

# SUPPRESSION OF MACROPHOMINA WITH WHEAT?



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**1962: fumigation with methyl bromide + chloropicrin reported by Wilhelm to control Verticillium wilt of strawberry.**





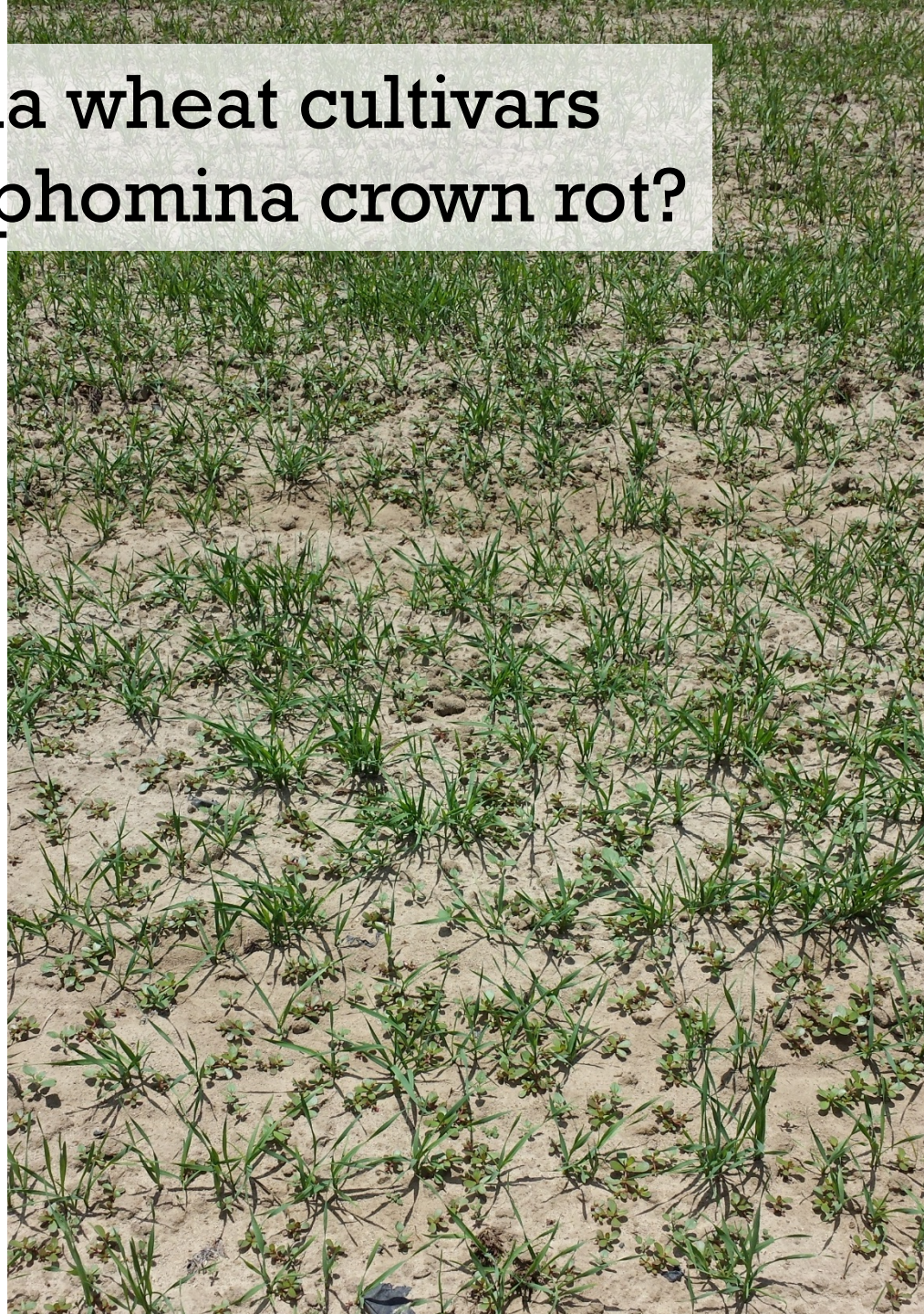
**1962: fumigation with methyl bromide + chloropicrin reported by Wilhelm to control Verticillium wilt of strawberry.**

**Used as a preplant eradicator in nearly all conventional strawberry plantings in California since...**





**Are there California wheat cultivars that suppress *Macrophomina* crown rot?**





# Greenhouse trial Summer & Fall 2015





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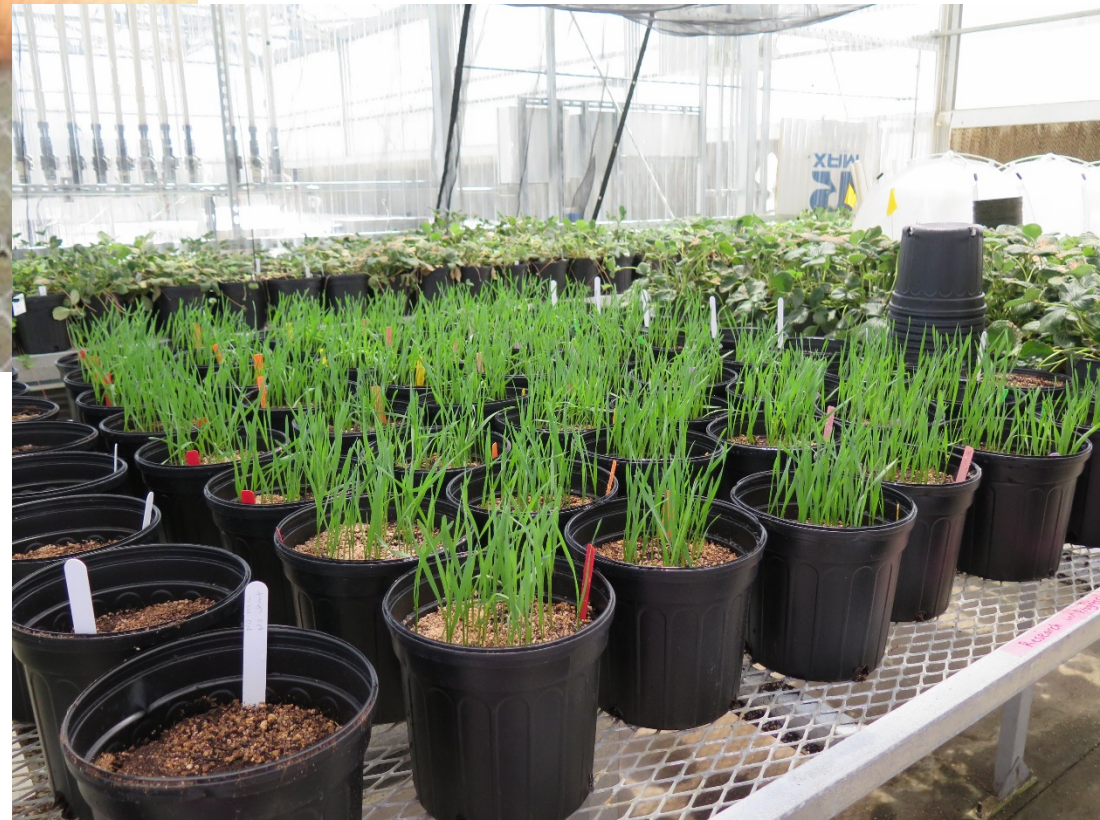
2 mm



# Greenhouse trial Summer & Fall 2015

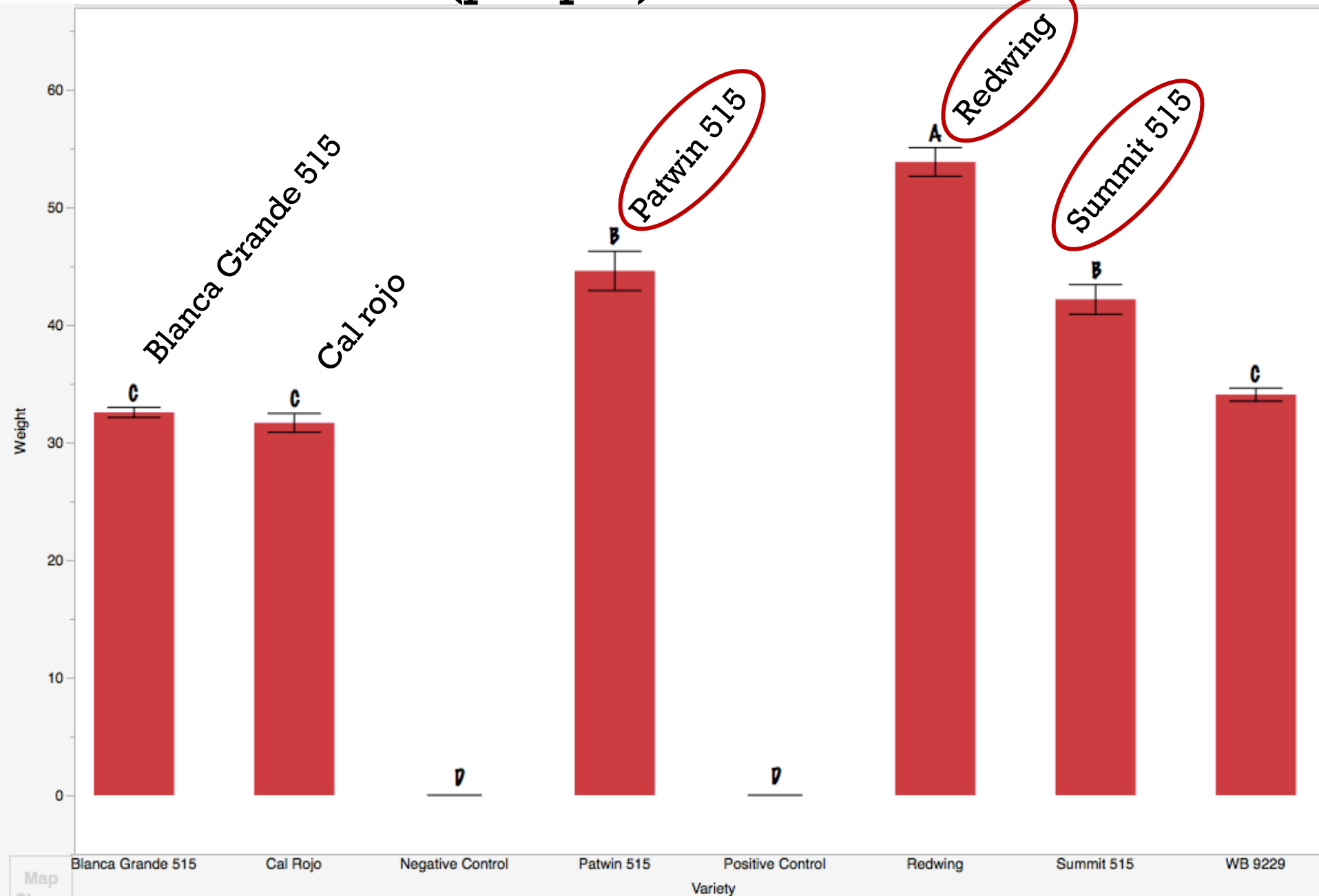


July 22, 2015





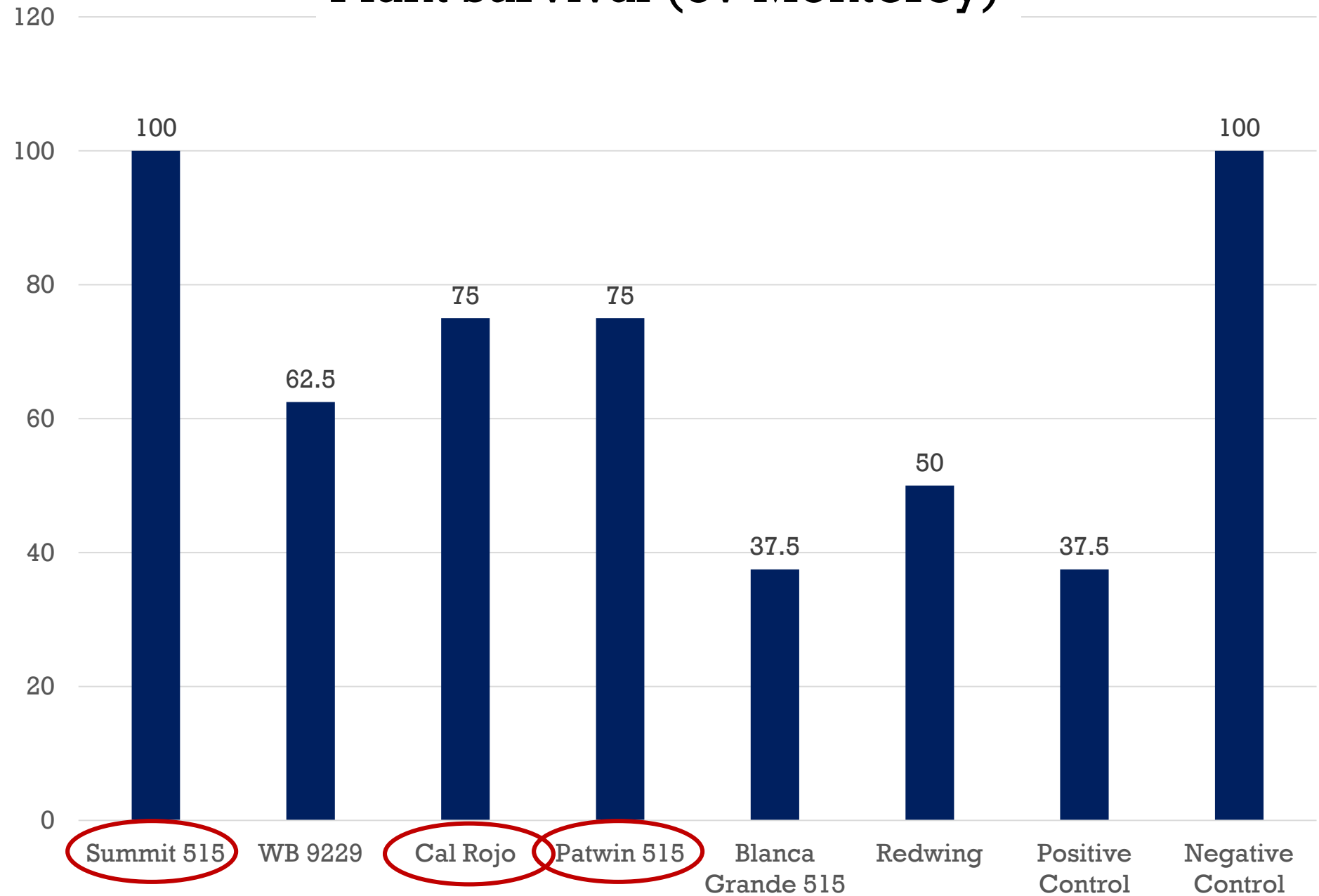
# Mean Fresh Wet (per pot) after 1 month



Map Shape



# Plant survival (cv Monterey)

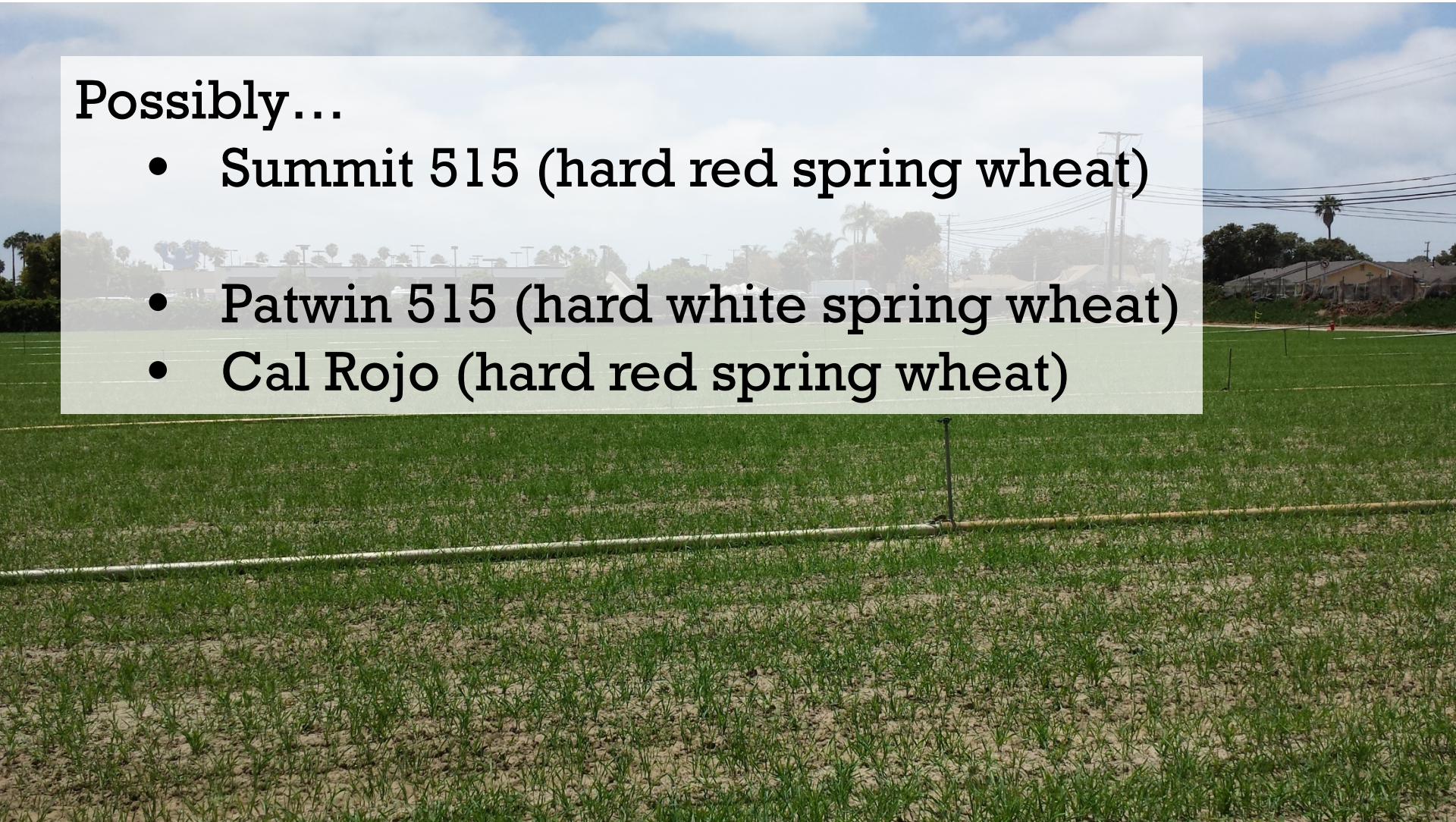




# Are there California wheat cultivars that suppress *Macrophomina* crown rot?

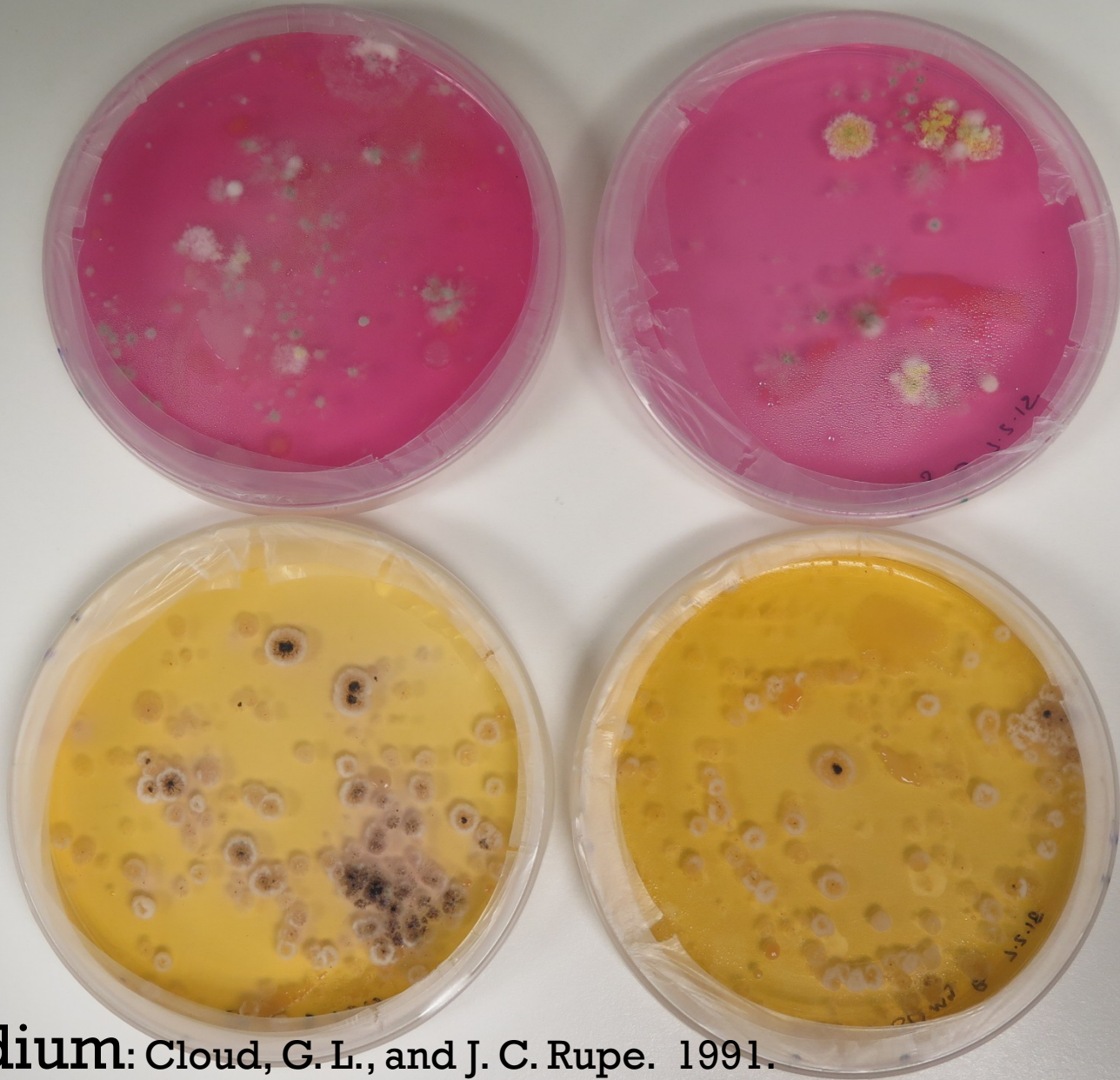
Possibly...

- Summit 515 (hard red spring wheat)
- Patwin 515 (hard white spring wheat)
- Cal Rojo (hard red spring wheat)





**MSA medium:** Zveibil, A., Mor, N., Gnayem, N., and Freeman, S. 2012.



**RB medium:** Cloud, G. L., and J. C. Rupe. 1991.



# *Macrophomina phaseolina*



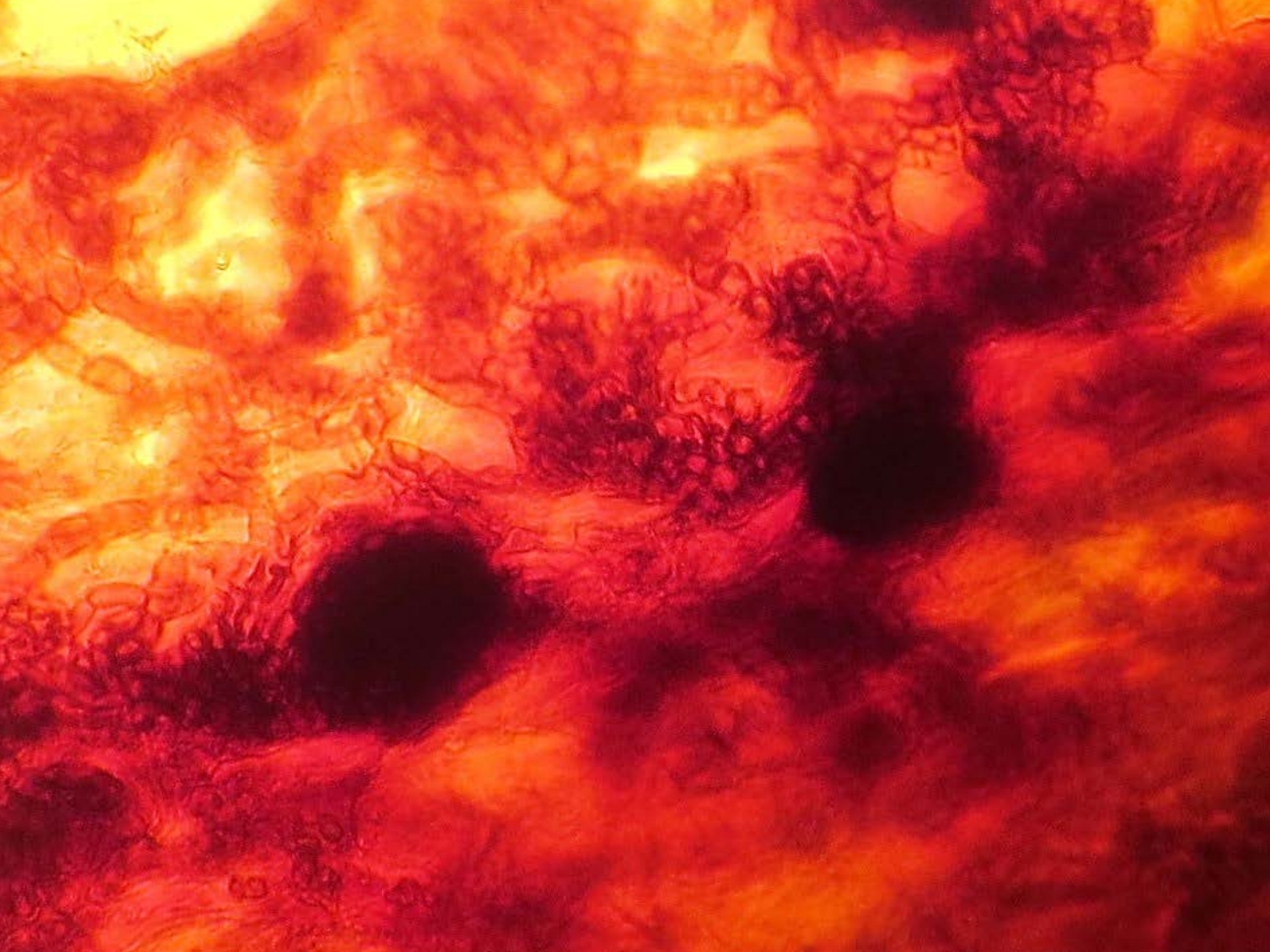
S. Koike





1 mm







***Fusarium oxysporum* f. sp. *fragariae***



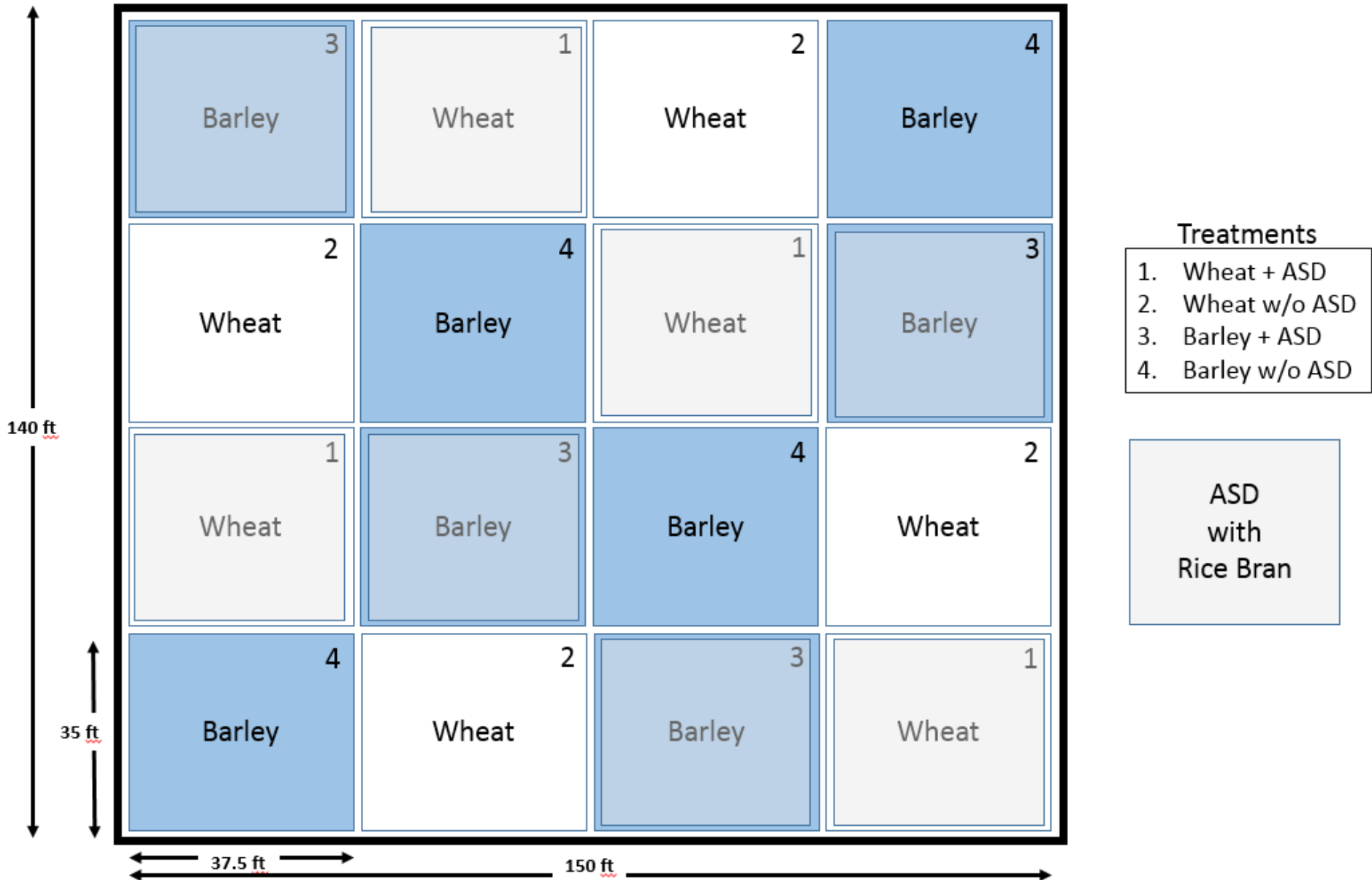


# *Verticillium dahliae*





# *Verticillium dahliae* naturally infested field





# Cal Poly Strawberry Center





## **Development and Deployment of Systems-Based Approaches for the Management of Soilborne Plant Pathogens**

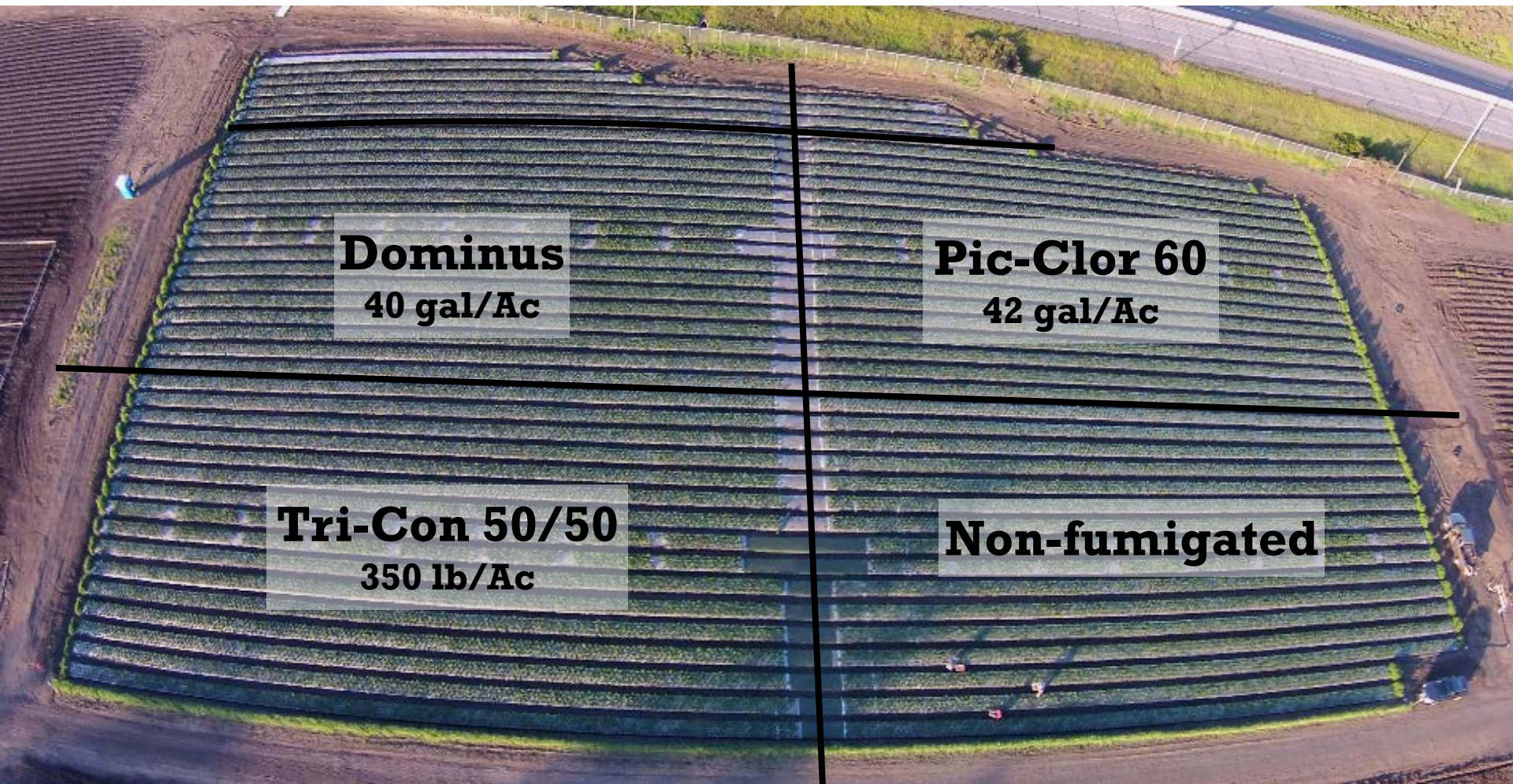
D. O. Chellemi, A. Gamliel, J. Katan, and K. V. Subbarao

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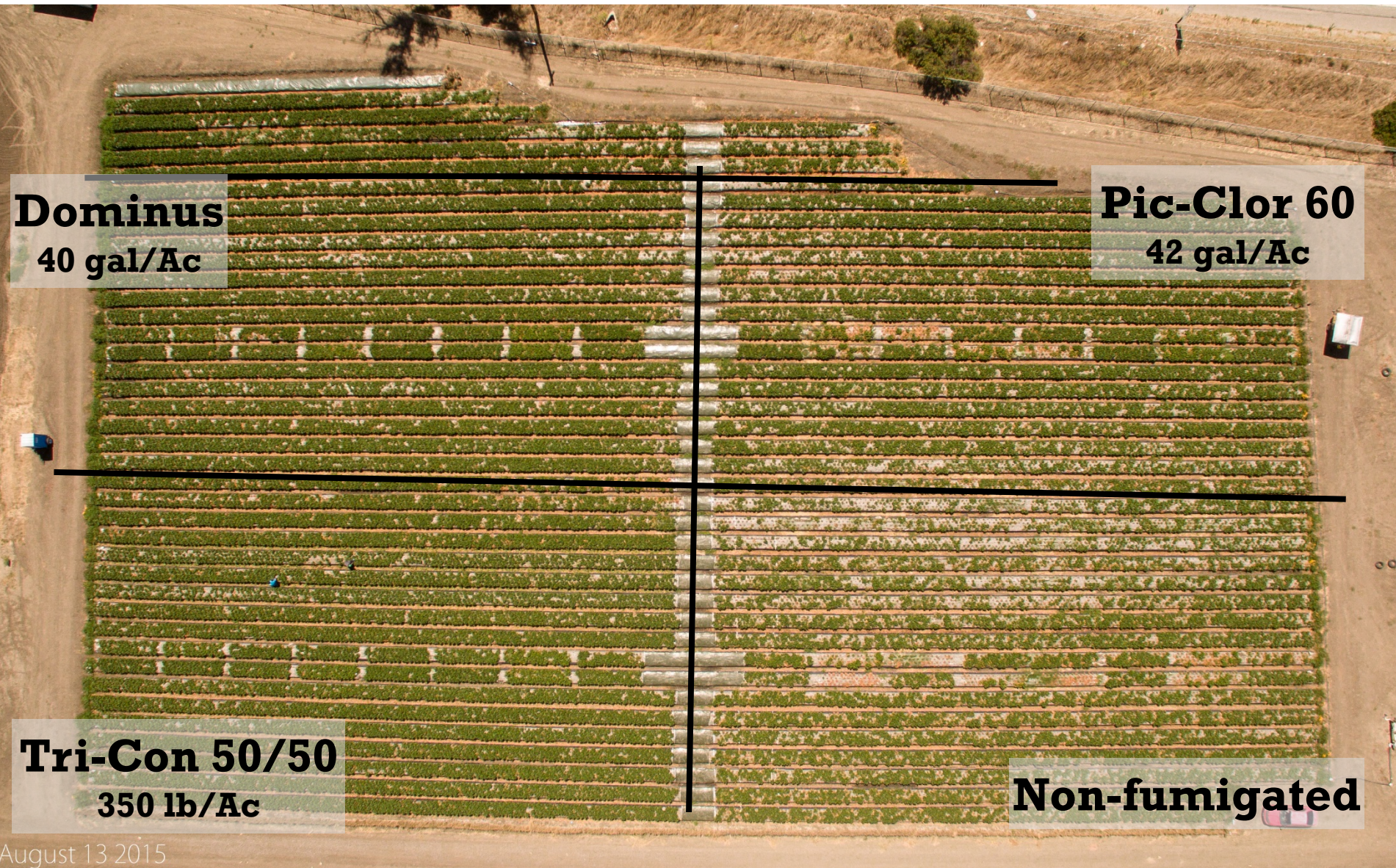


# *Verticillium dahliae* naturally infested field





# *Verticillium dahliae* naturally infested field



**Dominus**  
40 gal/Ac

**Pic-Clor 60**  
42 gal/Ac

**Tri-Con 50/50**  
350 lb/Ac

**Non-fumigated**



**Soilborne pathogens are NOT equal;**





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Knowing which one is established in your field is  
important;**





**Soilborne pathogens are NOT equal;**

**Knowing which one is established in your field is important;**

**Different treatments impact pathogens differently.**

