Vegetable Water Quality and Quantity BMP Collaboration in West-central Florida

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Introduction and Background

Water Quality/Quantity Best Management Practices (BMPs) for Florida vegetable and agronomic crops were created as a result of the Federal Clean Water Act (FCWA) developed in 1972 requiring states to access the impact of nonpoint sources of pollution on surface and ground waters and establish prevention measures. This led to the development of Florida’s Nonpoint Source Management Program, which requires the use of structural BMPs to minimize nonpoint source pollution either through regulation or voluntary measures such as the FDACS-adopted BMP Program. Enrollment in the BMP program gives producers a “presumption of compliance” with state water quality standards established by the Florida Department of Environmental Protection (FDEP).

This “presumption of compliance” is further described in the Florida Statute as follows:

"Under the Florida Watershed Restoration Act (s. 403.067, F.S.), agricultural nonpoint sources included in a TMDL Basin Management Action Plan must either implement DACS-adopted BMPs to achieve reductions that help meet a TMDL, or must conduct water quality monitoring prescribed by DEP or the applicable water management district. Implementation of BMPs that DEP has verified as effective and DACS has adopted by rule provides a presumption of compliance with state water quality standards. DEP is then precluded from recovering costs or damages for contamination related to the target pollutants. Maintaining BMPs is part of implementation."

A team of vegetable Extension agents and member of the UF/IFAS BMP implementation team have come together to develop a program in which growers are encouraged to implement BMPs and sign “Notice of Intent” (NOI) forms in which they agree to adopt practices that are not already being implemented on their operation.

Problems Faced by the Target Audience

West-central Florida vegetable and agronomic crop producers are the target audience for this BMP collaboration. Growers face many problems related to water quality and quantity including: difficulty complying with IFAS recommended nutrient rates due to variables such as weather and differences in crop, soil type and variety requirements, cost of implementing BMPs, difficulty complying with proposed EPA Numeric Nutrient Criteria, and the possible perception that BMPs are “regulatory” rather than beneficial.

Educational Approach, Curriculum, and Programs Offered

Objectives will be reached with the collaboration of the UF/IFAS BMP implementation team and county Extension agents. Extension is often considered “reputable” and many agents are able to reach growers through long-established relationships. Tactics used by the team include face-to-face interaction and teaching of BMP principles, on-farm BMP research demonstrations in which growers see results firsthand, vegetable industry meetings in which UF/IFAS Extension and researchers deliver the latest information regarding BMPs, and connecting growers with agencies providing cost share opportunities for the implementation of BMP practices.

Many materials are used to facilitate BMP program collaboration including the Water Quality and Quantity BMP Manual for Vegetable and Agronomic Crops, BMP checklist, NOI form, research trial protocols, industry meeting agendas, multimedia presentations, and the Vegetable Production Handbook for Florida (Fig. 1).
Objectives

Objectives of BMP collaboration in west-central Florida include: conducting farm evaluations, assisting growers in signing a NOI to give them a “presumption of compliance,” reducing nonpoint water pollution among vegetable and row crop producers in west-central Florida, saving money for growers by implementing cost-saving BMP practices, saving money for growers by assisting with cost share programs, establishing a grower base and trust relationship with UF/IFAS Extension and BMP implementation team, and facilitating grower understanding of the importance of water quality and quantity (Fig. 2).

Outcomes and Impacts

There have been many outcomes and impacts associated with BMP collaboration in west-central Florida. Since the onset of the statewide vegetable BMP program (Fig. 3) in 2005, over 35,000 acres of vegetable and agronomic crops in Hillsborough and Manatee Counties have been signed with the BMP program, thus reducing nonpoint source pollution to the waterways of west-central Florida. This includes approximately 5,500 acres of fruits and vegetables in Hillsborough County and approximately 29,600 in Manatee County. Also, 90% of growers at a recent Manatee County Nutrient Management Meeting indicated that they understood the importance of improving water quality and quantity in west-central Florida waterways.

Pros and Cons of Adopting This Program in Another County

With the adoption of any program come pros and cons. Pros of adopting this program in another county include: giving growers a “presumption of compliance,” the possibility of cost share funding, establishing a grower base, implementing cost saving BMPs, improving water quality and quantity statewide, extending BMP research to other areas of Florida and preparing growers to deal with proposed EPA Numeric Nutrient Criteria. Cons of program adoption include: BMP implementation may be perceived as regulatory and some BMPs may be costly or even cost prohibitive.