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Best Corn Hybrids in Short Supply

What a difference a year can make. Corn seed supplies are limited for the best hybrids due to the expected increase in corn acreage. This increase is being fueled almost entirely by ethanol plants. There are still several hybrids with the Roundup trait that can be used in Florida but they may require more management due to little disease resistance. Therefore, it is necessary to place orders early to ensure that you are able to get the hybrids that you desire. Plant diseases (rust and leaf blight) are one of the main impediments to harvesting high quality corn silage and grain. Severe disease outbreak often results in corn dying 2-3 weeks ahead of maturity which affects both yield and quality. A disease susceptible hybrid may not be suitable for silage if it is killed 2-3 weeks before a custom harvester gets to it. Fungicides are labeled for corn production and should be used if disease is detected just prior to silk/tassel stage. Follow all label restrictions for use of fungicides on corn for the various uses.

David Wright

Corn for Ethanol Production

It will be necessary to manage corn in Florida and the Deep South to decrease aflatoxin when used for ethanol since the production of DDG S (dried distillers grains with solids) concentrates not only the protein but also the aflatoxin. When ethanol plants make ethanol, they use only starch from the corn. The remaining nutrients - protein, fiber and oil - are the by-products used to create livestock feed called DDGS. Generally, the protein content as well as aflatoxin levels will be increased 3 fold. Therefore, aflatoxin levels of corn should be no more than 5 ppm when delivered for production of ethanol. A third of the grain that goes into ethanol production comes out as DDGS. Each bushel of grain used in the

ethanol-making process produces 2.7 gallons of ethanol; 18 pounds of DDGS and 18 pounds of carbon dioxide. DDGS are high in yeast proteins, energy, minerals and vitamins which are an excellent digestible protein and energy source for beef cattle.

David Wright

What Is Too Early to Plant Corn?

Corn can be planted from early February in north Florida through early August if proper hybrids and management are used. Corn planted in early February in north Florida usually requires about 70-75 days from planting to start of silk/tassel period. This may be as short as 45-50 days for corn planted in May or June. Therefore, slower growth can be expected from early planted corn and nitrogen applications should be made depending on the amount of uptake expected by the crop. Weeds may emerge later on early planted corn and management should be adjusted to control a late flush of weeds. Our experience is that aflatoxin is not influenced to a great deal by planting date and if anything is less with late planting. Harvest date, shuck coverage and insect control may have more influence on aflatoxin than other factors. Most of the corn planted in February can be harvested sometime in July high moisture.

David Wright

Corn Nitrogen Use and Prices

Corn is a high user of nitrogen compared to many row crops. Irrigated corn normally requires between 180 to 220 lbs/A to make high yields when applied in split applications and banded on the early applications. This rate is double of what is used on cotton and wheat. Prices of nitrogen have risen over the past few years due to the increase in natural gas which is the base for nitrogen production. Some

nitrogen materials are cheaper than others and should be investigated prior to buying. Generally the liquid fertilizers (28-0-0-5, 32-0-0, 18-0-0-3, 24-0-0-3) are from 5 to 14 cents per pound cheaper than ammonium nitrate and urea. Ammonium nitrate is usually the most expensive followed by urea. The lower analysis liquid fertilizers give similar plant responses at similar N rates to other fertilizers but more material handling is required. Liquid fertilizers may be pumped instead of handling dry material and may be put through irrigation systems. A 32% nitrogen solution contains about 45% ammonium nitrate, 35% urea, and 20% water by weight. Maximum solubility is obtained at this ratio and crystallization (salting-out) occurs at 32 degrees F.

David Wright

Ryegrass Knocked Out

Ryegrass takes a hard hit from warm temperature wave affecting Florida in December and January. Several pastures planted to ryegrass in the central and north east region of the state and some in the Northwest (Pasco, Hernando, Sumter, Osceola, Brevard, and Orange counties), were reported with a severe blight. In many cases, the outbreak occurred after the second nitrogen fertilizer application to an apparently healthy, green and lush ryegrass stand.

The unusually mild winter with night temperatures in the 50-60 °F and day temperatures in the 60-70 °F or higher are most favorable for development of the foliar disease and incidence of pest insects. The devastating sudden blast was in part associated with fungal leaf diseases and in part with insect damage. Samples were positive for 'gray leaf spot' (*Pyricularia grisea*) and 'leaf and crown rot' (*Bipolaris* spp.); however, no pathogens were found in the root system. The thatch layer created by the rotting of ryegrass leaves produced ideal

conditions for 'loopers' (*Mocis*) and 'true army worms' (*Pseudaletia unipuncta*) which were found in excessive numbers, feeding on new growth and very likely responsible for the weakening of the root system and severe blight of the grass.

If not under total pasture stand loss, most ryegrass cultivars will recover rapidly following the onset of cold temperatures.

What control practices can be implemented?

- Under unpredicted warm conditions and when under a mild winter, avoid the application of high nitrogen fertilizer rates and N sources that are readily available such as 'urea'.
- Try to use the forage when leaf spots first appear to avoid the build up of succulent tissue.
- Do not mow or graze the stand too short. Nevertheless, you need to avoid forming a thick thatch of material that would favor plant disease conditions.

Yoana Newman

Glyphosate Resistance Still Increasing

Cotton producers have been using glyphosate for weed control for many years now. Though once thought of as a herbicide that would never lose effectiveness, we now know that previously susceptible weeds can and will become resistant to glyphosate.

In 2000, the first documented case of glyphosate resistance in the US was discovered in Delaware. Although horseweed was the first resistant weed, it was soon revealed that it would not be the last. Since that time, 6 additional glyphosate resistant weeds have been found. These weeds include 2 ragweeds (common and giant ragweed), 2 pigweeds (Palmer

amaranth and common waterhemp), and 2 ryegrasses (Italian and rigid ryegrass).

Although no glyphosate resistant weeds have been found in Florida, considering the national trend, it is possible (if not likely) to occur here as well. It is critically important that we do not rely on glyphosate for total weed management in any cropping system for extended periods of time. In corn, the use of atrazine and preemergence grass control herbicides will provide a great weed control and resistance management advantage. Likewise, preemergence grass herbicides and residual products at layby will be greatly beneficial in cotton. It is true that adding alternative herbicides will increase the expense of the production system. However, managing resistant weeds is much more troublesome, time consuming and expensive than a resistance prevention strategy. A pro-active resistance management strategy employed now will pay great dividends in the future.

Jason Ferrell

Am I in Compliance with FDACS Pesticide Law?

This question should lurk in the back of one's mind prior to an FDACS inspector showing up at your establishment and not after their arrival. The UF/IFAS Pesticide Information Office has prepared the informative interactive tutorial, "Surviving the FDACS Bureau of Compliance Monitoring Inspection" that helps you prepare for when that day comes. Know what to expect, including:

- Am I properly licensed?
- Am I in compliance with Federal pesticide recordkeeping laws according to:
 - The use of restricted use pesticides?

- The use of any pesticide, if the Worker Protection Standard is in effect?
- Are my storage and mixing/loading sites up to speed?
- Are my applicator employees in compliance with label directions?
- Is my establishment in compliance with the major provisions of the Federal Worker Protection Standard, including:
 - Decontamination sites and supplies?
 - Central information display?
 - Worker/handler training and documentation?
 - Employer information exchange?
 - Worker/handler notification of applications?

The page below provides contact information for the Pesticide Information Office in case you need technical assistance or want to give feedback. Macromedia Flash Player is required for viewing the tutorial. Visit the Pesticide Information Office's [CEU Modules](#) page for information about downloading this free software. To view the tutorial at no cost, see:

http://pested.ifas.ufl.edu/ceu_modules/for_review/Surviving_FDACS_Inspection/player.html

This tutorial was also approved by FDACS for 1 CEU credit for those currently certified as restrictive use pesticide applicators in the following categories: Aerial, Ag Row Crop, Ag Tree Crop, Soil and Greenhouse Fumigation, Forestry, Ornamental & Turf, and Private Applicator. For those who would like CEU credit, they should contact the IFAS Extension Bookstore at 1-800-226-1764 or <http://IFASbooks.ufl.edu>. The cost for the CEU credit is \$20. The Bookstore currently has nearly 20 different interactive web-based tutorials that are approved for CEU credit in various categories; each costing \$20.

These presentations were produced in cooperation with the Florida Department of Agriculture and Consumer Services.

Fred Fishel

High Nitrogen Requiring Crops and Soil Ph

High nitrogen applications tend to reduce the soil pH. All commonly used sources of nitrogen are acid forming and will require monitoring of the soil pH to keep it at levels suitable for row crops. Ammonium sulfate or nitrogen solutions with sulfur have a higher calcium carbonate equivalent per ton and are more acid forming than ammonium

nitrate and urea or solutions. Soils can be limed at this time of year and still get benefit. If soils are very acid, it is best to apply it several months in advance of planting but reactions begin to occur immediately. For those growers who use minimum tillage and strip tillage, surface applications are acceptable. Long term no-till plots are still producing good yields of various crops after 30 years. A high calcium and phosphorus layer can develop in the top 2-3 inches after many years of surface applications of fertilizer and lime.

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