

QUANTIFYING FERTILIZER IMPACTS: A CASE STUDY INVESTIGATING YEARS OF EDUCATIONAL WORKSHOPS

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Seminole County is home to the Wekiva Springs River, a National Wild & Scenic River that is impaired by nitrogen and phosphorous. This water resource is economically and environmentally tied to the area through recreation, property values, wildlife support and aquifer recharge. Research by Florida Department of Environmental Protection in the Wekiva Springs Basin estimates 26% of the nitrate entering the basin comes from urban turfgrass fertilizer. To decrease these nitrogen inputs, Fertilizer Workshops were conducted from Sept. 2018 – Sept. 2020 to educate participants on Best Management Practices (BMP's) for landscapes. Workshops targeted homeowners, who received a free bag of fertilizer formulated with 50% slow-release nitrogen for attending, and FDACS licensed landscaping professionals, who received over 520 fertilizer CEUs (271 professionals). Through 70 classes, 2,142 people were educated about fertilizer BMP's. Of those participants, 1078 completed reflective post-surveys which revealed 97.2% increased their knowledge on the impact's fertilizer run-off had on local waterbodies, 98.8% intended to use the information to fertilize their yard appropriately, and 95.3% were more confident they could fertilize appropriately. In a 6 month follow up survey, 86.5% of 579 participants reported they were using BMP's. Using UF|IFAS research on nutrient leaching, these outcomes were estimated to reduce annual N leaching by 112.9 to 1,039.6 pounds, providing an economic benefit of \$56,486 to \$519,856. These educational efforts resulted in data showing significant behavior changes resulting in a reduction of nitrogen leaching, subsequently decreasing the potential for algae blooms and other water quality impairments. Because of these workshops, participants better understand sources of water contamination resulting from fertilizer misuse and acted to change those behaviors.

PRESENTER BIO: Tina McIntyre is a Florida-Friendly Landscaping Agent who came to Extension with 10 years of experience; four as Senior Biologist at the Orange County Environmental Protection Division and six at the University of Central Florida Arboretum as Program Coordinator and Professor. She specializes in water quality/quantity and landscape BMP's.