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Best Management Practices in the Suwannee Basin

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The Best Management Practices (BMP) Program is a voluntary program designed to protect ground and surface water from pollution caused by erosion or leaching of plant nutrients and pesticides. The Florida Watershed Restoration Act of 1999 is the state legislature’s mandate to clean up Florida’s waterways. The Suwannee River Basin is currently being monitored for pollutants and decisions of future regulations will be driven by the progress in protecting water quality. If a high percentage of the agricultural industries (vegetables, field crops, forestry, etc.) adopt BMPs and they are successful in protecting the water quality, the need for more restrictive and mandatory regulations should be diminished.

There are a few key BMPs which focus on nutrient and irrigation management for producers in the Suwannee Basin. These BMPs have been identified as most important to keeping nutrients from leaching into the groundwater. The BMPs these farms use emphasize managing nutrients and irrigation together, and includes the following practices:

- Nutrient budget and scheduling - Adjustment of fertilizer program to address specific crop needs. Adjust fertilizer rates for specific crop growth stages.

- Equipment calibration - Ensures proper functioning of equipment.

- Split fertilizer applications - Multiple applications timed with periods of peak plant growth allow plants to take up nutrients more efficiently.

- Fertigation - Application of fertilizer through irrigation water allows for direct nutrient application to the crop root zone. This fertilizer is typically applied daily, or several times per week in small quantities.
- Plastic mulch and drip irrigation - In cropping systems where plastic mulch and drip irrigation are feasible, adoption has led to reduced fertilizer and water use with increased yield and quality.

- Precision application - Use specialized equipment for precise placement of nutrients on targeted areas. This often reduces total amount of nutrients used.

- Soil and tissue testing - Used to base fertilizer applications on plant needs and available nutrients in the soil.

- Irrigation scheduling - Planning when to irrigate based on soil moisture content, crop water use rates, rainfall, and time of day. This practice reduces water use and nutrient leaching.

- Monitoring soil moisture - Use of devices that measure the amount of water in the soil, or using methods such as estimating water content by hand.

- Recordkeeping - Proper recordkeeping provides accountability in the implementation of BMPs.

Farmers in the Suwannee Basin have been leaders in the implementation of BMPs. Other specific BMPs may be more applicable in different watersheds throughout the state; however, our educational efforts in the Suwannee Basin have focused on these BMPs for their role in improved nitrogen management, and prevention of nutrient leaching into groundwater.