

AGRONOMY

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NOTES

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DATES TO REMEMBER

November 4-8	- ASA-CSSA-SSSA Annual Meetings – New Orleans, LA
November 14	- Agricultural Enterprise Workshops for North Florida, North Florida REC, Live Oak, FL

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Cotton Defoliation

Cotton can be defoliated without yield loss when at least 60% of the cotton is open. Defoliant and boll openers work together to remove leaves and open all mature bolls within a two week period after treatment. Picking ahead of this schedule may result in unopened bolls and leaves, or more trash in the seed cotton and, consequently, more discounts. Generally, defoliant and boll openers work better under warmer conditions and with lower rates than later in the season when temperatures are cooler. Some of the early picked cotton has had low micronaire in the discount range this year. It is normally expected that cotton that develops under hot conditions will have high micronaire. The lower micronaire may be due to the extreme drought and heat that resulted in cotton bolls being set later in the season, and is more of a result of immature fibers and less cell wall thickening. Try to time defoliation about 2 weeks before picking since the wet fall is causing regrowth. If not picked within that time frame, it would have to be defoliated again.

David Wright

Manure Applications vs. Fertilizer and Soil pH

Generally manure applications from cattle grazing fields will result in somewhat constant soil pH levels. Most of the reduction in soil pH is due to nitrogen applications. Fallow fields and fields that have no fertilizer applications show very slow reductions in pH. Therefore, if cattle are stocked on perennial grasses and winter annuals, and these fields are used in rotation with row crops, pH may be maintained at a higher level than if cattle were not part of the system. Also, much research shows that cattle manure enriches some microbial communities that favor higher soil productivity through maintenance of higher

pH and stimulates activity of several enzymes involved in N and P transformation.

David Wright

Overseeding Cool-season Annuals into Bahiagrass or Bermudagrass

Use of cool-season forage legumes was popular before chemical fertilizers became a cheap resource not only because of their natural nitrogen fixation ability but also because of their high nutritive value with protein concentration of 20% or more on a dry basis. It is remarkable to see the early literature showcasing success stories in Florida with the use of cool season legumes like crimson clover, red clover, whiteclover, and many others like berseem, sweetclover, and lupine, whose seed production gave in to the cheap fertilizer. With the hike in fertilizer prices, forage legumes interest is back. Next, are a couple of pointer items if you are overseeding cool-season annuals and particularly legumes:

Overseeding into warm-season perennial grasses requires that you open the sod to help germination of the legume or ryegrass seed. To achieve that objective, lightly disk the area 1 to 2 inches deep, then broadcast the seed. If using a drill, make sure that the seed is placed at the right depth: clover and ryegrass no deeper than ¼ inch; small grains 1 inch deep. After broadcasting the seed roll or pack the area to seal in moisture and increase the seed to soil contact. If overseeding clovers, make sure to use a variety that is best suited to your soils and to use the right inoculums with the proper nitrogen fixing bacteria for your seed.

Yoana Newman

Perennial Peanut – Window for Planting in Florida and Fall Measures

If planning on planting perennial (rhizoma) peanut, fall should not be targeted for planting but instead for doing the weed control and getting the field ready to sprig later in winter and early spring. At this time in fall and through January or February, weed control is the goal and can be accomplished by harrowing. Care must be taken not to apply any chemical for weed control as it would affect the emergence of the perennial peanut later in the spring. You should wait and dig the rhizomes (or underground stems) while they are dormant. Fall is not recommended for digging because, at this time, perennial peanut is placing all the energy reserves into the underground rhizomes, and you want to dig them when they are fully 'charged' as this is the energy they will use mainly for coming up. A practical rule of thumb is to dig and plant the peanut when it is dormant, or before it breaks dormancy in the spring—the window for planting in Florida under rain fed conditions is any time after Christmas through early March. Recommended planting rate is 80 bushels/acre or more if material is available. Fertilization should follow in the spring only after the peanut has initiated active root growth, usually when nighttime temperatures are consistently above 60°F, otherwise if you put the fertilizer too early you will be feeding the weeds.

These recommendations are for rain fed conditions. The key to successful planting and establishment is available water. If irrigation is available some exceptions can be made like extending the planting window later in the spring. For a list of Perennial Peanut providers, please see extension publication from University of Florida – IFAS titled: 2007 Perennial Peanut – Source List of Planting Material (Rhizomes) and

Hay; available on line at: <http://edis.ifas.ufl.edu/AG105> or through your extension county agent.

Yoana Newman

Pastures: The High Price of Mowing

The use of herbicides has almost been second-nature for crop producers for over 30 years. However, cattle ranchers have traditionally used fewer herbicides because increasing grass yield is rarely critical to maximizing profit; herbicides were expensive, and mowing was cheap. However, we have seen a reversal of these trends in the past 5 years. As a rule, the price of diesel fuel has more than doubled and labor prices have steadily increased. Meanwhile herbicides prices have remained steady or decreased. Believe it or not, in many instances it is now cheaper to spray herbicides than to mow.

A recent economic cost analysis concluded that mowing can cost as much as \$15 per acre when fuel, machinery cost, and labor are calculated. Also, very few weeds will be controlled by mowing. True, timely mowing of weeds such as dogfennel (in the late summer) can often make these weeds disappear for the remainder of the season. However, dogfennel will readily resprout the next season as if the mowing never occurred. Conversely, a timely application of 2,4-D, Cleanwave + 2,4-D, or 2,4-D + dicamba can adequately control dogfennel for as little as \$11 to \$15 per acre (application cost included).

Granted, not all weeds can be controlled this inexpensively. Brush weeds such as blackberry, or invasive species like tropical soda apple will require a greater investment. But, mowing is not necessary for either of these weeds and in the case of blackberry can even decrease control if not timed

properly. Therefore, consider which weeds you are currently battling and whether herbicides can improve weed control and your bottom line.

Jason Ferrell

Weed Control Inventory

The 2007 growing season should be slowing down within the next few weeks. This is the perfect time to make a weed control inventory while all the details of this season are still fresh in your mind. In particular, make a list of all the weeds that were easily managed and which weeds were not well controlled and start planning a weed control strategy to address the unmet needs. Those who wait until next season to start the planning process will generally forget important details, reuse the same herbicide strategies, and battle the same weeds again in 2008. But, a proactive approach will address these issues well in advance and hopefully provide better weed control solutions. For assistance in planning and utilizing the most current weed control information, please contact your local county extension office.

Jason Ferrell

Fertilizer Prices and Usage in Corn and Rotation with Soybean

Corn acreage was up dramatically this year due to price at corn planting time. Corn has one of the highest fertilizer requirements of any crop and even though weather was erratic and acreage was up, this may be a record crop of about 154 bu/A average in the U.S. Yields of corn have continued to increase as better hybrids have been developed and genetic technology has reduced the damage done by pests and drought. With higher yields, higher rates of nutrients have been removed from fields with both grain and silage. The average use of fertilizer on a per acre basis in 1950 was

N-17 lbs/A, P-26 lbs/A as the oxide, and K-17 lbs/A as the oxide. In 2000, the average fertilizer use rate had risen to: N- 150 lbs/A, P- 64 lbs/A, and K- 91 lbs/A. Soybean prices have risen since early spring so that more beans may be planted in the coming year. Soybeans respond little to direct fertilization but do respond to residual fertility and good soils. The higher corn acreage this year may result in better soybean yields in another year. Genetic technology is being developed for corn that will allow better nitrogen utilization and may reduce lime needs as rates are lowered.

David Wright

Rotations Matter

Rotation results in higher yields of following crops and less pesticide use due to less pest pressure. This is one of the oldest management practices and one that is often not followed well. There are many reasons for lack of rotation implementation including low prices for good rotation crops and lack of equipment for planting or harvesting the other crops. Prices for several commodities are good now so consider some of the crops that you may not have grown for a number of years that will make a good rotation. Generally, legume crops should follow grass crops or cotton to reduce nematodes and many of the hard to control weeds can be controlled when different classes of herbicides can be used on the rotation crop. In our bahiagrass rotation studies using cotton and peanut, nematode levels are several folds lower when bahiagrass is in the rotation for 2 years and no nematicides were needed; levels were high enough in the rotation with 2 years of cotton followed by peanuts that a nematicide did have to be used for optimum yields.

David Wright

Tillage and Soil Organic Matter

Tillage continues to reduce OM content of the soil. Much of the SE is now using strip tillage for cotton, corn, peanuts and other row crops. However, after many years of winter annual cover crops, little or no build up of OM is occurring. Recent work with bahiagrass in rotation with cotton and peanut has shown that we can increase soil OM by about one tenth of a percent per year. When you consider this OM increase vs. the OM reduction that has occurred in the Midwest, where OM content of the soil has decreased from about 4% when it was plowed out of native prairie grasses to 1% in many areas over the last 100 years as shown by long

term plots at several universities— implications are that we would be able to gain about 1% OM in our SE soils in a 10 year period. This fact can have a significant impact on fertility, water holding capacity, yield, and crop quality. The Magruder plots in Oklahoma were plowed out of prairie grasses in 1892 and planted to wheat every year since then and did not respond to nitrogen applications until 65 years later due to the high OM soils releasing nitrogen for the crops. We do have an economically viable option to get back to those types of farms using perennial grasses in our farming systems.

David Wright

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.

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