



“Omnibus Presentation”

**Reinier van der Lee
Temecula winegrower**

PESTS IN MY VINEYARD

- MEALYBUGS
- ANTS
- ON ROOTS (?)
- CALL GREG



PESTS IN MY VINEYARD

- **SKELETONIZERS**
- **Local spray application**
- **Check every day**
- **Bacillus thuringiensis (Bt)**
- **Horticultural oil**



WEEKLY IRRIGATION EMAIL

- Reference vineyard
- Cabernet Sauvignon
- 4.4 acres, Planted 2000
- 6 x 9 feet, 2 feet canopy
- ET0 from CIMIS 237

- This season: 100% ET

	Date	Predicted ET0	Kc	ETc	Gallon/Vine/Day	Irrigation time (minutes) 100% ET daily
Satellite Prediction	08/19/19	0.27	0.378	0.103	3.50	105
	08/18/19	0.26	0.378	0.097	3.29	99
	08/17/19	0.26	0.378	0.097	3.29	99
	08/16/19	0.31	0.378	0.116	3.95	119
	08/15/19	0.33	0.378	0.126	4.31	129
	08/14/19	0.36	0.378	0.135	4.61	138
	08/13/19	0.32	0.378	0.119	4.06	122
	08/12/19	0.28	0.378	0.106	3.60	108
Weekly total per vine					27	814

CIMIS Last Week	08/11/19	0.27	0.378	0.102	3.48	104
	08/10/19	0.29	0.378	0.110	3.73	112
	08/09/19	0.30	0.378	0.113	3.86	116
	08/08/19	0.28	0.378	0.106	3.60	108
	08/07/19	0.23	0.378	0.087	2.96	89
	08/06/19	0.25	0.378	0.094	3.22	97
	08/05/19	0.31	0.378	0.117	3.86	120
	Weekly total per vine					25

Growing Degree Days 2019 2103
 Growing Degree Days 2018 2305

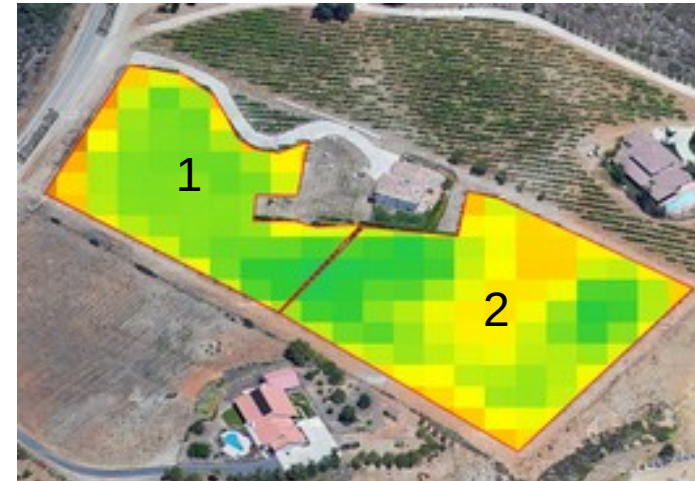
Assumptions:
 Canopy width 2 Shaded area 12 square feet
 Vine spacing 9 x 6 feet Area per vine 54 square feet
 % shade 22% Kc 0.378 crop coefficient

2 x 1 gph drippers/vine
 CIMIS station 237 Temecula East III

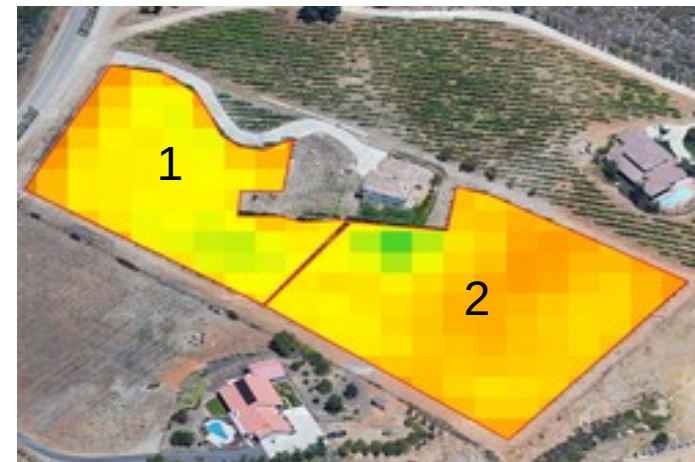
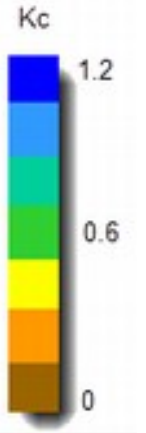
CROP COEFFICIENT

- Varies with canopy density
- Canopy altering work (hedging, leaf pulling, etc) changes Kc

irrisat-cloud.appspot.com



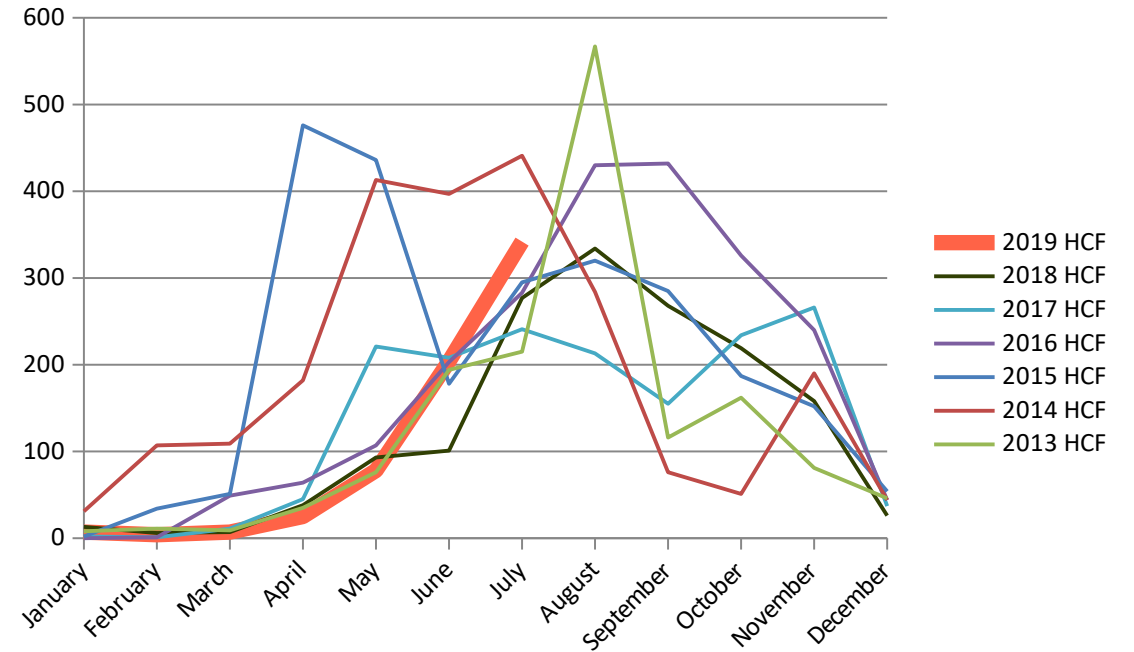
June



August

REFERENCE VINEYARD WATER USE

- In line with 2016-2018
- >>50% less than 2014-2015



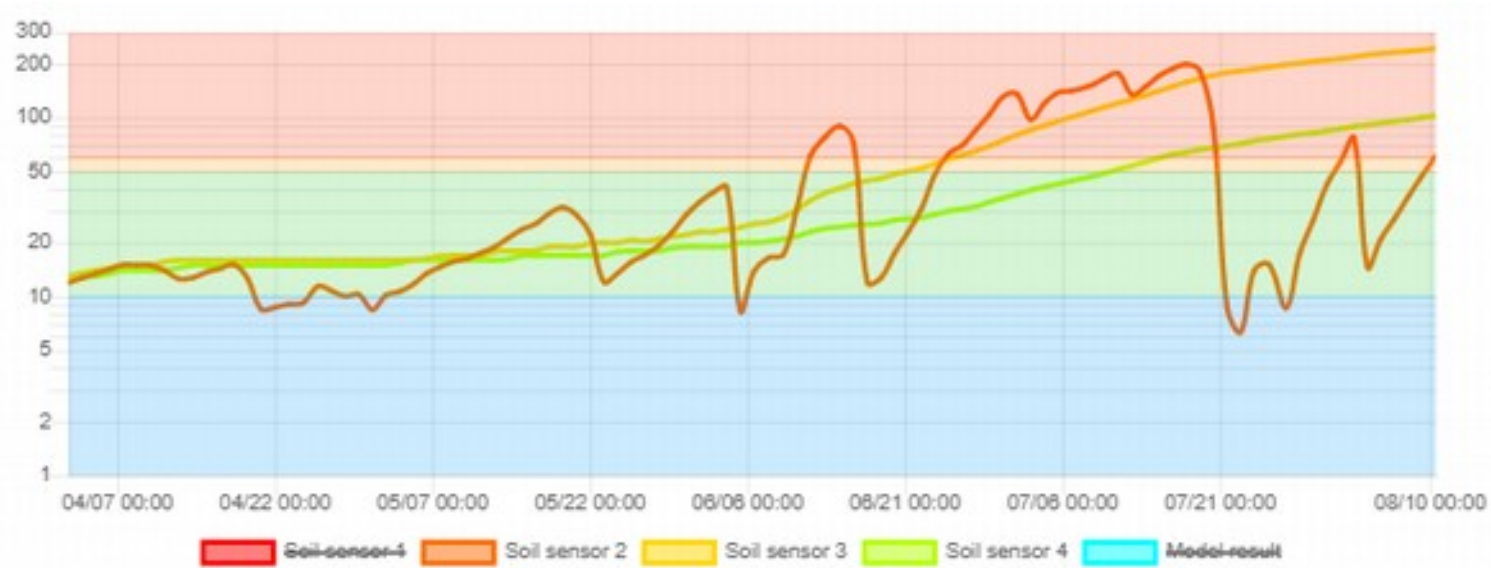
SOIL MOISTURE

- Block 1 August 1-12
- 11-14 kPa @ 2, 3 & 4 feet
- Block 2 August 1-12
- 42 kPa @ 3 & 4 feet
- Flat line = 100% ET



WHAT HAPPENS AT \ll 100% ET

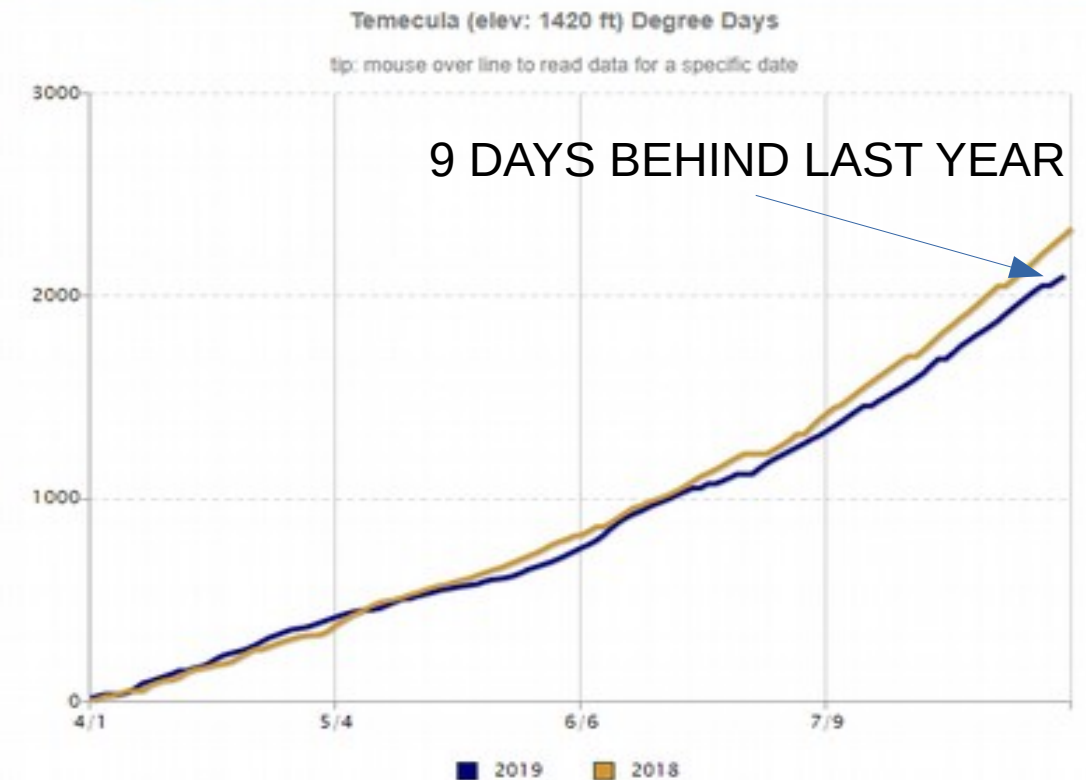
- When vines use more water than what gets replaced by irrigation



GROWING DEGREE DAYS SEASON 2019

- Also called Winkler scale
- Sum of degree days over 50 °F from April 1 until October 31
- Temecula = Region III
3,000 – 3,500 degree days
- Better to calculate from January 1

growing degree days



NRCS EQIP FUNDING 2019

SEVERAL GROWERS GOT EQIP FUNDING

- Irrigation System Refurbish
- Irrigation Automation (!!)
- Irrigation Water Management
- Wood Chips

- > 100% cost coverage
- Priority for Veterans and new farmers (<10 years)
- 50% pre-payment option (3 months completion)

ENCLOSURE POLL RESULTS

- **THANK YOU**
- **208 EMAILS**
- **1 UNSUBSCRIBED**
- **63% OPENED**
- **38 (86%) VOTED FOR A**
- **6 (14%) VOTED FOR B**



SWA MEMBERS PRE-ORDER

SOIL MOISTURE MONITORING KIT

- Vinduino R4 sensor station
- IoT gateway
- 2 x Watermark sensor
- 1 yr eVineyard software

Pre-order 25% off: \$ 595

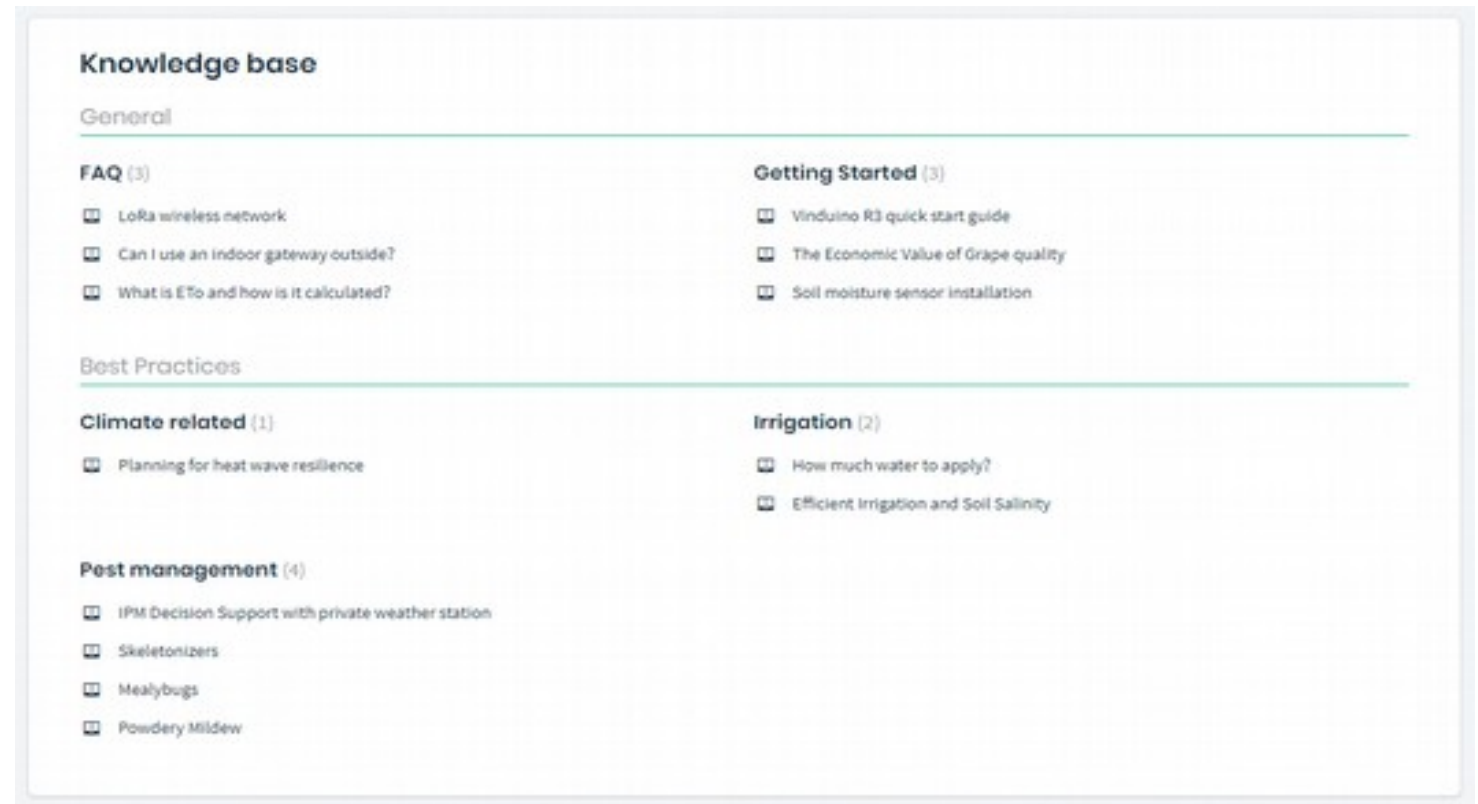
Shipping Q4 2019



ON-LINE KNOWLEDGE BASE

<https://vinduino.freshdesk.com/support/home>

- Best practices
- Irrigation
- Pests
-
- Add content



Knowledge base

General

FAQ (3)

- LoRa wireless network
- Can I use an indoor gateway outside?
- What is ET_o and how is it calculated?

Getting Started (3)

- Vinduino R3 quick start guide
- The Economic Value of Grape quality
- Soil moisture sensor installation

Best Practices

Climate related (1)

- Planning for heat wave resilience

Irrigation (2)

- How much water to apply?
- Efficient Irrigation and Soil Salinity

Pest management (4)

- IPM Decision Support with private weather station
- Skeletonizers
- Mealybugs
- Powdery Mildew



Thank You

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