

UCANR Nitrogen and Irrigation Initiative: Opportunities for Technical Assistance

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Overview of the UCANR Nitrogen and Irrigation Initiative



Improve nitrogen and irrigation management in California by closing the information access and training gap.



NII advisors and staff deliver educational content, training, and consultations to growers and their consultants in 12 counties in the San Joaquin Valley and Central Coast.



Educational Resources, On-farm Trials, Training Events, Grower Consultations.



Central Coast Project Team



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When to Irrigate – Soil Moisture Sensors





When to Irrigate – Stem Water Potential

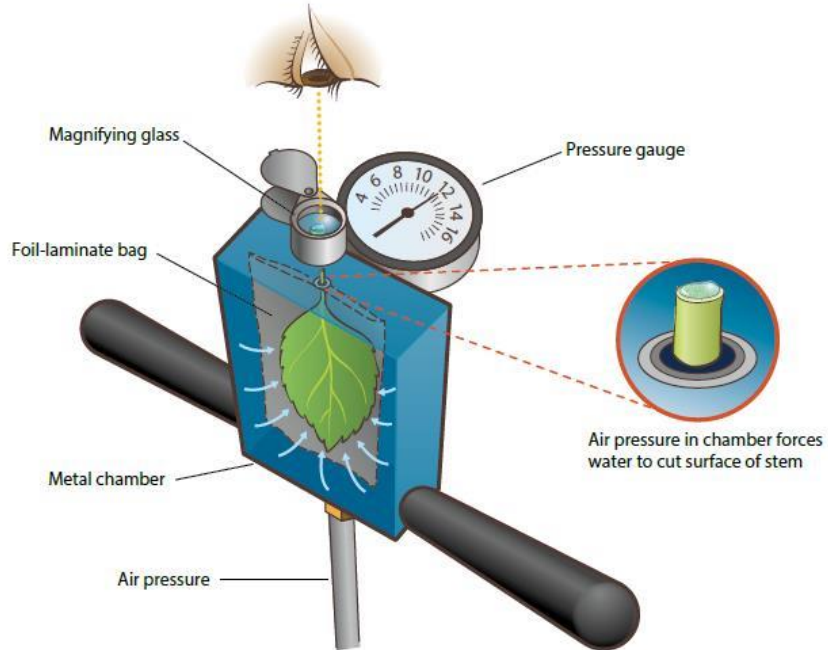


Figure 2. Schematic showing how water potential is measured in a severed leaf and stem (petiole) using a handheld pump-up pressure chamber. *Source:* Adapted from Plant Moisture Stress (PMS) Instrument Company.

Measure How Much Water is Being Applied



Flowmeters are useful tools for irrigation scheduling

Evaluate Irrigation Application Uniformity

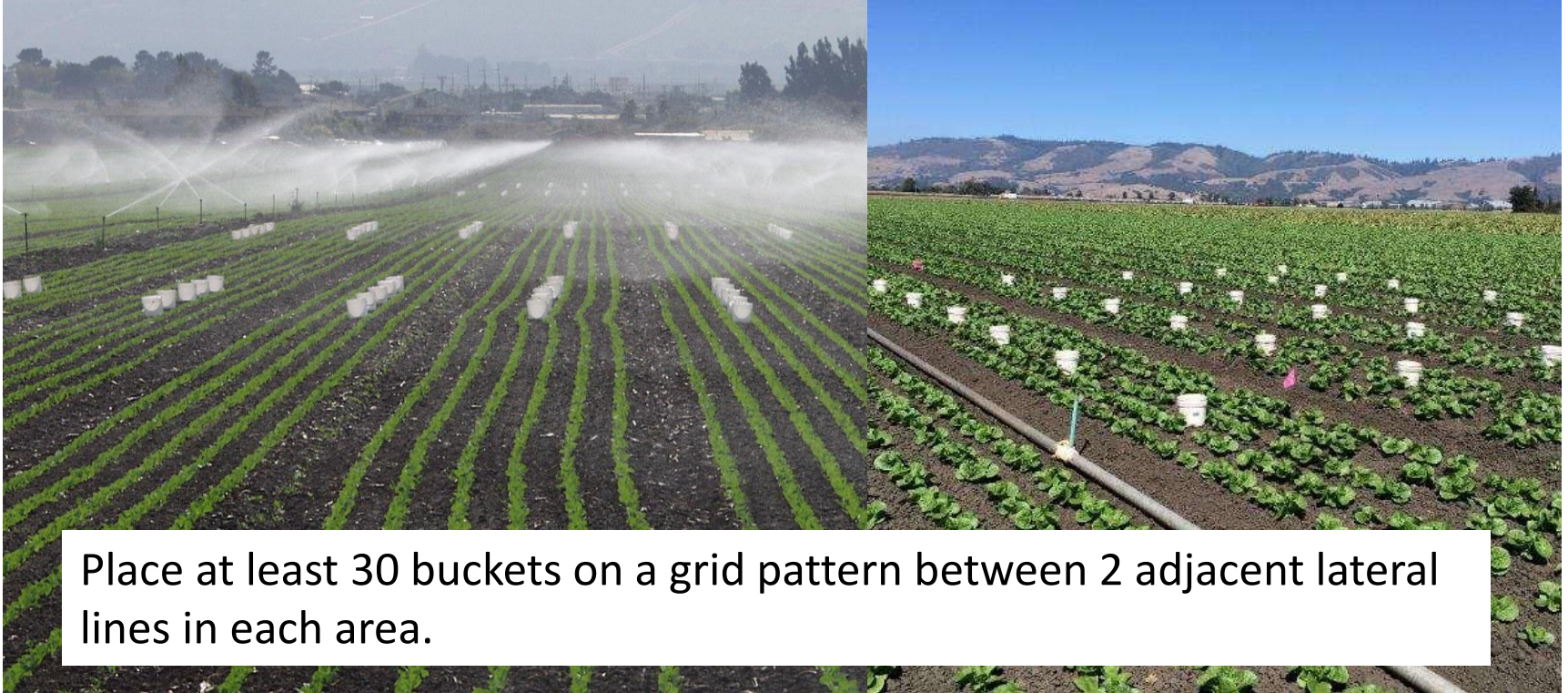


Measure volume of water discharged from 30 or more emitters for 10 minutes: eg. 8 emitters \times 6 locations in the field



$$\text{Application Uniformity}_{\text{Lowest quarter}} = \frac{\text{Average volume of lowest 25\% of the emitters}}{\text{Average volume of all emitters}}$$

Evaluate Irrigation Application Uniformity

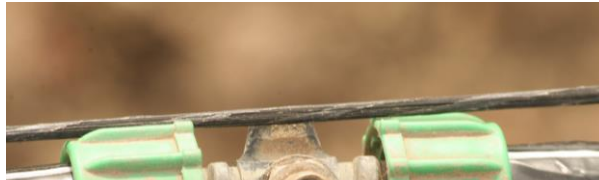


Place at least 30 buckets on a grid pattern between 2 adjacent lateral lines in each area.

Evaluate Irrigation Application Uniformity



Evaluate Pressure Uniformity



Use Schrader valves and a calibrated pressure gauge.

Use a gauge with 0-30 psi range for the drip system and a gauge with 0-100 psi range for pressures greater than 30 psi.

Evaluate Pressure Regulating Valves



Pressure regulating valves minimize variability in irrigation application rate



Soil Nitrate Quick Tests



<http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=4406>

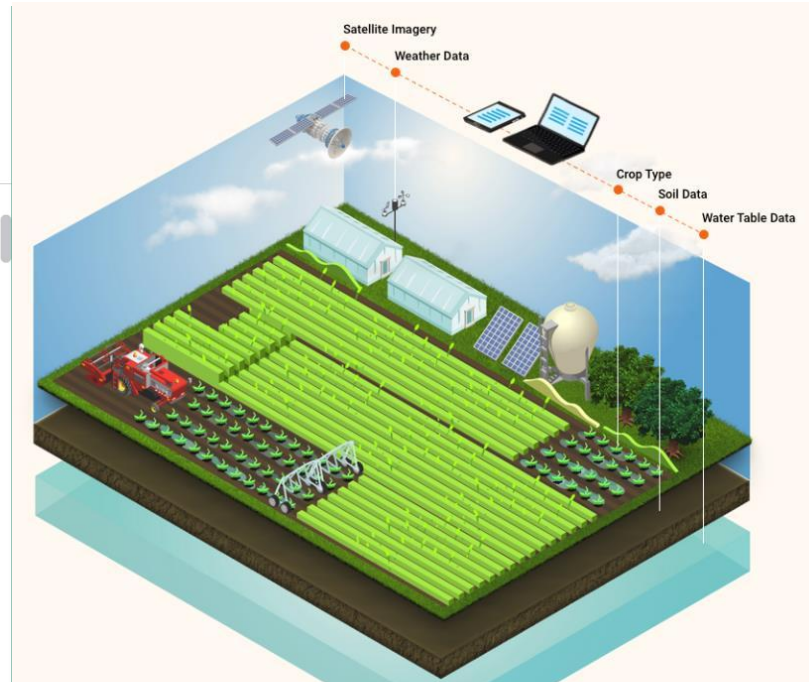
CropManage: Online Irrigation and Nitrogen Management Decision Support

☆ Red Cabbage 100% ET ✕

29 Apr 2020 - 5 Aug 2020 ⚙️ 📊 📄 📈

Upcoming **Past** 📅

27 Jul 2020	Drip	5.1 hr
24 Jul 2020	Drip	5.5 hr
	UAN32	7 gal/acre
20 Jul 2020	Drip	6.4 hr
	Quick Nitrate Strip	0.5 ppm
	Quick Nitrate Strip	0.5 ppm



cropmanage.ucanr.edu

CropManage Workshops

Watsonville

March 7

Salinas

March 27

San Martin

April 10

<https://surveys.ucanr.edu/survey.cfm?surveynumber=39745>

Trained Staff is Critical for Irrigation Management – Hands-on Irrigator Training Workshops



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Questions?