Summary of invited presentation to Lodi Grape Day

Overview of Two Decision-Support Systems for Viticulture

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OPENET

Sustainable water management is one of the most challenging issues of our time, especially in the arid western U.S. Adequate water supplies are crucial to maintaining the health of communities, rivers, and wildlife, and nothing is more important to agriculture's ability to produce food for the world's growing population. Maximizing the benefits of our water supplies requires careful measurement of their availability and use. For irrigated agriculture, satellite-based estimates of evapotranspiration (ET) provide a measure of the water used to grow food — the biggest share of water consumption in most arid environments around the world. However, access to ET data has been limited and expensive, keeping it out of the hands of most water users and decision-makers.

OpenET provides open, easily accessible satellite-based ET data for water management support. The OpenET collaborative includes leading national and international experts in remote sensing of ET, cloud computing, and water policy, partnered with nationally recognized web development teams and leaders in the western agriculture and water management communities. The system can be accessed at https://openetdata.org/.



Transformative, Timely ET Data



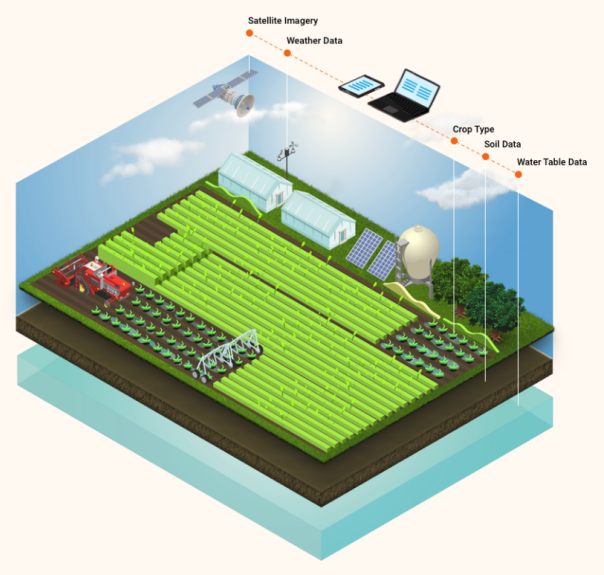
An Ensemble of Well-Established Methods



Secure, Custom Data Delivery

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CropManage
Knowledge Base



CropManage is an online decision support tool that assists growers and farm managers in determining water and nitrogen fertilizer applications on a field-by-field basis. Automated calculations derive crop water needs from weather data and models of crop development. Fertilizer N requirements are estimated by a combination of infield measurements, models of crop N uptake and soil/crop residue mineralization. The system also helps growers maintain records of irrigation schedules and nitrogen fertilizer applications on multiple fields, and allows users from the same farming operations to view and share data. CropManage was originally developed by **UC Cooperative Extension** and is currently free to use. Access at https://cropmanage.ucanr.edu

What it does:

- Automates weather-based irrigation scheduling.
- Science-based algorithms provide site-specific recommendations for irrigation and nitrogen management based on soil type, climate, crop type, and crop development stage.
- Maintains records on water and nutrient management to support regulatory compliance.
- Includes optional links for import of OpenET data.

Vineyard version recently released:
-cover crop
-deficit irrigation
-preliminary nutrient model