SapIP Services From



Overview

* Sap Flow

- * Why is sap flow ideal for irrigation scheduling?
- * How to access your sap flow information
- * What tools are available to me on the Agrisensors.NET website?
- * Soil Moisture Profiles
 - * The advantages of the SM150 sensors
- ***** Weather Stations and Etp
 - * Stress Factor (Ks)and the Crop Coefficient (Kc)
- * IR Infrared Temperature Sensors
- * SapIP Services



SapIP Systems & Sap Flow Sensors

- Help you Maximize Water Use Efficiency
- Tell you how much to irrigate
- When and how much to Irrigate
- Apply and Manage Nutrient loss
- Ability to Manage Plant Stress
- Measure plant water consumption directly
- Gallons/Hr or Total Gallons/Day







Water Availability

Soil Status

Root Health

Disease

Fertility

Sap Flow Sensors

- Do not harm the plant
- Use a scientifically proven method
- Give total water flow through the stem
- Do not need calibration





Sap Flow – g/h or Gal/day

= Heat Gain / Temp

Heat Balance: Warm the plant 2-3 °C, and measure where the heat goes. Measure how much is carried up the stem by the sap. Convert to water use.



SapIP Wireless Systems

- ✓ Plant Water Use
- ✓ Stress Factor
- ✓ ET and weather
- ✓ Soil moisture profiles
- ✓ IR leaf temperature

Agrisensors.NET Remote Network





Current Plant Water Usage

7/20 to 7/26 SITE2 ALMONDS

Sensor 1 -Gallons

Gallons

Sensor 2 - Total Avrg Gallons



Data is recorded in 15 minute intervals

Response to weather, irrigation, stress.

Daily Crop Water Use Totals



- Create water budgets and conserve water
- Average tree water
 use is extrapolated
 to entire irrigation
 zones by trees/acre.

Stress Factor

1.0 means no stress and well-watered, 0.6 means using 60% as much water





Plants Tell You The Stress Level by Sap Flow Rate per Hour

- Manage plant stress accordingly
- Know when to irrigate & how much
- Deficit irrigate if desired
- Maximize water use efficiency
- Prevent over-watering and conserve water
- Know when to apply nutrients
- Improve recovery time & avoid losses

SapIP-SM Soil Moisture Nodes



- Add to SapIP Wireless Networks
- Soil Moisture Profiles
- Works well in all kinds of soils
- Water Content +/- 2%
- SapIP with (4) or (6) SM150 Sensors
- Bury at 6", 1 ft, 2 ft, & 4 ft
- No temperature or salinity effects
- No maintenance required
- Buried > 15 years with no issues

SapIP-MICRO Weather Kits

- Add to SapIP Wireless Networks
- Complete ET Weather Stations RH, Air Temp, Solar Radiation, Wind Speed & Direction
- or RH & Temperature Only
- Use ET to generate "Stress Factor"
- Chill Factor & Frost Warning Available



SapIP-IRT IR Leaf Temperature Sensor



- Add IRT Sensors to SapIP Wireless Network
- Monitor Plant Stress Crop Water Stress
 Index CWSI or iDANS models
- Receive Frost Warnings
- 0.5 Degrees Accuracy
- Can be used with Center Pivot systems
- Wireless or used with data loggers

SapIP Services

- Our trained technicians will ensure your sensors are working properly and all equipment is being maintained
- Online and Toll Free Support
- Access to data 24/7
- Access with PC, notepad, or cellphone
- Receive alerts based on your criteria
- Data summary reports made for you





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