

UC Davis Olive Center

What the Latest Research Tells Us

Presenter: Dan Flynn
UC Davis Olive Center



California Extra Virgin Olive Oil | Better.Fresher

Olive center DEDICATED TO CALIFORNIA



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Building Research Capacity

- New blood at UCCE
- New Yale Institute
- New lab equipment and orchards
- Expanding global research network
- 15 peer-reviewed papers in 13 months
- Graduates trained in olives and olive oil



Dr. Selina Wang



Support from Industry and Beyond



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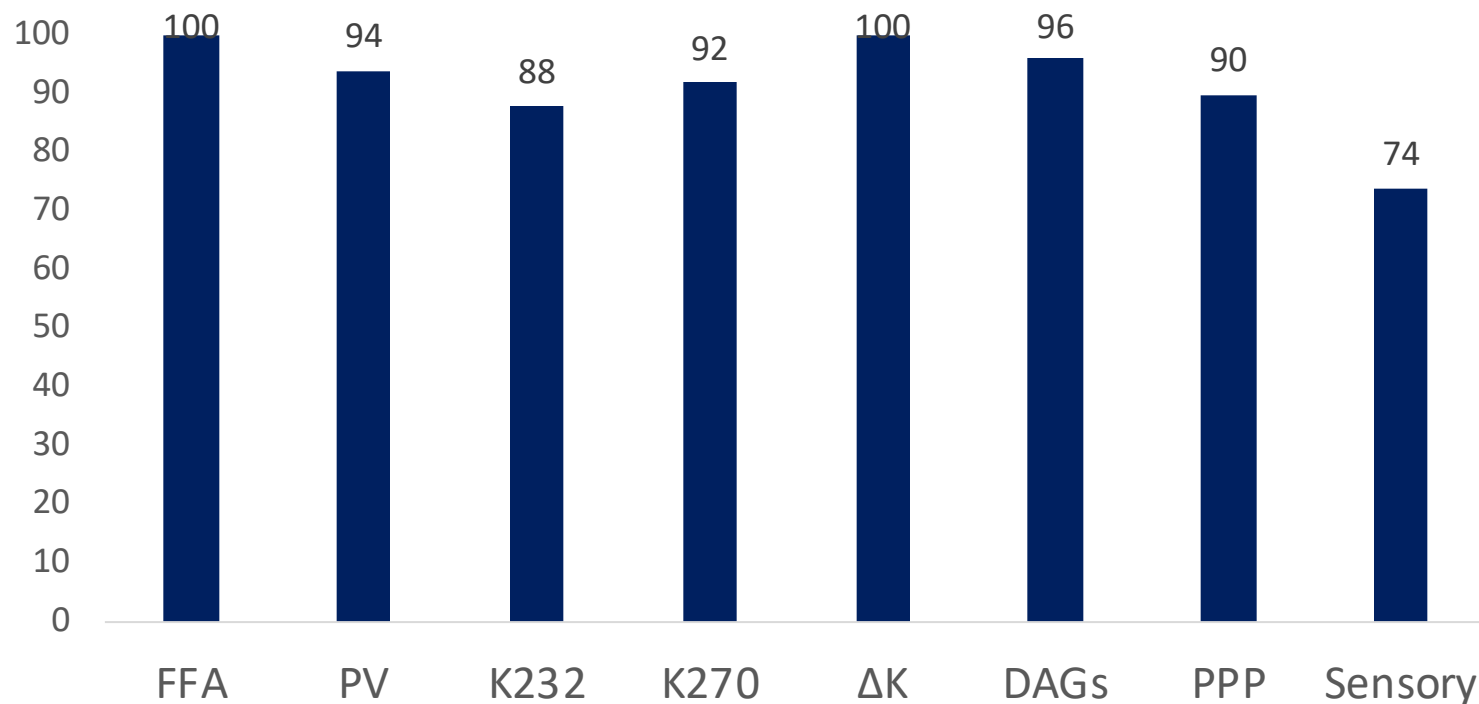
Producers Are Grading Accurately

- All 161 samples designated as EXTRA VIRGIN
- 13 of 14 samples undesigned met EXTRA VIRGIN
- 11 of 12 samples designated as VIRGIN or CRUDE



UC Davis Olive Center, “Evaluation of Mandatory Testing California Olive Oil 2017/18 Season,” Submitted to the Olive Oil Commission of California, August 2018

Shelf Quality High, Room to Improve



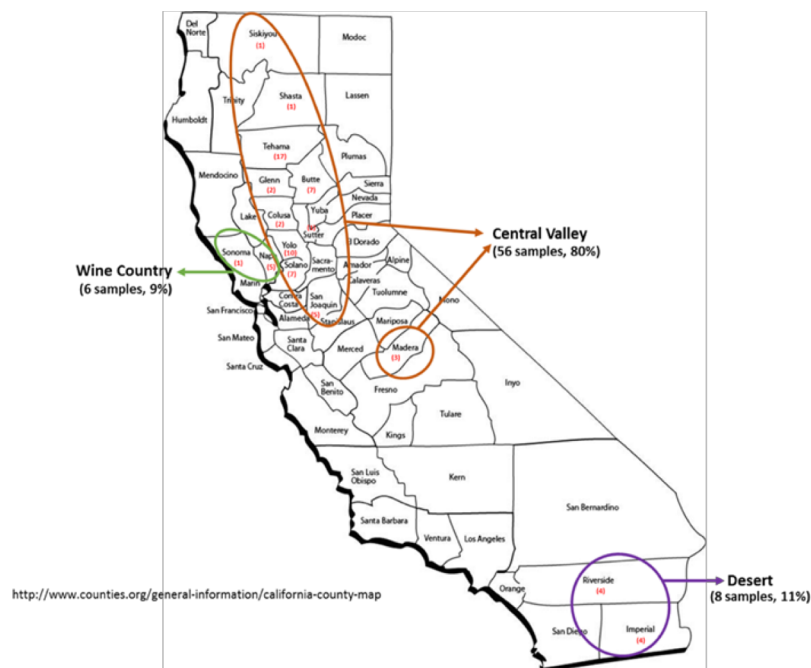
UC Davis Olive Center, “Evaluation 50 California Olive Oil Samples at Least One Year After Harvest,” Submitted to the Olive Oil Commission of California, August 2018



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Purity Standards Don't Fit CA Chemistry

- **11% (28 of 216 samples) outside USDA limits**
 - **1/2 Koroneiki**
 - **1/2 Central Valley**
 - **~1/2 Desert**



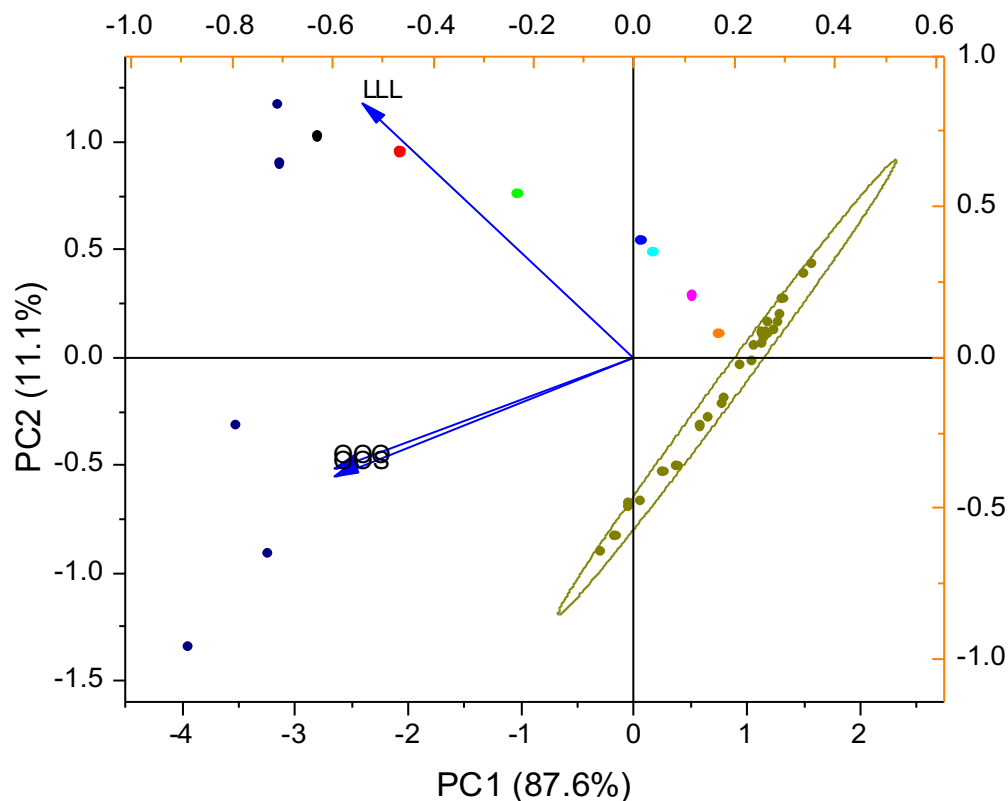
UC Davis Olive Center, “Evaluation of Sterol and Fatty Acid Profiles, California Olive Oil 2017/18 Season” Submitted to the Olive Oil Commission of California, August 2018



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Lower-Cost Purity Method On Horizon

- **Saves prep hours**
- **Dilute and shoot**
- **Detect @ 5 -10%**



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New Knowledge Delivers More Oil

- **Multi-variable study**
- **Smaller grid size, lower rotor speed, longer malaxation = max yield (89.4%)**
- **Shorter malaxation = min yield (84.7%)**



Juan Polari

Interactions between hammer mill crushing variables and malaxation time during continuous olive oil extraction. Polari, J. J., Garc -Aguirre, D., Olmo-Garc , L., Carrasco-Pancorbo, A., & Wang, S. C. (2018). *European Journal of Lipid Science and Technology*, 120(8), 1800097.



Better Accuracy of Harvest Timing

- **NIR for oil/moisture analysis**
- **Database is key to accuracy**
- **Options for all production sizes**



[Near-Infrared \(NIR\) Spectrometry as a Fast and Reliable Tool for Fat and Moisture Analyses in Olives.](#)

Lee, C., Polari, J. J., Kramer, K. E., & Wang, S. C. (2018). *ACS Omega*, 3 (11), pp 16081–16088.

What's Next

- **Pomace composting with California Olive Ranch (CDFA grant)**
- **Faster, better and cheaper DAGs method**
- **Olive Production Manual revision**
- **Sensory Evaluation Certificate Course: Sue Langstaff, June 12 and 13**
- **Master Milling Certificate Course: Leandro Ravetti, September 23 - 25**



Olive Center 2.0



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