FACETS
Floridan Aquifer Collaborative Engagement for Sustainability

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Water Institute

Solutions for Water Availability in North Florida

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University of Florida

Water Workshop for Decision Makers

Feb. 17, 2021

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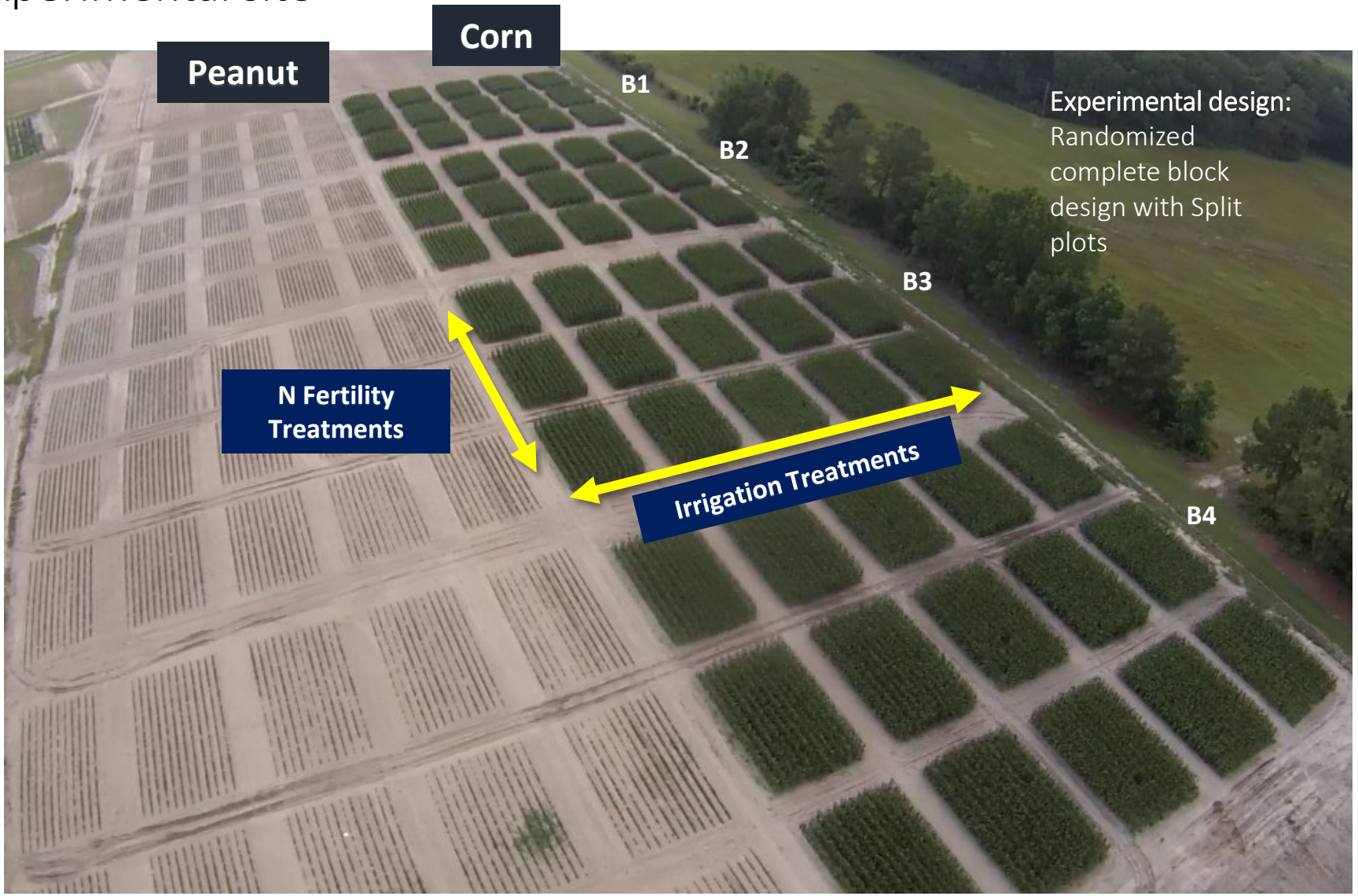
The Floridan Aquifer Collaborative Engagement for Sustainability (FACETS) project is a Coordinated Agricultural Project funded by the USDA National Institute of Food and Agriculture

USDA United States Department of Agriculture National Institute of Food and Agriculture

Agricultural Land Use

Field Experiment: Irrigation & Nitrogen Rates

Experimental site



Suwanee Valley Agricultural and Educational Center (SVAEC), Live Oak, FL (30.31353N, -82.90122W).

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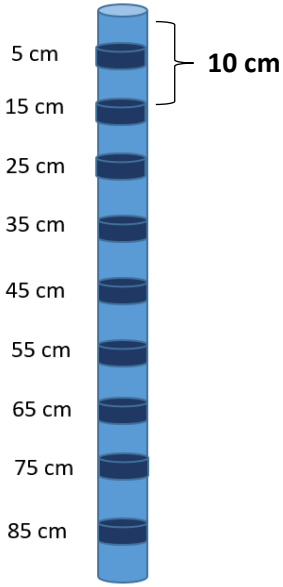
Irrigation Treatments

- Irrigation
  - **GROW:** mimics grower's irrigation practices. Calendar-based irrigation scheduling (amount of water applied depends on crop growth stages).
  - **SWB:** Soil water balance, irrigate at 30% MAD.
  - **SMS:** use of sensors to monitor volumetric water content in soil profile in order to determine when to irrigate.
  - **REDUCED:** Applies a 60% of GROW treatment.
  - **NON:** non-irrigated/control.

Soil Moisture Sensors

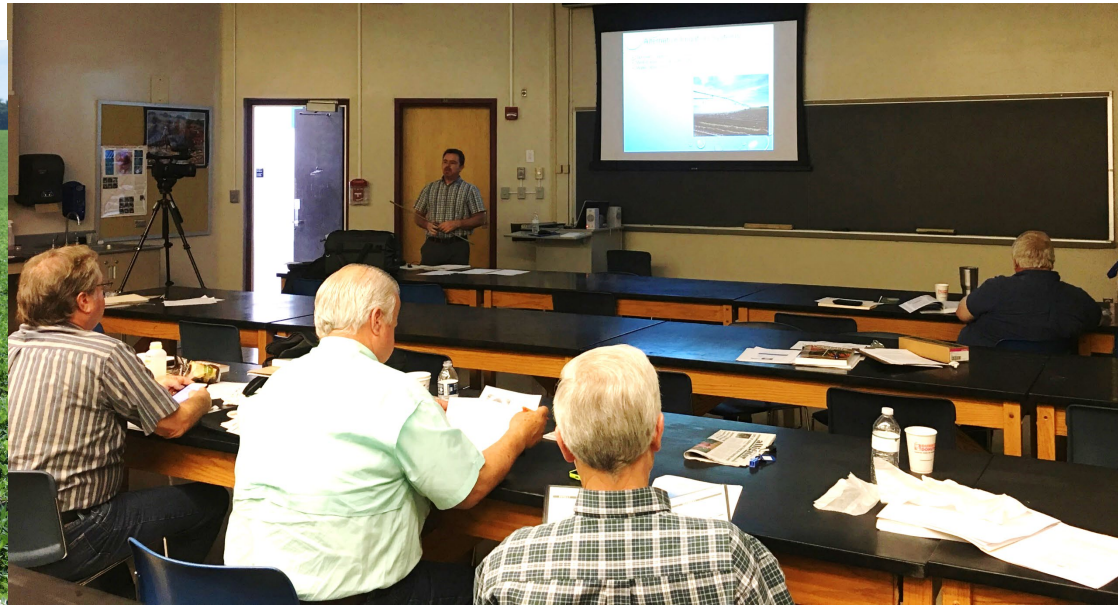
- Sensors Moisture-Salinity-Temperature (Sentek)

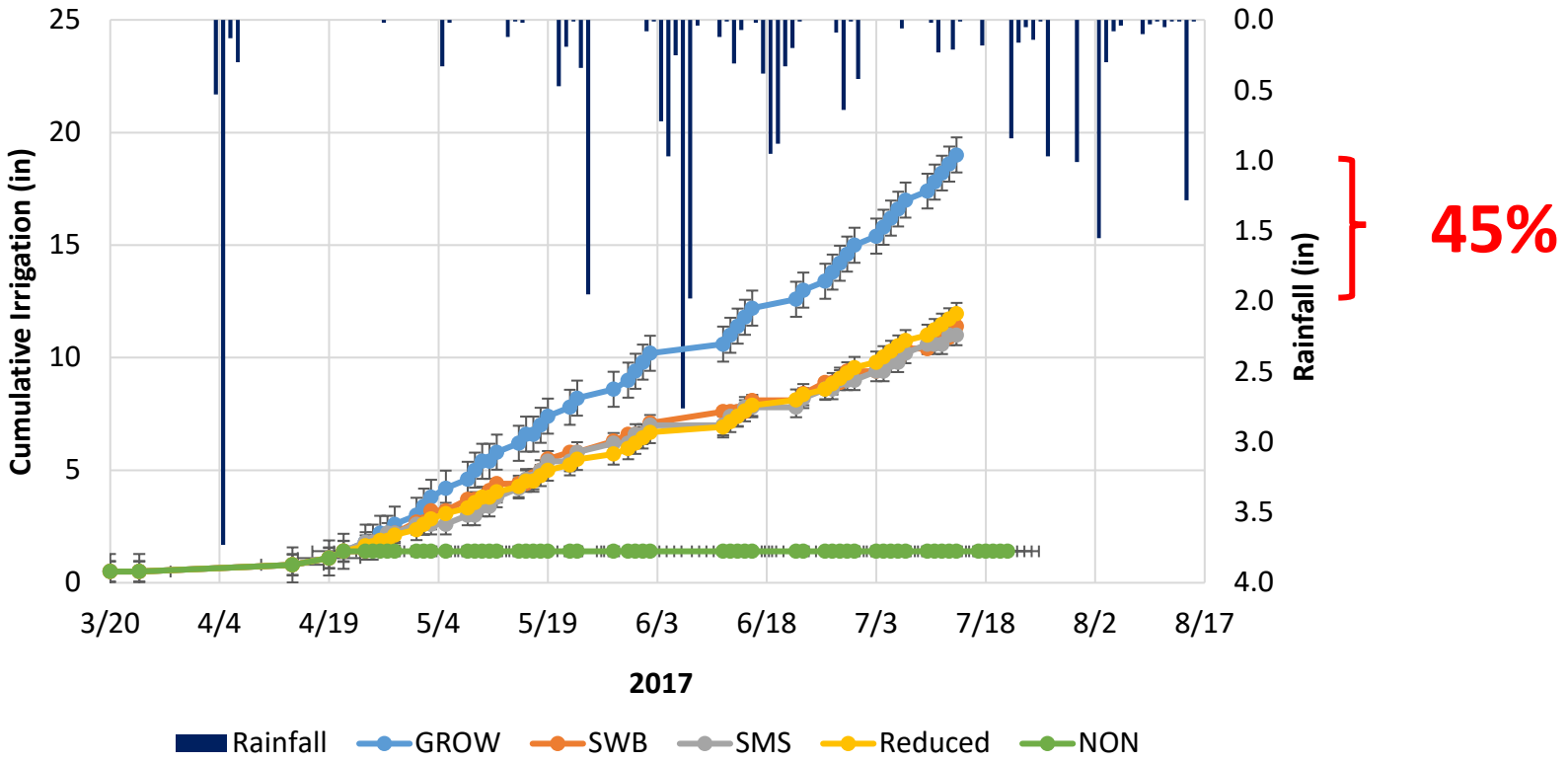


Pictures by M. Gutierrez.

Engaging Agents

- Field days
- In-service trainings
- Farm visits, installs, follow-ups
- **In-season workshops with live data**





45%

Treatment	Water savings (%) vs. GROW		
	2015	2016	2017
SWB	42	39	42
SMS	53	43	45
Reduced	34	37	36
NON	95	95	91

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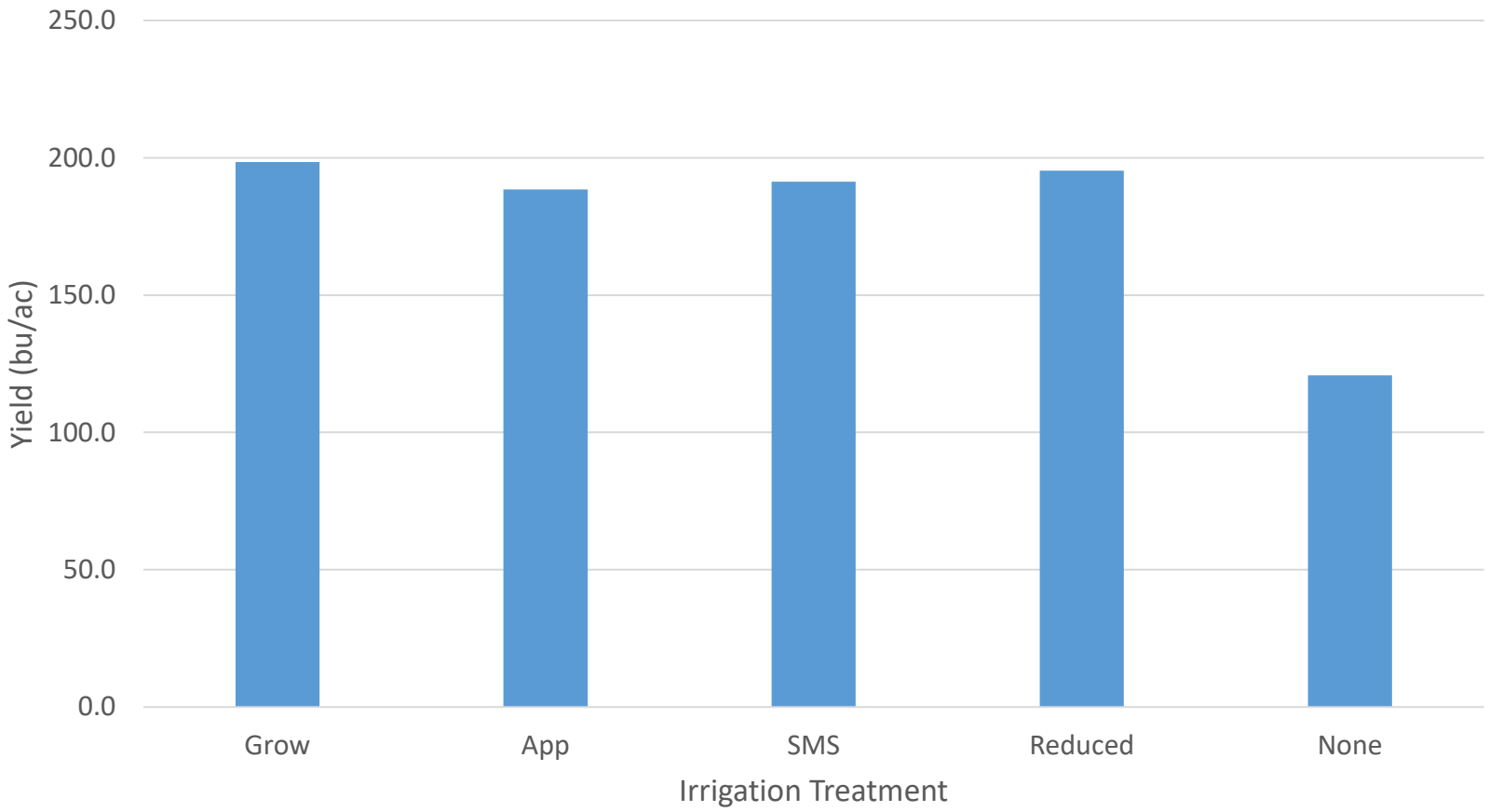
Corn Yield by Irrigation 2015-17

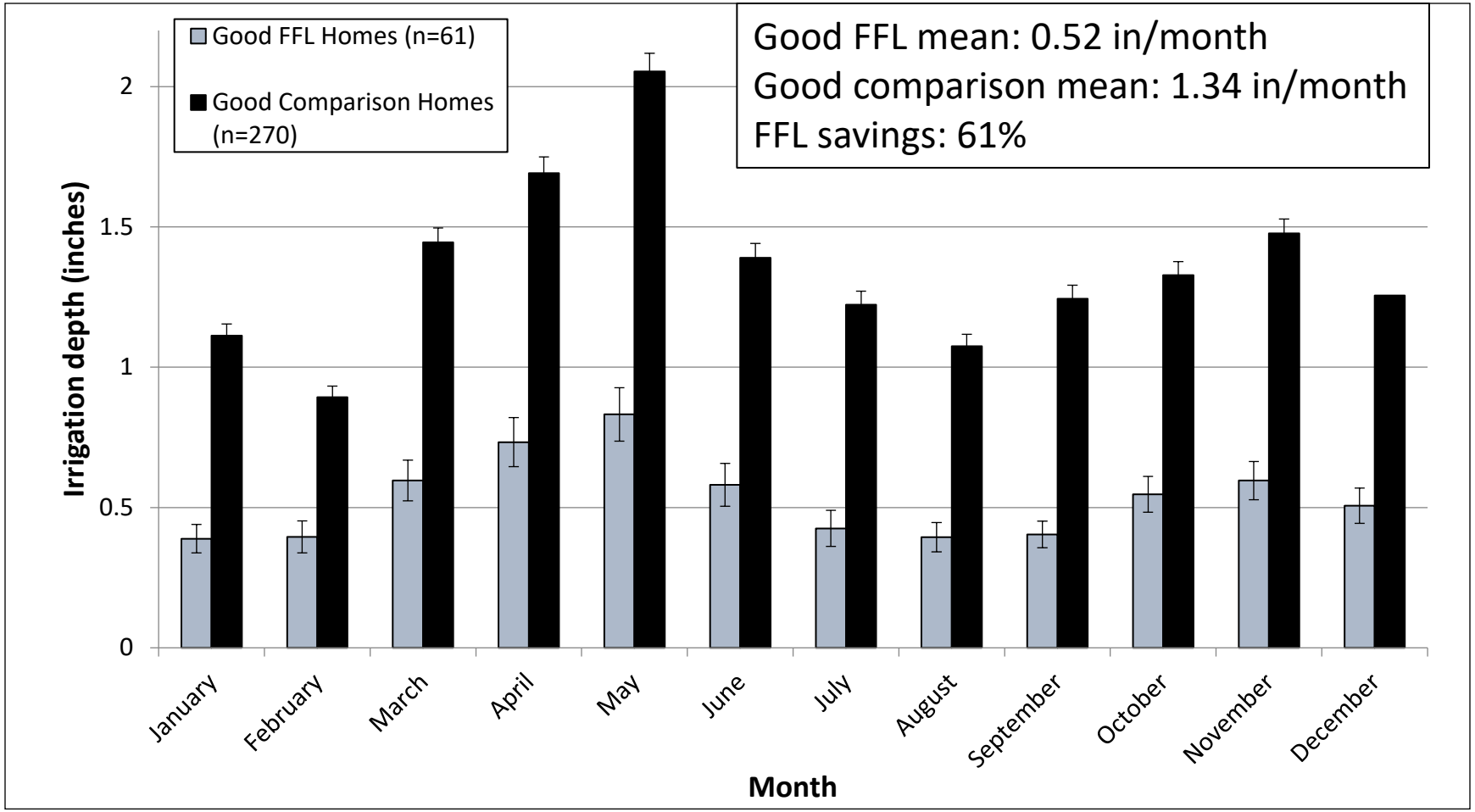


Urban Land Use


Traditional


Good FFLs

“Good” Quality FFL vs. Neighbors



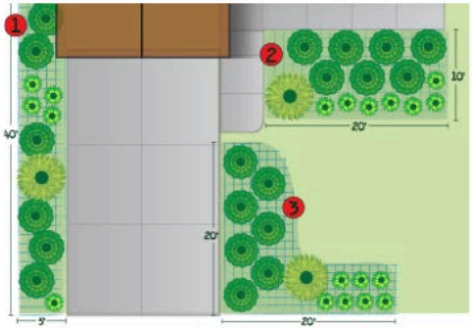
FFL Takeaway

- FFL savings vs. Traditional, 61%
- 59% in-ground irrigation
  - 43% operated manually
  - 52% had rain sensor
- 2/3 < 25% turfgrass
- Irrigated area:
  - 22% turfgrass
  - 62% ornamentals

Alachua Co. Turf Swap

TURF SWAP
Save water Add Plants

Click here to learn how to apply.



WELCOME to TURF SWAP:

Alachua County has received grant funds to reduce outdoor water use in existing landscapes. You may be eligible for a 50% rebate up to $1,500 to SWAP out a portion of your irrigated turf and replace it with water-conserving Florida Friendly Landscaping™

Not ready for landscape changes? Rebate funds can also be used for irrigation system improvements for efficiency and conservation. The program ends 5/30/2021.

Am I eligible?

- You must not have received a Turf SWAP rebate in the past.
- You must have an irrigation system - the goal of this program is to permanently remove some high volume irrigation so we can save water immediately and into the future.
- Rebates can be used for residential properties, HOA common spaces, and business properties within Alachua County (including municipalities).
- Work must be completed by a Florida Water Star Accredited Professional - a list of these SWAP Shops is available Here.

Before

After

Irrigation Efficiency Design and Maintenance Code

On September 22, 2015 the Alachua County Board of County Commissioners adopted a new landscape irrigation efficiency code to promote water conservation and improve water quality. Click HERE to view the Code. The design standards took effect 4/1/2016.

Irrigation professionals installing or maintaining irrigation systems within Alachua County must register their business. Click HERE to register your business. The irrigation portal works best with Chrome.

All new irrigation systems installed in Alachua County after 10/1/2019 require County approval, which includes a review fee and site plan. All systems will then go through an inspection process. The inspection fee is waived for irrigation professionals who are certified for self-inspection (see trai
weather based controller OR a soil moisture sensor. Click

Fees and site plans are waived for new construction that a
voluntary program for saving water HERE.

Alachua County Smart Controller and Soil Moisture Sensor Fact Sheet

Beginning October 1, 2019, all newly installed irrigation systems and those modified 50% or more by area, must have a functioning weather based controller or soil moisture sensor (SMS), as per Chapter 77 Sec. 77.61(a)(11). – Irrigation design standards.

Due to Florida State Statute 373.662, which requires that ALL irrigation systems have a functioning rainfall shut off device, all irrigation systems must have a traditional rain fall shut off device or a soil moisture sensor, even if there is a weather based controller.

Weather-based controllers

are also called "smart" controllers or ET controllers (evapotranspiration) and use local weather data to adjust irrigation schedules. All weather-based controllers must have a functioning rainfall shut-off device (traditional or soil moisture sensor).

When using a weather-based controller:

- Alachua County recommends that you select an EPA WaterSense labeled controller, as these have been tested.
- For a traditional rain sensor, set to ¼" and place in an area that is open to the sky and away from obstructions. If using a soil moisture sensor, follow recommendations listed below for placement, installation and operation.
- Program for local watering restrictions (days of the week, start time/s).
- If irrigation has been installed but the property is unoccupied and does not have wifi, the installer must re-program the controller once wifi is available.

Soil Moisture Sensors (SMS)

are add-on devices that connect to irrigation system controllers and bypass irrigation when there is sufficient moisture in the soil. These can be wireless or hard wired.