



BMP Update

A production of the University of Florida,
Institute of Food and Agricultural Sciences,
Agricultural Best Management Practices Program

Fall 2016

Volume 2, Issue 3



Coming Events

September

Sept 1, 2016: Sod Based Rotation Field Day, Suwannee County

Sept 9, 2016: Producer Water Quality Update, 3:00-5:00 pm, Manatee County

Sept 13, 2016: Irrigation and Crop Management BMPs, 9:00 am – 1:00 pm, Escambia County

Sept 16, 2016: BMPs for Tropical Fruit Growers, Dade County

Sept 20, 2016: Irrigation and Fertilizer Management, 8:30 am – 11:30 am, Lake County

Sept 29, 2016: Everglades Agricultural Area Phosphorus BMP Training, Palm Beach County

Sept 30, 2016: Inter-agency Partnership: What Makes them work (In-Service Training), State Wide

October

Oct 6, 2016: Production Agriculturalist Appreciation Breakfast, 7:00 -9:00 am, Manatee County

Oct 6, 2016: Pesticide Applicator Training, Marion County

What Are Agricultural Best Management Practices?

Agricultural Best Management Practices (BMPs) are practical measures that producers can take to reduce the amount of fertilizers, pesticides, animal waste, and other pollutants entering our water resources. They are designed to improve water quality while maintaining agricultural production. The Florida Department of Agriculture and Consumer Services (FDACS) has adopted BMPs for most commodities in the state. Each BMP manual covers key aspects of water quality and water conservation. Typical practices include:

Nutrient Management to determine nutrient needs and sources, and manage nutrient applications (including manure) to minimize impacts to water resources.

Irrigation Management to address the method and scheduling of irrigation to reduce water and nutrient losses to the environment.

Water Resource Protection using buffers, setbacks, and swales to reduce or prevent the transport of sediments and nutrients from production areas to waterbodies.

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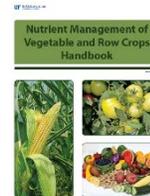
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SP500 - Nutrient Management of Vegetable and Agronomic Row Crops

The Florida Department of Agriculture and Consumer Services released an updated version of the Vegetable and Row Crops BMP manual in the spring of 2015. Copies of the new manual can be downloaded from the FDACS, Office of Agricultural Water Policy web site at <http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Water-Policy/Enroll-in-BMPs/BMP-Rules-Manuals-and-Other-Documents>

The updated manual references nutrient management practices documented in a new EDIS document. The document was developed by compiling several existing EDIS documents on vegetable and row crop nutrition in cooperation with their authors. Electronic copies of SP500 are available at https://edis.ifas.ufl.edu/topic_sp500 and printed versions are available from the BMP Program by contacting Kelly Morgan (conserv@ufl.edu).



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Understanding The Soil Test Report

What is a Soil Test:

A soil test chemically extracts and measures most of the elements essential to plant nutrition. It also measures soil acidity and pH. These factors are indicators of lime requirement, nutrient availability, and the potential of the soil to produce crops. This information enables growers to apply nutrients with environmental stewardship and profitability in mind.



There are two types of soil tests: predictive and diagnostic.

The predictive test is the standard soil test conducted prior to planting for annual crops or annually for perennial crops that provides the lime and fertilizer recommendations necessary to optimize yields. In contrast, the diagnostic soil test is used when samples are collected because of an observed problem situation. The purpose of a diagnostic test is to identify specific nutrient deficiencies or excesses that may be preventing optimal plant growth.

Predictive Soil Testing

Lime and fertilizer recommendations are based on field experiments conducted in across a variety of soil types and cropping sequences. Other factors that have a strong impact on yield include environmental conditions during the growing season (rainfall, temperature, etc.), soil productivity, water-holding capacity, planting date, variety, pest and disease pressure, and soil compaction. Optimum production requires reasonable management of all factors involved in the overall crop production scheme. Continuous field calibration research is essential to determine fertility requirements dictated by changes in farming practices and cropping sequences.

Diagnostic Soil Testing

Samples for diagnosis of nutritional problems must be submitted as quickly as the problem is found and accurate describes crop history, symptoms and other relevant factors must be recorded. In addition to the routine analyses, levels of soluble salts should also be determined. Test results for problem soil samples must be reviewed by an agronomist, who provides appropriate comments regarding the cause of the problem and recommended treatment. Collect soil and plant samples from both “good” and “bad” areas for comparison purposes.





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Enhanced Efficiency Fertilizers On Forages Demo

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Cheryl Mackowiak, North Florida REC – Quincy, Ph.D.
Ann Blount, North Florida REC – Quincy, Ph.D.
Jose Dubeux, North Florida REC – Marianna, Ph.D.
Mark Mauldin, Washington County, EA I
Chris Prevatt, Range Cattle REC – Ona, EA II

An on-farm demonstration was conducted on a cattle farm in Crestview, FL, Okaloosa County. After an initial soil test, ryegrass, oats, rye, wheat and triticale were planted. The demo was on



Orangeburg sandy loam with a 0 to 2 percent slopes. The planting methods were broadcast and cultipacker for ryegrass, drill for others into a prepared seedbed. The two fertilizer treatments and a no-fertilizer control was replicated twice in the field. The treatments were urea only and urea with Nutrisphere. Nutrisphere reduced volatile loss of nitrogen from urea, allowing more of the fertilizer applied to enter the soil. Although the site experienced below average rainfall for the demonstration period, the Nutrisphere treatment perform well compared to the control and urea alone. The fertilization types and rates were as follows:

- Potassium and Phosphorus were applied per IFAS recommendations based on soil test results.
- Two replications for each grass received no nitrogen fertilizer.

- Two replications for each grass received 70 lbs of nitrogen from Urea.
- Two replications for each grass received 70 lbs of nitrogen from Urea with Nutrisphere.

The normal rainfall for this period of time is 22.42 in., however the actual rain during this period was only 6.89 in. Some of the challenges during this demonstration was the impact of deer feeding on the growth of forages, but was overcome once a fence charged by a solar powered charger was installed.

A field day was planned, advertised and Held on April 16, 2015. According to the post field day evaluation,

- 100% (7/7) reporting learning something new,
- 86% (6/7) indicated that they would adopt one or more BMPs for Cow/Calf operations.

The agent also presented results of this demonstration at a local cattlemen’s association meeting with 35 growers in attendance. Producers



were accepting of enhanced efficiency fertilizers with many already switching to using them while others indicated the desire to begin using them.



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Letter To Growers

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FDACS OAWP

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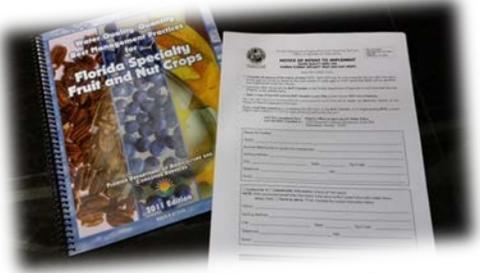
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The Florida Department of Agriculture (FDACS), has adopted, by rule, Best Management Practices (BMPs) for most agricultural commodities in the state. The associated manuals, were developed by multi-entity groups of stakeholders, including growers, and are based on research and expert review, to prevent or reduce nutrient loadings to watersheds. These practices include, nutrient management, irrigation management, sediment and erosion control, storm water management, water resources protection, and integrated pest management.



Record-keeping is a main tenant of BMPs. Growers who enroll in the program are not required to submit records, but are asked to maintain records of fertilizer and spray applications and irrigation/rain events and amounts. Most growers have embraced BMPs. This is fortunate because a watershed assessment effort is underway though out Florida. Through this effort, headed up by the Department of Environmental Protection (DEP), water quality is measured and assessed in watersheds throughout the state. These plans are called Basin Management Action Plans (BMAPs) and have already been established for many watersheds in Florida.

Record-keeping is a main tenant of BMPs. Growers who enroll in the program are not required to submit records,

While enrolling in the BMP program has been, and continues to be voluntary throughout the state, the new water bill will require DEP, FDACS and water management districts



to implement new planning and reporting requirements related to water quality and quantity. Growers located in BMAP areas must enroll in the BMP program or, alternatively, work with DEP to develop an extensive and most likely, expensive monitoring plan.

Several agencies provide cost-share options for farms, to assist in off-setting costs associated with implementing the BMP Program. FDACS, Natural Resources Conservation service (NRCS), Southwest Florida Water Management District Facilitating Agricultural Resource Management Systems (FARMS) practices and the Hillsborough Soil and Water Conservation District all have financial assistance programs to help farmers implement costly practices. There are also other direct financial incentives. One invaluable free service offered to farmers is the Mobile Irrigation Lab (MIL) that evaluates irrigation efficiencies and provides water-savings advice.

DEP and DACS are depending on grower enrollments to meet state water quality goals. We thank those farms who have signed up with the BMP program and encourage the rest to enroll as



soon as possible. For those farms already enrolled and are adding parcels to their farms, please contact Jemy Hinton or a FDACS Office of Water Policy staff member to adjust the registered NOI documents.