

# AGRONOMY

UNIVERSITY OF  
**FLORIDA**  
IFAS EXTENSION

# NOTES

Vol. 31:8

August 2007

## *DATES TO REMEMBER*

<b>August 6-9th</b>	- Beef Cattle Reproduction Management School, Deseret Ranch, Deer Park, FL
<b>August 9</b>	- 10 <sup>th</sup> Regional Hay Field Day, Alachua
<b>September 20th</b>	- 2007 Equine Institute and Allied Trade Show, South Eastern Livestock Pavilion, Ocala, Marion County.
<b>October 19th</b>	- Quail and Dove Management Short Course, Arcadia, FL.

## IN THIS ISSUE

### **CORN**

Field Tests for Nitrate in Drought Stricken Corn .....	2
Soybeans After Corn.....	2

### **COTTON**

Potential for Cotton.....	2
---------------------------	---

### **FORAGE**

Cattle Feed After Drought Stressed Corn .....	2
Summer Time and Hay Curing in Florida .....	3

### **WEED CONTROL**

Spraying with Liquid Fertilizer.....	3
--------------------------------------	---

### **MISCELLANEOUS**

Recent Pesticide Blunders.....	4
Earn Pesticide Applicator CEUs on Your Own.....	4

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Employment Opportunity \_ Affirmative Action Employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Office. Florida Cooperative Extension Service / Institute of Food and Agricultural Sciences / University of Florida / Larry Arrington, Dean.

## **Field Tests for Nitrate in Drought Stricken Corn**

Livestock are sensitive to high nitrates in grass crops and care should be taken when grazing summer annual grasses during drought periods. Nitrates are usually highest in the base of the stalk and become less as you get higher on the plant. It may take a week or longer after rains for the nitrates to be diluted throughout the plant. Plants that have died from drought may have high nitrates in the lower stems; if cut for hay or silage, this plants with high nitrates need to be cut at a higher stubble height to avoid cutting the stem parts with the highest nitrate concentrations. Plants should be checked or tested before being utilized after periods of drought. The nitrate test can also be used to determine if nitrogen is adequate for corn growth during the vegetative stage of growth. Kits to test testing for nitrates in forages can be found on the web or contact your local county extension office.

David Wright

## **Soybeans After Corn**

Growers who have irrigation and want to plant soybeans after corn can do so successfully. In recent years, maturity group V soybeans have been planted in mid to late August in 36" rows with yields of 35 bu/A. Bean yields can be increased by as much as 25% when more narrow rows are planted. Planting closer rows makes a more efficient use of light, nutrients and water. Planting after late August is probably too late for good yields; the earlier in August or July that soybeans can be planted, the higher the yield potential. Even though years ago we recommended maturity group VIII soybeans for late planting, the earlier group (MG V and VI) seems to mature naturally without a

frost and give good yields when planted late with adequate height. Cool nights and light frosts slow down pod fill and yield potential.

David Wright

## **Potential for Cotton**

Even though cotton was slow to germinate in May and June due to the drought and growth has been erratic, the potential for a good crop is still within reach. Usually cotton planted after the first of July fruits up well and looks as if it will make a good crop but seldom does. Cotton planted in the 3<sup>rd</sup> week of June has made more than 3 bale cotton at times in North Florida but cannot recover from a lot of stress and replanting would be out of the question if stand failures occur. The period from emergence to bloom can take about 60 days. The last effective bloom date for cotton is usually around the first week of September. Cotton planted in April and May emerged over a 6-8 week period due to the drought. Therefore, blooming started in late July and will continue through early August leaving 3-5 weeks of effective blooms. Thus, cotton could produce a very good boll set and yield despite the crop not being very uniform because of the different emergence times in the same field. Give cotton every chance to make a profitable yield by protecting blooms and young bolls from stinkbugs as well as plant bugs and provide adequate fertility.

David Wright

## **Cattle Feed After Drought Stressed Corn**

Many growers are considering winter forages to help overcome corn or other feed sources lost due to drought. However,

millets and sorghum-sudan grasses may be more of a sure thing and will give growers forage sooner than fall grazing. These grasses may be planted after corn that was mowed down, grazed, or cut for hay or silage. These grasses may also take advantage of residual fertilizer made to the previous crop. Recent rains will help these crops get off to a good start and they have high quality. They also germinate and grow with low moisture conditions compared to corn. Early planted small grains often have problems with barley yellow dwarf virus which stunts and delays forage availability. Consider using the summer annual forages and plant them in August. These annual forages will grow until frost hits.

David Wright

### **Summer Time and Hay Curing in Florida**

The moisture content of fresh forage is around 75 – 85%, so getting forage to where it is dry enough for baling – which is around 20 % moisture - requires removing a large amount of water. The number of days to bring the moisture down to 20% is typically 3 or more. However, you want to quickly cure your hay because rapid curing keeps the forage from respiring and consuming sugars. Once the forage is below 40% moisture the respiration rate is almost zero. Rapid removal of moisture also helps in maintaining the green color in the hay as well as avoiding spoilage due to rain. Drying of fresh cut forage is affected by different factors: solar radiation intensity, air temperature, relative humidity and soil moisture. Moisture can also move from the air to the crop when the relative humidity is very high as is the case when there is dew or rain occurs. Typical hay production practices in Florida include ‘tedding and raking’. Tedding disperses or scatters the forage over the entire field in order to capture all the solar radiation and use more efficiently the energy of the sun. Tedding also makes a thinner layer which produces a

more uniform drying. Usually, tedding shortens the curing time by about ½ day. Raking should be done at 35-40% moisture to keep dry matter losses under 4%. If raking is done too late (when crop is at baling moisture) losses can exceed 20%. Also, to minimize losses, hay should be raked in the same direction that it was mowed.

Yoana Newman

### **Spraying with Liquid Fertilizer**

Many hay producers opt to spray herbicide in a liquid nitrogen solution (28-0-0, 32-0-0, etc) so they can fertilize and control weeds in one pass. This procedure can be a convenient one-pass solution for two problems. However, it is possible for herbicide and liquid N to react with one another and cause the solution to clabber, or gel, in the spray tank. To avoid that situation, here are some things to consider before using liquid N/herbicide solutions.

1. Not all herbicides are compatible with fertilizer blends. Read the herbicide label to ensure that special mixing steps are not required to improve compatibility.
2. If in doubt, perform a jar test. A jar test is simply when you mix herbicides and nitrogen solutions together in small batches prior to adding to the spray tank. It is important to mix the products in the same proportions as you plan to spray and in the proper mixing order. If incompatibility occurs, it is much easier if you know this ahead of time and only have to dispose of 1 pint rather than 400 gallons.
3. As a rule, ester formulated herbicides (such as Remedy, 2,4-D ester, Outlaw, etc) are more compatible with liquid N than other formulations (2,4-D amine, Milestone, Weedmaster, etc). If using

amine formulations, mix a 50% solution with water prior to adding to the liquid fertilizer.

4. Incompatibility is more common with fertilizers that contain phosphorus, potassium, or sulfur than with those containing nitrogen only.

#### *Solutions to incompatibility*

Sometimes the jar test indicates that the herbicide and fertilizer solution are not compatible. If this occurs, here are a few possible solutions.

1. Mix the herbicide with water prior to adding to the fertilizer. This can often minimize the interaction.
2. Change to a different herbicide formulation.
3. Use a fertilizer solution that contains only nitrogen.
4. Add a commercial compatibility agent.

Jason Ferrell

#### **Recent Pesticide Blunders**

This past spring semester, a student who was a national of another country made a comment to me after our class lecture on pesticide regulations in the U.S.: “we really have no laws regulating pesticide use in my country, and quite often, we have human deaths attributed to pesticides.” I didn’t tell the student, but I was thinking to myself: “we are highly regulated in the U.S., yet we still have plenty of accidents, stupid mistakes, but fortunately very few deaths attributed to pesticide use.”

FDACS keeps me abreast of their pesticide misuse investigations with emails, on practically a daily basis, of interesting encounters from around the state. Some are unbelievable for whatever reason – personal

grudges with malicious intent, mischief seekers, attempting to maximize pesticide efficacy, plain ignorance, being in a hurry, etc. But, I thought that I would share some of these recent investigative reports. To summarize several:

- Palm Beach County (July): a pesticide storage trailer was parked on the side of the road, broken into, and set afire. The local fire department responded, put out the blaze, but herbicides were spilled and the area subsequently flooded.
- Santa Rosa County (June): a homeowner while mowing his lawn was drifted upon by an applicator treating a nearby peanut field. The report stated that the wind speed at the time was 30 mph.
- Volusia County (June): a lady’s 3 dogs were found violently ill in her front yard along with a tainted piece of pork covered with a blue/green substance. Their vet postulated the substance to be rat poison. The dogs subsequently survived following treatment.
- Jackson County (April): aerial application of a defoliant applied to a peanut crop rather than to the intended cotton crop.

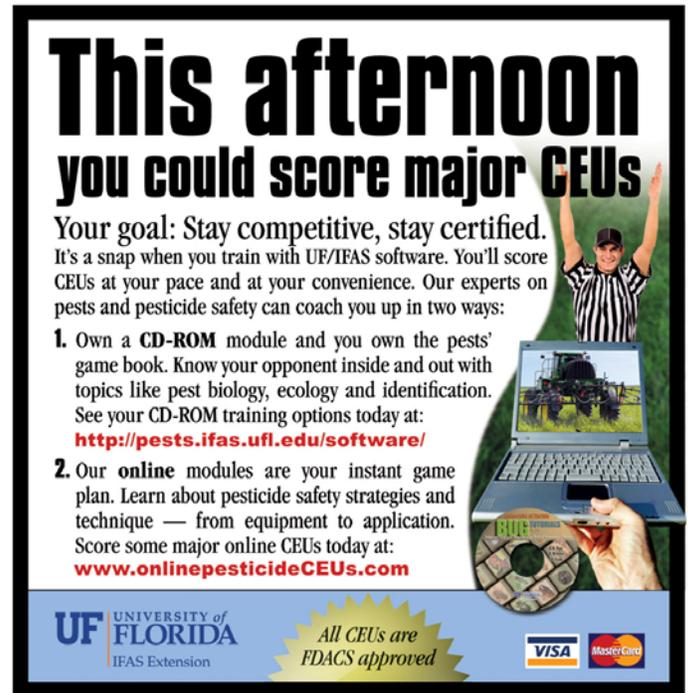
Those are just a sample of some of the more colorful recent incidents in this state. The incident that prompted me to write this article came to me yesterday (July 19) from a colleague at Washington State University. This is a horrific human tragedy that fortunately doesn’t happen often in the United States; nevertheless, was reported by the Associated Press:

- Lubbock, Texas (July 18): a family in an attempt to rid their home of cockroaches used phostoxin in their home. A 2-year-old girl died and 4 adults were sickened by the released fumes. Phostoxin is a fumigant which releases phosphine gas, and is typically used industrially for insect control in storage facilities, such as grain warehouses.

Yes; pesticide use is highly regulated in the United States, but for obvious reasons. In Florida, we have stricter regulations than many states; but, that's not necessarily to our disadvantage. Our natural resources are at stake, yet precious to all. Our rapidly growing population demands and expects a cleaner and safer environment as well as their personal protection. With our climate, pest complexes, and cropping systems, the need for pesticide use will continue. At the same time, being a good steward of our natural resources, family, and neighbors should be placed at a premium.

Fred Fishel

## Earn Pesticide Applicator CEUs on Your Own



**This afternoon you could score major CEUs**

Your goal: Stay competitive, stay certified. It's a snap when you train with UF/IFAS software. You'll score CEUs at your pace and at your convenience. Our experts on pests and pesticide safety can coach you up in two ways:

1. Own a **CD-ROM** module and you own the pests' game book. Know your opponent inside and out with topics like pest biology, ecology and identification. See your CD-ROM training options today at: <http://pests.ifas.ufl.edu/software/>
2. Our **online** modules are your instant game plan. Learn about pesticide safety strategies and technique — from equipment to application. Score some major online CEUs today at: [www.onlinepesticideCEUs.com](http://www.onlinepesticideCEUs.com)

UF UNIVERSITY of FLORIDA IFAS Extension

All CEUs are FDACS approved

VISA MasterCard

The advertisement features a central image of a person in a referee's uniform celebrating next to a laptop displaying a tractor in a field. A hand is shown holding a CD-ROM in the foreground. The background is a green field with a tractor.

Fred Fishel

The use of trade names does not constitute a guarantee or warrant of products named and does not signify approval to the exclusion of similar products.

Prepared by: J.M. Bennett, Chairman ([jmbt@ufl.edu](mailto:jmbt@ufl.edu)); J.A. Ferrell, Extension Agronomist ([jafferrell@ifas.ufl.edu](mailto:jafferrell@ifas.ufl.edu)); F.M. Fishel, Pesticide Coordinator ([weeddr@ifas.ufl.edu](mailto:weeddr@ifas.ufl.edu)); Y.C. Newman, Extension Forage Specialist ([ycnew@ufl.edu](mailto:ycnew@ufl.edu)); and D.L. Wright, Extension Agronomist ([dlw@ifas.ufl.edu](mailto:dlw@ifas.ufl.edu))