

# Agronomy Notes

Volume 32:4

April 2008



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## Upcoming Field Days

Everglades REC, Belle Glade, FL, Tues., April 8  
For more information: <http://erec.ifas.ufl.edu> or call (561) 993-4702

## *Follow-up on Forage Potential of Edible Peanut*

**I**n our March issue of Agronomy Notes, we discussed the forage potential of edible peanuts. It is important to remind producers that many of the herbicides commonly used for edible peanut production (Cadre, Valor, Prowl, etc), or fungicides, restrict grazing or haying the peanut vines. We realized that some people do bale peanut vines but this is an illegal practice if they have used pesticides that restrict feeding. Some of the newer cultivars do have levels of leaf spot and rust resistance that would permit the successful use of peanut vine for grazing or haying without the use of fungicide, however, weed control applications may still be required.

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## *Planting Forages and Minimizing Risks*

**A**s mentioned in the Spring weather outlook, April and May are usually too dry in Florida. These months are not ideal for establishing pastures as they are risky for planting if in rain-fed conditions. This year because of the predicted drier than normal conditions due to La Nina, the risk of establishment failure seems to increase unless you have irrigation. Instead of planting, use this dry period to prepare the field using the dry conditions to your advantage. Make sure you do your lime application if your soil test calls for it, and do it ahead of time before starting the land preparation. Do the planning now for summer planting; contact your seed provider, plan for conditioning of the seed if planting vegetative material, and make arrangements toward that so you can be ready when the summer rains start. Our somewhat unique conditions in Florida make it ideal for summer planting (remember summer time is hurricane season, and even in dry years, it is in summer when we receive most of the rainfall in the majority of Florida). Planting in summer time will minimize your risk when establishing pastures if you have prepared your seed bed well and have a weed free planting area. As much as possible plant into a moist or humid seedbed.

Dr. Yoana Newman

## *Forages and Sulfur Fertilization*

**W**hen planting pastures, adequate sulfur supply to the forage plant in the top soil (top 6 inches) is important because these new areas, particularly in sandy soils, are low in organic matter and the newly established forage plant is in the process of developing a root system and may not be able to uptake sulfur available at lower depth. Sulfur is a secondary nutrient together with calcium and magnesium; 'secondary' meaning that these are nutrients required in lesser amounts than the primary nutrients nitrogen, phosphorus, and potassium. Sulfur is essential in proteins and is important for nitrogen fixation in legumes. Sulfur is mobile and in sandy soils it tends to leach more compared to soils that have more content of clay. The suggested recommendations for forage crops in sulfur deficient areas is to apply 5 lb per expected ton of dry matter. If anticipating a yield of 5 tons of dry matter, the rate of sulfur to use should be about 20 to 25 lb per acre.

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# Hay, Forage, and Weather Updates for Florida

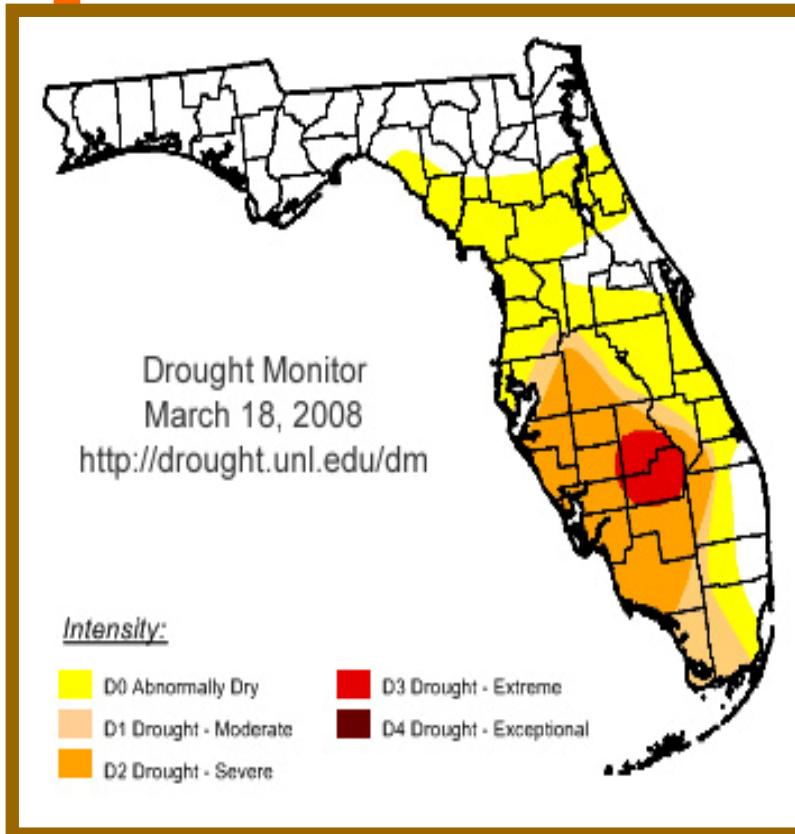
March 24, 2008

Following is an update on hay and forage production as well as weather conditions for Florida. This update provides a perspective of where we are in pasture and hay production. There is also the Spring weather update for strategic and critical decision making.

## North Florida

Current forage production in the North West area is good although set back due to frost in the last week of March. The Florida Panhandle is gradually recovering its moisture. In this quarter some areas have received 17 inches of rainfall. Ponds are filled, soil moisture is replenished. Within this context, winter forage production is good despite the warm temperatures and the slow start due to the dry soil conditions on which these forages were planted. Hay prices for bahiagrass are \$40-50/round bale.

In the North East, the hay supply is good. There is plenty of hay in the barn. Many areas in this part of the state do not have much winter pasture grown because the rains needed at planting were not there. Pastures are in 'overgrazed' condition with presence of many winter annual weeds. At present many producers are feeding hay until bahiagrass comes out. Hay prices for bahiagrass in the northeast are \$45-55/round bale; high quality hay is \$ 55-60/round bale; square bales range from \$ 5.5 to 7.5/bale.



## Central Florida

Central Florida winter weather has been favorable with intermittent but well distributed rainfall allowing for adequate ryegrass production. The water table is close to ideal conditions in some areas. Price of round bales in Central East Florida is \$45-50 for bahiagrass, and up to \$70 for bermudagrass hay; square bales are approx. \$ 8/bale.

## South Florida

South Florida remains under the influence of severe drought conditions but there seems to be some release with spotty rainfall events. The local hay supply has been used but there is a fair supply of hay brought from neighboring states. Hay prices for bahiagrass round bales in south Florida are \$40-45 and \$48-52 for bermudagrass.

Hay, Forage, and Weather Updates for Florida continued on page 3

## Current Weather Conditions

Moderate La Niña (colder than normal ocean temperatures along the equator in the eastern and central Pacific Ocean) conditions that developed during this fall and winter has likely reached its peak intensity and will continue at least through the month of April. La Niña is well known to typically bring drier conditions and warmer weather to the Southeast in the colder months (November through March). While the threat of a dry winter did not fully materialize in the northern parts of the state, several counties in south Florida remain under **severe** (most of the southwest including Collier, Hendry, Lee, Charlotte, Desoto, and Sarasota) or **extreme** (Glades, parts of Highlands) drought conditions.

## Spring Weather Outlook

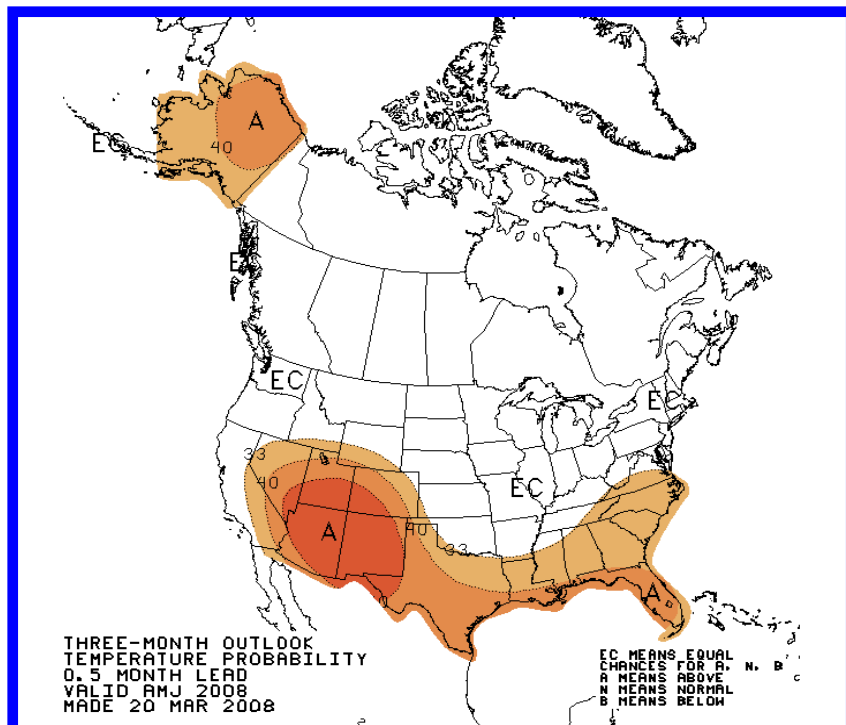
Spring in Florida is generally dry due to the weakness of two important mechanisms by which rainfall reaches the state. The polar jet stream rarely passes into the Deep South causing frontal rainfall to become less frequent than during the winter. The other reason is that the stable air flowing from high pressure systems over the Atlantic Ocean continues during the spring and reduces convective and convergent rainfall, our main source of summer rain.

Looking at historical rainfall measurements from past La Niña episodes, April generally brings a weak tendency for drier than normal conditions over the Florida peninsula. The most recent released drought outlook ([http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.gif](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif)) calls for drought conditions to persist in the southwest region of the state during the next three months. Warmer than normal weather is also expected to persist through June across Florida.

Keep this forecast in mind when planning the 'planting of your pastures' and for implementation of cultural practices on those that are already established. (For more information check article on page 10 about 'Pasture Establishment and Minimizing Risk').

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Temperature outlook for April-May-June indicating higher chances for above normal temperature across most of the southern U.S.A.

## *Soybean Maturity Group and Planting Date*

**S**everal years of research with group V-VIII soybean shows that the optimum planting date for soybean is early May through the second week of June. Earlier planting or later planting will result in lower soybean yield. The long juvenile soybean that was developed by Dr. Hinson will allow higher yields at early and later planting. However, even these varieties will have higher yields planted during the recommended planting date of May 10 to June 15. Planting a week or two earlier is normally better than planting a week or two later than the recommended planting period. There are more group V, VI, and VII soybean on the market than there are group VIII. The later group beans were developed for the deep south and the acreage has been low in these states in the last 10-15 years. In many cases, group V and VI soybean will do better under rainfed conditions than later group soybean because they mature earlier and need good soil moisture during the months of August and early September. Group VII and VIII soybean will need good soil moisture through September and early October. Group V soybean will normally be ready to harvest by about October 7-10 while group VIII soybean will be ready to harvest around November 7-10. The other groups will fall in between about 7 - 10 days apart.

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## *Calendar Dates*

### *Upcoming Field Days*

- April 8**                                      **Everglades REC, Belle Glade, FL**  
For more information: <http://erec.ifas.ufl.edu> or call (561) 993-4702
- April 11**                                      **Goat Field Day, FAMU Research & Extension Center**  
Quincy, FL For information, [www.famu.edu/herds](http://www.famu.edu/herds)

### *Professional Society Meetings*

- May 12-14**                                      **Southern Peanut 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
- June 17 - 19**                                      **2008 Florida Cattleman's Association Convention**  
Marco Island, FL
- 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

# UF Departments bring Renown Agronomist to UF

Lecture available on-line at <https://swsde.ifas.ufl.edu/>



Dr. Kenneth Cassman visits UF.

Courtesy Photo: University of Nebraska

The Agronomy and Soil and Water Science Departments were pleased to host a visit to the UF campus by Dr. Kenneth Cassman on March 5-6. Dr. Cassman is Professor and Director of the *Nebraska Center for Energy Sciences Research* and former Head of the Department of *Agronomy and Horticulture* at the *University of Nebraska*.

*Dr. Cassman is an international leader in agronomy and soil science, and his recent work on the use of crops as sources of bioenergy has gained broad attention.*

During his two-day visit to campus, Dr. Cassman presented a lecture entitled ***Biofuels, Global Food Security, Land-Use Change and Greenhouse Gas Emissions*** and this lecture is available on-line at the link above. Once the page is accessed, there's no need to log on. Scroll about halfway down the page and click on "Ken Cassman," and the video will load.

During his visit, Dr. Cassman also addressed the Graduate Agronomy Seminar class on the topic of ***Trends in Crop Yield Potential and Ecological Intensification of Agriculture***. In addition, Dr. Cassman discussed issues related to energy production, especially the production of bioenergy crops, with about 60 students in two other courses, and met with Agronomy and Soil and Water Department faculty and graduate students, as well as with members of the IFAS administration. Dr. Cassman

shared considerable scientific expertise, enthusiasm, and excitement for the work he has been doing and certainly stimulated our scientific thinking on issues associated with the rapidly expanding use of crops for energy production.

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## Increased Soybean Acreage

There has been more interest in soybean this year than in the past 10 years due to

the current price and the price of fertilizer and inputs that other crops require in greater amounts. Seed should be purchased early to make sure that you get better varieties. Soybean performance trials for the Deep South can be found on the web at [www.griffin.uga.edu/swvt](http://www.griffin.uga.edu/swvt). However, most of the recommended soybean varieties are already taken and varieties will have to be grown for the proper maturity group without a lot of information on them (Maturity Group V-VII). Soybean responds more to residual fertility than to direct fertilization but can respond to potassium applications on soils testing low or very low. There are several good Roundup Ready varieties on the market that make growing soybean much easier than using conventional varieties from 10-12 years ago. Soybean should be planted in rows 30"-36" apart with subsoiling in the row. Make sure the seeds are inoculated with the proper inoculant (*Rhizobium japonicum*) at planting to ensure that the young soybean plants can fix their own nitrogen for good plant growth and yield. Good rotation is critical to high yield and should not be grown in the same field more than once in three years.

*Dr. David Wright*

Cover crops have value in producing nitrogen if it is a legume. All

## Cover Crops

grass and legume cover crops act as a reservoir for maintaining nutrients in the topsoil after they are killed. Cover crops help to increase water holding capacity of the soil but may also use up soil moisture for the crop that is to be planted behind it if it turns out dry or if the cover crop is not killed early enough. As the cover crop degrades it provides energy for microorganisms releasing carbon dioxide. Cation exchange capacity of the soil can be increased and soil structure improved by cover crops. It is important to kill the cover crop at least three and preferably four or five weeks in advance of planting the crop. This practice helps to eliminate soil insects and to keep soil from drying. It is much easier to plant through dried cover crops than those that are wilted and tough when coulters have to slice through the soil ahead of the subsoil shank.

*Dr. David Wright*

## Sulfur Fertilization of Crops

Many of the fertilizers that are used today are high analysis materials

that contain little or no sulfur. Most of the crops require 15-20 lbs/A of sulfur for best yields. At least this amount of sulfur should be applied with nitrogen or as Potassium sulfate, sulfate of potash magnesia or other sulfur containing fertilizers. Growers may use nitrogen materials that contain 3-5% sulfur when applying split applications and when sidedressing the crop. This practice will help keep sulfur from leaching along with nitrogen.

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# Seeding Rates for Narrow and Wide Row Soybean

Soybeans are usually grown in 36" rows by most producers and this comes from tradition of having to cultivate. However, this is no longer the case with roundup Ready soybean. Herbicide resistant weeds are making it more necessary to keep residual herbicides in the program. Seeding rates will be different for different row spacings. Normally we suggest 7-9 seeds per foot of row in 36" rows which amounts to about 40-45 lbs of seed per acre depending on seed size. With no-till drilled beans in 10" rows, 3-4 seeds per foot of row are required or about 65 lbs of seed per acre. If a conventional drill is used with 7" spacing, about 2-3 seed are needed or about 75 lbs of seed per acre. If conditions are optimal at planting a few less seed can be used but if conditions are harsh at planting higher seeding rates are needed as well as for late plantings in July. Yields are normally highest planted in 30-36 inch rows when planting during the recommended dates of May 15-June 15 as compared to more narrow rows. Very late plantings should have more narrow rows to take advantage of light, water, and nutrients from plants that are smaller.

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## Slender-leaf Goldenrod Control in Pastures

Slender-leaf goldenrod (*Euthamia caroliniana*), commonly called flat-top goldenrod, is found throughout Florida. Its native range extends from Louisiana to Nova Scotia, with many different ecotypes throughout. In Florida, this weed is found in 'older' pastures that have not been well managed and likely have low soil pH. Many of us do not notice this weed until it begins to flower from August through November; a point in time where an herbicide application is not beneficial.



Slender-leaf goldenrod with yellow blooms.

Photo: Brent Sellers

Slender-leaf goldenrod is a perennial plant that spreads by both seed as well as creeping rhizomes. Individual leaves are up to 8 cm long and 3 to 5 mm wide with 1-5 visible veins. At maturity, individual plants can reach heights of 3 to 4 feet. The flowers are yellow.

Control of slender-leaf goldenrod is not easy once plants have become established in a pasture. Therefore, the first step is prevention. Slender-leaf goldenrod prefers acidic soils; maintaining the proper soil pH for optimum forage growth will limit infestations of this weed. Once established, however, there are very few herbicide options. If plants are 15 inches tall or greater, no herbicide available for use in pasture will provide adequate control. In fact, all the herbicides available for the pasture market did not even injure slender-leaf goldenrod when applied at flowering. The only time control with herbicides has been successful is the early spring when plants are beginning new growth. Apply 3 to 4 pints/

acre of WeedMaster (banvel + 2,4-D) to plants less than 15 inches tall (April to May). This application rate should provide 80 to 95% control of this weed species.

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# Does Your Pesticide Storage Facility Measure Up?



An example of improper storage of pesticides.  
(Not at UF, of course!)

Photos on this page: Fred Fishel

It's one of those jobs that we say we'll get around to doing on a rainy day – cleaning up and evaluating the pesticide storage facility. If you've ever seen a facility such as the one shown on the left, then you know that a little effort can save lots of future work and headaches. Anyone managing an agricultural production firm that has had a FDACS pesticide use inspection understands that the storage component of the inspection is straightforward

Basically, inspectors will check for 3 items:

- ⇒ Are restricted use pesticides stored in a secure manner? That is, are they kept under lock and key with signage indicating their presence as in the photo on the right?
- ⇒ Are pesticides stored according to label directions? Are they labeled and their containers capped?
- ⇒ Does the condition of the storage area appear not to injure or endanger water/humans/wildlife/livestock/crops?



There are several simple things that can also be done to improve the logistics of the facility. Some of these are relatively inexpensive; others cost nothing.

A facility designated as a “pesticide storage facility” should be just that – only containers holding pesticides. Paint, solvents, fuels, lubricants, PPE, tools, equipment, food, feed, medicines, clothing, and all other such articles belong somewhere else.

Materials and cleaning supplies for the facility. Does the facility have a spill kit?



Accidents, large and small, don't keep calendars and clocks. They are a potential to happen at any facility at any time. Spill kits are relatively simple, and contain such items including a shovel, broom, dust pan, absorbent materials and a hazardous materials-rated drum. Many of these items can be held in a 5-gallon drum as in the photo on the left.

Post an Emergency Contact List. When and if an accident occurs, will you know who to contact? An emergency contact list can be made and posted at the facility.

Materials used for keeping storage facility records. Ask yourself if you can remember when the product arrived at the facility. If the arrival date is not labeled on the container or package, often you will not know. A simple notebook that lists the inventory by product and arrival date is a great and easy way to track what comes in and out of the facility. In the photo, ours is shown in notebook fashion attached to a shelf with the inventory.



If it's not a pesticide or one of those materials mentioned, then it belongs somewhere else. You don't have to wait for the rainy day, or worse - an accident, to inspect and make any upgrades to the facility.

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## Late-Season Burndown in Cotton

The most critical time for weed control in any crop is during the first 6 to 8 weeks after emergence. This demonstrates the importance of “starting clean” an effective preplant burndown program. The most common weeds we encounter at this time are wild radish and cutleaf eveningprimrose. These weeds can be easily controlled with 2,4-D, but the application must be made 30 days prior to planting due to potential crop injury. Although 2,4-D is the least expensive option, the 30 day window is often missed and other herbicides must be used. Below is a list of herbicides that can be used for preplant burndown less than 30 days prior to planting.

Although these herbicides will be more expensive than 2,4-D, they can offer greater flexibility if a 2,4-D application can not be made 30 days prior to planting

<i>Herbicide</i>	<i>Effectiveness on wild radish and cutleaf evening primrose</i>	<i>Planting delay</i>
Clarity – 8 oz/A	Good to excellent on both species	21 days and 1” of rainfall
Valor – 1 to 2 oz	Fair to good on primrose and good on wild radish	Strip-tillage: 15 days and 1” rainfall for 1 oz and 21 days for 2 oz.
Harmony Extra – 0.5 oz	Fair on primrose, excellent on wild radish	14 days

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## Volunteers Needed to Read on Florida Ag Literacy Day

The Board of Directors and staff of the Florida Agriculture in the Classroom, Inc. (FAITC) invites you to participate in Florida Agricultural Literacy Day. Florida agriculture industry volunteers are asked to visit elementary school classrooms around the state and read a special book written for the fifth anniversary of the event called *These Florida Farms!* and talk with K-5th grade students about the importance of Florida agriculture.

*These Florida Farms!* by Gary Seamans of FDACS’ Division of Marketing is a rhyming book in which students learn about Florida agriculture by touring farms around the state with a safari guide. It’s readers’ responsibility to schedule classroom visits. While volunteers are encouraged to read on Ag Literacy Day (April 10) they may choose another day. However, readings should be completed by the end of the school year, and classroom visits should be scheduled at least two weeks in advance as some school districts may require volunteers register before they are allowed on school grounds.

To register, either visit FAITC’s website at [www.agtag.org](http://www.agtag.org) and fill out the form by Friday March 28. Once registration is received, FAITC will send a book, a lesson related to the book, classroom sets of bookmarks and other materials.