

Best Management Practices

To Your Advantage

Implementing best management practices (BMPs) is a key component of agriculture's environmental stewardship role. Recognizing this, the Florida Legislature established enrollment in and implementation of BMPs adopted by the Florida Department of Agriculture and Consumer Services (FDACS) as the means to address agricultural non-point pollution, rather than impose permitting requirements. However, continued support for this approach depends on the level of participation in the BMP program.

The FDACS Office of Agricultural Water Policy, in consultation with agricultural groups, the University of Florida, the Natural Resources Conservation Service, and others, has developed and adopted BMPs for most agricultural commodities. These practices are designed to protect water quality by reducing the runoff and leaching of nutrients into Florida's surface and ground waters, and to enhance water conservation.

Program Benefits

While BMPs have a specific emphasis on protecting water quality and conserving water, there are additional benefits to enrolling in and implementing FDACS BMPs. For instance:

- By Florida law, enrolling in and implementing FDACS-adopted BMPs provides a presumption of compliance with state water quality standards for the pollutants addressed by the BMPs.
- Enrolling in FDACS BMP programs makes producers eligible for cost-share for certain BMPs.
- The Florida Right to Farm Act generally prohibits local governments from regulating an agricultural activity that is addressed through rule-adopted BMPs when farmers implement them.
- Producers who implement FDACS-adopted BMPs might qualify for exemptions from water management district surface water permitting, and/or satisfy other permitting requirements.
- Some BMPs increase production efficiency and reduce costs.

BMPs for Water Quality and Conservation

FDACS has adopted BMP manuals for citrus, vegetable/row crop, container nursery, sod, cow/calf, silviculture, and aquaculture operations. To date, 5,124 producers have enrolled 7.3 million acres of agricultural land in these programs, but with the vast amount of agricultural lands left, there is still a long way to go. BMP manuals for equine and specialty fruit and nut operations are under development and targeted for adoption by the end of 2010. Each BMP manual covers key aspects of water quality and water conservation. Most of the BMPs can be implemented through management actions without great expense. Typical practices include:

Nutrient Management - to determine nutrient needs and sources, and manage nutrient applications to minimize impacts to water resources. Practices may include soil testing, tissue testing, quantifying non-commercial nutrient sources (e.g., residual nitrogen from legumes), following recommended application rates based on published research, splitting fertilizer

applications, using precision application techniques, and adhering to application setbacks from waterbodies and sensitive features such as sink holes.

Irrigation Management - to address the method and scheduling of irrigation to reduce water and nutrient losses. Practices may include the use of high-efficiency irrigation systems, diagnostic tools such as soil moisture sensors, tensiometers, water-table observation wells, and weather-related data such as evapotranspiration.

Treatment and Erosion Control - to reduce or prevent the transport of nutrients and sediments from production areas to waterbodies. These practices may include vegetated buffers for streams and wetlands, filter strips to treat field runoff, vegetative cover in non-production areas to reduce erosion, and retrofitting ditches in high-velocity areas to prevent scouring.

The FDACS Division of Forestry and Division of Aquaculture also conduct BMP programs for silviculture and aquaculture. For additional information on BMPs, visit: www.floridaaqwaterpolicy.com

BMPs in Legislatively Designated Areas

In some areas of the state, producers are required to either implement BMPs or monitor water quality at their own expense to determine whether they meet water quality standards. These areas include the Northern Everglades and any area where the Florida Department of Environmental Protection (FDEP) has adopted a basin management action plan (BMAP) including agriculture as a pollutant source. To date, FDEP has adopted seven BMAPs, and has many more under way with more to come. To view FDEP's BMAP development, visit: <http://www.dep.state.fl.us/water/watersheds/bmap.htm>

BMP Success Stories

In addition to providing resource protection and legal benefits, implementing BMPs can result in significant gains in production and operational efficiency. For instance, management actions such as rotational grazing and forage height control strategies help to maximize pasture production, while enhancing water quality by limiting denuding and related erosion in pastures. Also, with the use of technologies such as "light bars" some producers have significantly reduced fertilizer and fuel costs per acre by minimizing overlap and number of passes in the field when applying products.

Many BMP successes have been documented already. Following are several examples of BMP success stories on Florida farms.

- After retrofitting a pesticide applicator with a high-efficiency "tree see" system, a citrus grower reduced his aldicarb application to a 249-acre grove from 6,119 pounds to 4,612 pounds, a saving of 1,507 pounds. The total cost to retrofit the applicator was \$2,500, with \$1,500 supplied by the FDACS cost-share program.
- A watermelon farm achieved a farm-record yield using BMP irrigation and nutrient management tools. The amount of nitrogen used to grow the crop was 25% less than IFAS-recommended rates.
- A corn grower reduced nitrogen inputs by 30 lbs/acre on 70 acres using BMP tools. This was a reduction of 2,100 lbs of nitrogen with no yield loss. The grower since has reduced rates on all his fields.

- A North Florida grower used soil moisture equipment for irrigation management as part of a BMP demonstration project. Based on the soil moisture data, the grower modified his irrigation practices for perennial peanut, saving approximately 22.8 million gallons of water from one center pivot.

Enrolling in BMPs

Enrolling in FDACS BMPs involves on-site assessment of an operation to identify opportunities to improve water quality and conservation practices through the selection of applicable BMPs. An on-site assessment includes a review of fertilization and irrigation practices, identification of water resource features through soil maps and aerial photography, and discussion of how to address any observed concerns. This is a critical part of the enrollment process, because the presumption of compliance is based on the expectation that producers understand and address the water quality and conservation issues on their operations, within economic and technical constraints. Producers implementing BMPs must document their practices through record keeping, as specified in the BMP manuals.

Trained staff and contractors are available to assist producers with the on-site assessment, BMP selection, and record-keeping requirements. The outcome of the on-site assessment is completion of a checklist that records the BMPs applicable to a producer's operation. The producer then signs and submits a Notice of Intent to Implement BMPs, along with the completed checklist, to enroll the operation in the FDACS program. Staff and contractors normally follow up with the producer within 90 days to see whether assistance is needed.

It is helpful to read the relevant BMP manual before scheduling an on-site assessment. For questions about a BMP manual, or to schedule a site visit, please contact FDACS at **(850) 617-1727** or AgBmpHelp@doacs.state.fl.us

The Bottom Line

Along with local governments and private industry, the agricultural community is expected and required to reduce their water quality impacts. It is crucial that producers enroll in and implement BMPs as quickly as possible to underscore agriculture's participation in and commitment to water resource protection. As the agricultural industry works with FDACS and other stakeholders to embrace BMPs now and into the future, the likelihood is that support for this approach will continue. Please participate - it is to your advantage.