and disposal.

Operation Cleansweep was initiated in 1995 with the original intent of collecting lead arsenate, a widely used pesticide in Florida citrus production, but banned for use by the EPA in 1978.

During 1995, Operation Cleansweep collected more than 70,000 pounds of lead arsenate.

Statewide surveys have identified substantial quantities of cancelled, suspended and unusable pesticides stored throughout Florida. Some of these materials had been in confinement for many years and were in containers unsuitable for proper storage.

Some, such as chlordane and DDT, are no longer allowed to be used. Considering these factors, a 3-year pilot program was initiated in 1996 to collect all unused pesticides. The

program has been a success as evidenced by the participation and that **to date over 1,000,000 pounds of unused pesticides have been collected.**

For more information, contact the Florida Department of Agriculture and Consumer Services by calling 877-851-5285 or email to Cleansweep@doacs.state.fl.us.

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Storage of old pesticides poses environmental and safety hazards.

Photo compliments of FDACS

Herbicide Resistance

At this time of year, all the herbicides for a given crop have been sprayed. But before we turn our attention away from weed control for another year, **it is important that we stop and think about the efficacy of our spray program.** In particular, we need to think about herbicide resistance.



Photo 1: All weeds are controlled except this one isolated area. This indicates weed resistance.

Photos: Dr. S. Culpepper, University of Georgia

Resistance: Palmer amaranth has been documented to be resistant to the ALS family of chemistry (Cadre, Accent, Staple, Strongarm, Envoke, ect.) and glyphosate. Although glyphosate and ALS resistance has not been documented in North Florida, that **does not** mean that resistant Palmer amaranth has not invaded this area. Now is an excellent time to critically scout fields and attempt to determine the success of your weed control program.

What to look for: The most important observation is the **pattern of existing weeds.** Were all weeds controlled except for one area in the field? Usually resistance begins with one plant. It will drop seeds that are also resistant – so failure to control “weed islands” (see Photo 1) in the field is very indicative of the early stages of resistance. It is also possible to bring weed seed into a field with contaminated equipment. See if there is a pattern with the weeds heaviest on one side of the field. That would be indicative of a path the picker traveled last season.



Photo 2: Classic example of a mixed population of susceptible and resistant weeds.

Photo: S. Culpepper

The most obvious factor is **living and dead weeds occurring in the same area.** Some weeds will not be controlled because they were not emerged at the time of application, or maybe they were too large for the herbicide dose to be effective. However, if you observed side by side weeds living and dead weeds that are of similar age, chances are that resistant weeds are present. (See Photo 2 for example.)

What to do if you suspect resistance: If possible, remove these plants from the field to prohibit more resistant seed from dropping. If there are too many suspect weeds for hand removal to be a reasonable option, think seriously about what crop you can grow in this area next year. For example, if you suspect glyphosate resistance, it could be useful to rotate away from cotton or soybeans where glyphosate is the foundation of the weed control

program. Consider corn and plan to use the maximum allowable atrazine rate (3 pints PRE followed by 2 pints POST). If you suspect ALS resistance, rotate away from peanuts since Cadre is the principle herbicide and plan to incorporate corn or cotton. If using cotton, a good residual herbicide program will be necessary to keep these weeds in check.

Herbicide resistant weeds have been around for a long time and crop producers have successfully managed them. But, it does require a greatly increased level of **management.** There are still several herbicides and application options (such as spray hoods) that can help overcome these resistant weeds. But applications must be made in a timely fashion that targets small weeds. Also, new research has indicated that Palmer amaranth cannot emerge from a depth of greater than 2” and that seeds only remain viable in the soil for 3 years. Though we have no data to prove this, deep tillage followed by 2 or 3 years of intense weed control may reduce Palmer amaranth pressure in some fields.

Calendar & Field Days

- August 27** **2009 Extension Farm Field Day**, [West Florida REC](#)
Free to the public; registration encouraged: 850-983-5216, ext. 113.
- September 8** **2009 Florida Tomato Food Safety Update**, Ritz-Carlton, Naples
Pre-registration is encouraged to ensure enough handouts are available.
Contact: adberry@ufl.edu
Free admission due to the generosity and sponsorship from the
FDACS Block Grant entitled “Good Agricultural Practices Training
Grant” and the Florida Tomato Exchange.
- September 15** **Nutrient Management Workshop**, Okeechobee County Civic Center
Contact: Patrick Hogue, beefman@ufl.edu or 863-763-6469
- September 15-17** [Annual Georgia Peanut Tour](#), Douglas, Fitzgerald, and Tifton, GA
- September 15-18** [International Citrus and Beverage Conference](#), Clearwater Beach
- September 19** [Fall Field Day and Open House](#), NFREC-Quincy
Free to the public compliments of [ADAGE](#)
Register [online](#) or call 850-875-7100 ext. 0
- September 22-24** [Southeast Herbicide Applicator Conference](#), Panama City Beach
- October 20-22** [Sunbelt Ag. Expo](#), Moultrie, GA
- October 28th** [2009 Florida Ag Expo](#)
Gulf Coast REC, Balm
- November 1-5** ASA, CSSA, SSSA annual meeting, Pittsburgh, PA.
- November 7** “Livin’ the Country Life - Land and Animal Ownership” Conference
Bert Harris Agri-Civic Center, Sebring
Sponsor: South Florida Beef-Forage Program in UF IFAS Extension
Contact: Manatee County Extension Service, Christa Kirby
941-722-4524
- November 14** [Florida 4-H Centennial Gala](#), Jacksonville
- November 15-17** [Energy Conference](#), Orlando
- February 24-26, 2010** [UF Water Institute Symposium](#), Gainesville

ANNOUNCEMENT:

The *Proceedings of the Florida State Horticultural Society* communicates the results of applied and technical research, and teaching activities relevant to the needs of horticulture in the state. These publications, however, are of general interest to horticulturists elsewhere. This [link](#) will take you to the Volumes of FSHS Proceedings.