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Planting dates for row crops

As we get into June we have had dry pockets throughout the panhandle where there has not been any rain for 30 days or longer and cotton, peanut or soybeans have not been planted. Growers often ask how much yield reduction will they have from mid-June plantings. We saw very good yields of all crops planted early or late in 2012. Cotton and soybeans can still make very good yields when planted into late June while peanuts usually do better when planted in May or early June. Cotton fruits up well even planted into July but often a killing frost stops boll development before it opens leaving a good crop unopened. June planted cotton can be very high yielding and frost does not normally impact it. With the newer soybeans varieties, yields can be good from mid to late June plantings in traditional row widths. Plantings made in July should be made in more narrow rows since plants tend to be shorter.
Importance of pasture liming and fertilization

Pasture plants need a variety of available nutrients to grow. This may be a simple statement but many producers forget about the importance of soil pH and the effects on nutrient availability. Many overlook the fact that plants require not only nitrogen but also phosphorus, potassium and micro nutrients for adequate growth. The majority of the mineral nutrients come from the soil. If the plants have been hayed and removed from the area then the soil nutrients will need to be continually replenished. While grazing removes some of the nutrients, haying removes most of them. It is only through soil sampling that soil nutrient levels can be analyzed and measured in order to apply only the nutrients and lime needed.

The primary nutrients [nitrogen (N), phosphorus (P), and potassium (K)] are required by the forage plant in greater quantities, with nitrogen and potassium needed in greater levels than phosphorus. Calcium (Ca), Magnesium (Mg), and Sulfur (S), are called secondary nutrients because they are used in smaller amounts but they are as important as N, P, and K. The last group is the micronutrients or trace elements, which are as essential as the primary and secondary elements, but they are needed in very small amounts. They include silicon (Si), boron (B), iron (Fe), manganese (MN), copper (Cu), zinc (Zn), chlorine (CL), molybdenum (Mo), and nickel (Ni).

In addition, for warm-season grasses the availability of soil nutrients for plant uptake increases when pH is raised to 5.5 or 6.0. The target pH for different forage crops is around this value. For example, the target pH is 5.5 for bahiagrass and bermudagrass, 6.0 for warm-season annual grasses like corn, sorghum and millets, 6.0 for cool-season annual grasses, and 6.0 to 7.0 for cool-season legumes or legume grass mixtures.

The main reason for liming acidic soils is to enhance fertilizer efficiency and increase crop yield. Lime affects the solubility of elements. Plant nutrients’ availability is enhanced by liming, while toxicities caused by excessive concentrations of other plant nutrients are reduced. In addition to neutralizing soil acidity, limestone supplies the plant with calcium, and dolomitic limestone supplies both calcium and magnesium. While a correct liming program is beneficial for plant growth, excessive liming can be detrimental. Deficiencies and imbalances of certain plant nutrients may result from excessive lime application.

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The benefit of the interactive effect of lime and fertilization on annual bahiagrass dry matter yield is illustrated in a study conducted in central Florida (Adjei and Rechcigl, 2004; Figure 1). Compared to unfertilized treatments, yield of bahiagrass improves when N, NPK, or NPK plus micronutrients were applied. In this study the authors show how repeated N fertilization (red bar) without adequate lime application to bahiagrass pastures can lead to yellowing and may predispose bahiagrass loss to insects or fungal diseases. When pastures were limed (green bars) production increased. Even when plants had not been fertilized lime had a positive effect on yield.

**Figure 1. Effect of lime and fertilizer application on bahiagrass yield**

![Bar chart showing the effect of lime and fertilizer application on bahiagrass yield](chart.jpg)

Control= non fertilized, N= 60 lbN/acre, N-P-K= 60-10-50 lb N-P-K/acre, N-P-K-micros= same as previous + 20 lb micronutrients mix

Source: Adjei and Rechcigl, 2004 – Univ of Florida

To obtain maximum benefit from liming and to determine the type and quantity of lime to apply, soil and plant factors must be taken into account. The first step is to properly collect a soil sample from the area to be limed. Sample to a depth of 4–6 inches. If needing to apply lime, mix into the soil whenever possible since lime reacts with soil that it comes in contact with. Immediate effect is on the soil pH within the top inch. To affect zones that are deeper in the soil, lime should be applied and incorporated 3–6 months prior to planting. The frequency of lime application will depend on many factors, including fertilization program, soil type, and crop. Typically, lime application should seldom be more frequent than every 3 years, with the exception of intensive hay fields that receive high ammonium-nitrogen fertilizer application rates that tend to acidify the soil.
Importance of directed spray for cotton weed control

Last year was a bumper crop for peanuts, but drought through most of the country hurt yields of most other crops. For these reasons, peanut prices are low and cotton prices are more attractive. This is leading farmers to plant cotton, who may have never grown this crop before.

If you have never grown cotton before, you should be aware that this crop is not highly competitive with weeds. Cotton is planted at a relatively low density on wide rows. Unlike corn, cotton does not quickly form a dense leaf canopy that shades the soil and prevent weed germination. But, as cotton gets taller and starts to square, driving through it to spray weeds becomes problematic.

Many cotton producers will discuss a “layby” application where they go in, and spray a fairly aggressive herbicide mix to control existing weeds while providing soil residual activity to control weeds until the cotton canopy has closed in. These herbicides include MSMA, diuron, Valor, and others. Each of these herbicides will cause significant injury if applied to cotton leaves. Therefore, these herbicides must be directed below the leaves to avoid cotton injury.

As cotton matures and reaches 16-20” in height, the lower stems become woody. This allows us to spray aggressive herbicides against this bark layer without them being absorbed into the stem – therefore the cotton is not injured by a properly placed herbicide application.

The directed, or layby, application can be accomplished with many different sprayer designs. You can choose a hooded sprayer, a traditional directed rig, or even a single flood-jet nozzle dropped into the row middle. Regardless of which you choose, it will be important to plan on making a directed application if you have dense weed pressure or Palmer amaranth. Though it is attractive to attempt to control all existing weeds with an over the top sprayer, getting a residual herbicide down to the soil will be essential if you have Palmer amaranth.

If you are a first-time cotton producer and don’t have a way to make directed herbicide applications, start planning now to buy, lease, or build an appropriate sprayer.
USDA releases 2011 pesticide data summary

USDA’s Pesticide Data Program (PDP) annually tests a wide range of commodities in the U.S. food supply. PDP tests fresh and processed fruit and vegetables, grains, beef products, catfish, groundwater, and treated and untreated drinking water for pesticide residues. These data are important to ensure the implementation of the 1996 Food Quality Protection Act (FQPA) is followed. The FQPA requirements include stricter safety standards, especially for infants and children, and a complete reassessment of all existing pesticide tolerances. Thirteen states participated in 2011, including Florida. Sound conclusions about the U.S. food supply can be drawn from the PDP results because these states represent all regions of the U.S. and more than half the population.

During 2011 excluding water, PDP tested 11,894 samples for various insecticides, herbicides, and fungicides. Of the total samples collected and analyzed, 82.3% were fresh and processed fruit and vegetables. Fresh and processed products were tested for 319 parent pesticides, metabolites, degradates, and/or isomers plus 17 environmental contaminants. Other samples collected included water, milk, eggs, and soybeans. Excluding water, residues exceeding the tolerance were detected in 0.27% (32 samples) of the total samples tested (11,894 samples). Of these 32 samples, 25 were imported and 7 were domestic. Residues with no established tolerance were found in 3.4% (399 samples) of the total samples tested. Of these 399 samples, 280 were imported (70%), 115 were domestic (29%), and 4 were of unknown origin (1%).

PDP laboratory operations are designed to detect the smallest possible levels of pesticide residues possible, even when those levels are well below the safety margins established by EPA. It is important to note that the mere presence of a pesticide on food does not indicate the food is unsafe. For samples containing residues, the vast majority of the detections were well below established tolerances and/or action levels. Before allowing the use of a pesticide on food crops, EPA sets a tolerance, or maximum residue limit, which is the amount of pesticide residue allowed to remain in or on each treated food commodity. EPA also factors in large margins of safety when determining any given tolerance. The reporting of residues present at levels below the established tolerance serves to ensure and verify the safety of the U.S. food supply.

Of all samples collected and analyzed, the majority were fresh fruits and vegetables, many of which are often eaten in a fresh, raw state. Health experts and the U.S. Food and Drug Administration agree washing fresh fruit and vegetables before eating is a healthful habit. Consumers can reduce pesticide residues, if they are present, by washing fruit and vegetables with cool or lukewarm tap water. Such reports of data are reassuring to know that the U.S. not only has the world’s most abundant food supply, but also the safest. Visit the PDP Website at www.ams.usda.gov/pdp.
Calendar of Events

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

June 8  FAMU Farm Fest. Quincy, FL
https://www.famu.edu/index.cfm?a=headlines&p=displayEvents&events=895

June 17-21  Florida Cattlemen’s Convention. Marco Island, FL.
http://www.floridacattlemen.org/convention.html

http://www.conference.ifas.ufl.edu/smallfarms/registration.html

Oct 15-17  Sunbelt Ag Expo. Moultrie GA
http://sunbeltexpo.com/

Nov 3-6  ASA, CSSA, & SSA International Annual Meetings. Tampa, FL.
https://www.acsmeetings.org/