

HOW INTELLIROOT™ MOISTURE SENSORS HELP SUGARCANE FARMERS INCREASE BRIX AND SELLABLE TONNAGE



OVERVIEW

Monitoring water usage is important for crops of all types, but for water-intensive crops like sugarcane that remain in the ground year-round, it's critical.

We put IntelliRoot™ moisture sensors to the test in deep organic soils at a large sugarcane growing operation in Florida. Typical of most sugarcane operations, the sugarcane is irrigated via a series of canals, from which water is pumped out and into the fields when needed.

Because the organic soils are flooded from the bottom up, soil moisture sensors can help managers determine where water levels are at various points in the field, since each location is saturated at different times and to differing depths based on distance from the canal discharge.

The water needs to reach the center of the field but the plants also need sufficient drainage so that roots stay in aerobic conditions for an adequate length of time.



Farmers can increase brix content by as much as 7%, which results in a direct increase of 7% of sellable tonnage.



PRIMARY BUSINESS CHALLENGES

- The year-round nature of sugarcane farming requires a 24/7/365 monitoring solution
- Canal irrigation presents additional challenges in ensuring that distance from the irrigation source doesn't result in over- or under-watering

AGRISOURCE DATA SOLUTION

- The managers at this operation are utilizing the IntelliRoot™ sensors to help indicate when specific locations in a field reach saturation, which helps them find optimal timing for irrigation pumping events.
- The return on investment for using soil moisture sensors in sugarcane fields comes mainly with the optimization of irrigation events and results in savings in both water and power over time.
- Increased precision on irrigation timing allows yields to stay high but with fewer resource inputs.
- In highly organic soils, the value comes from reducing soil loss to oxidation by maintaining an optimal amount of soil moisture to prolong the useful lifespan of the field.

INTELLIROOT™ FEATURES & BENEFITS



MULTI-DEPTH

Sensors allow you to monitor moisture at multiple depths as well as predict future conditions. Soil temperature at 2", moisture at 8" & 16" (24" available if required).



EXTENDED RANGE

While most systems have limited range, our sensors can talk to each other from up to 4 miles away, meaning more fields covered by a single data.



DATA GATEWAY

Our data gateway can support up to 250 sensor locations within a 4 mile radius. More sensors per gateway means more savings to you.