

# SO, WHAT'RE YA GONNA DO ABOUT RED BLOTCH?

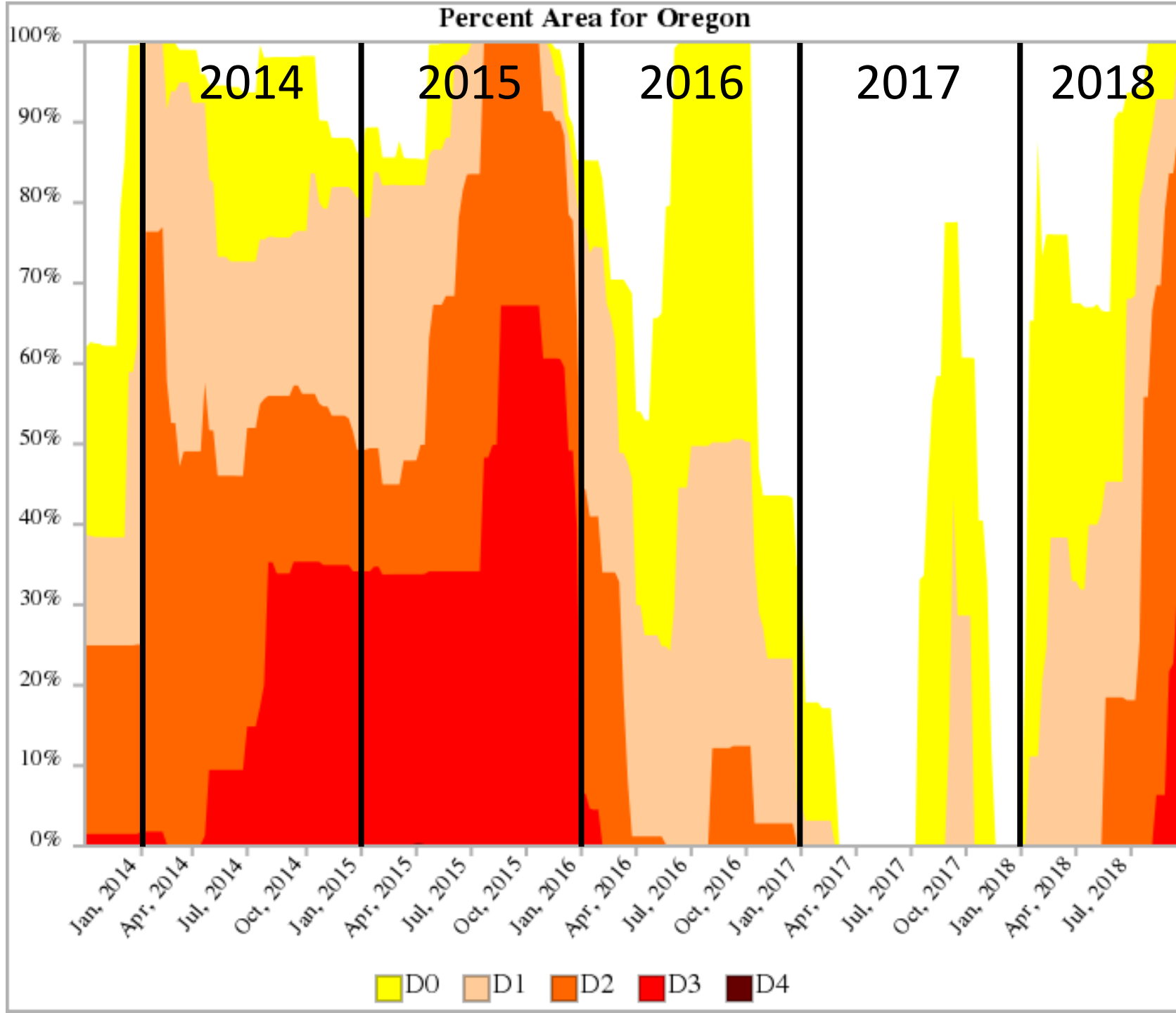
Alexander Levin  
Viticulturist and Assistant Professor  
Department of Horticulture



Oregon State University  
Southern Oregon Research  
and Extension Center



# Identifying the **SITUATION**









**The Red  
Vineyard at  
Arles, 1888  
by Vincent Van  
Gogh**



# Some cultural management options

- Plant material  Once every 30 years
  - Irrigation
  - Fertilization
  - Crop thinning
- Every year
- 

We did some  
**EXPERIMENTS**

# Interaction between GRBV and water deficit?

**GRBV-**



**GRBV+**





# Deficit Irrigation Trial (2017-2018)

- Plant material:
  - PN Pommard on Schwarzmann
- Irrigation treatments:
  - "Wet"
    - 100%  $ET_c$
  - "Dry"
    - 66%  $ET_c$  (2017)
    - 50%  $ET_c$  (2018)





# Supplemental Input Trials (2018)



Photo: D. Dewey





# Supplemental Irrigation/Fertilization Trial (2018)

<b>Control Irrigation + Control Fertilization</b>
<b>Control Irrigation + 2x Fertilization</b>
<b>2x Irrigation + Control Fertilization</b>
<b>2x Irrigation + 2x Fertilization</b>





# Supplemental Irrigation/Thinning Trial (2018)

<b>3309 or RG</b>	<b>Cont. Irrigation + Cont. Thinning</b>
	<b>Cont. Irrigation + Supp. Thinning</b>
	<b>2x Irrigation + Cont. Thinning</b>
	<b>2x Irrigation + Supp. Thinning</b>

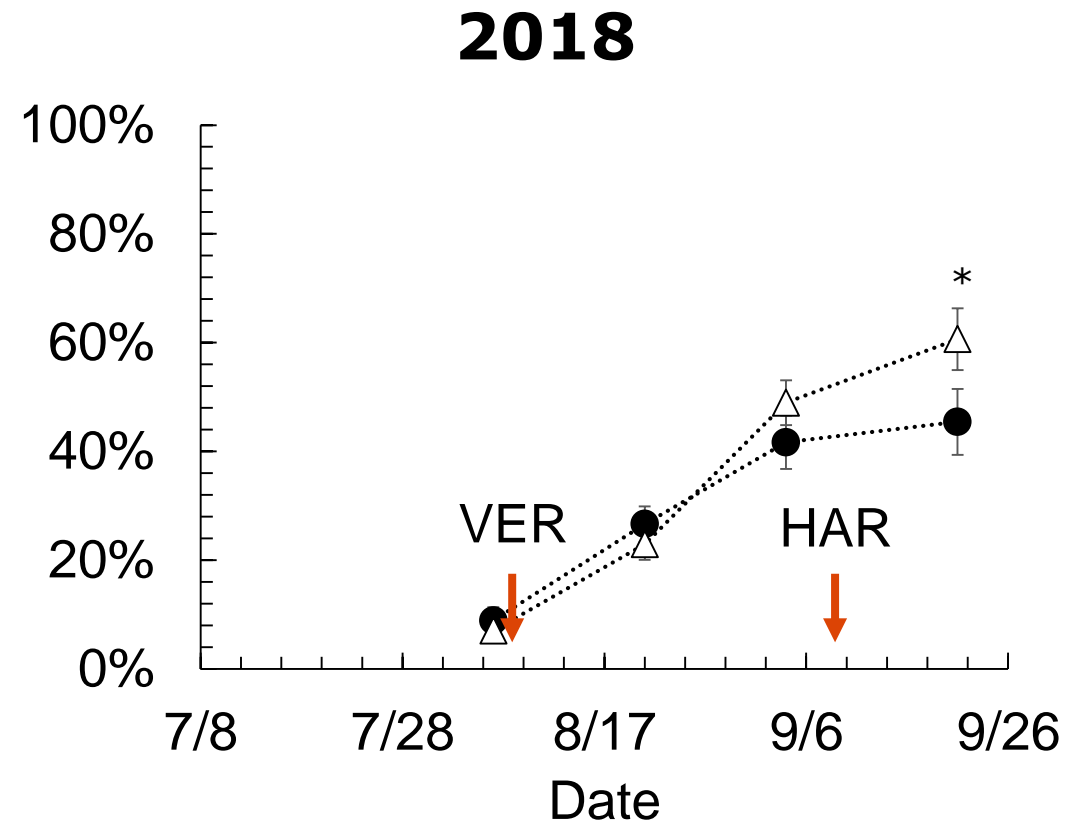
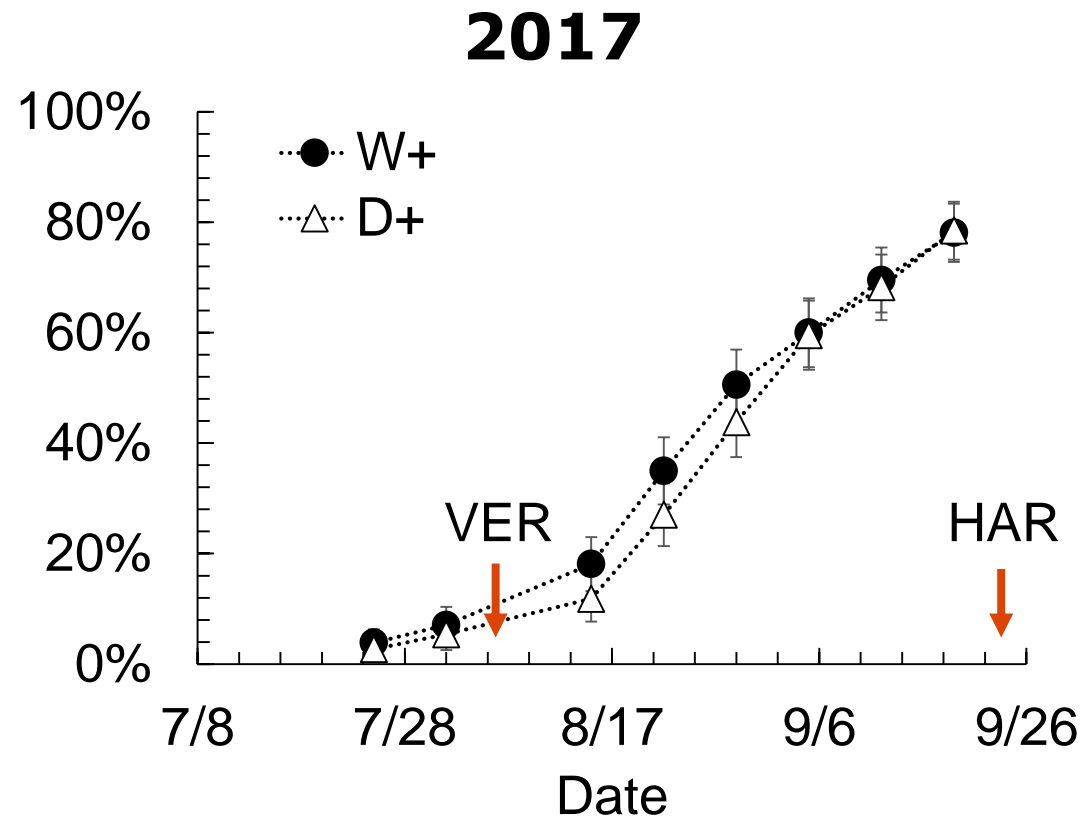


Results:

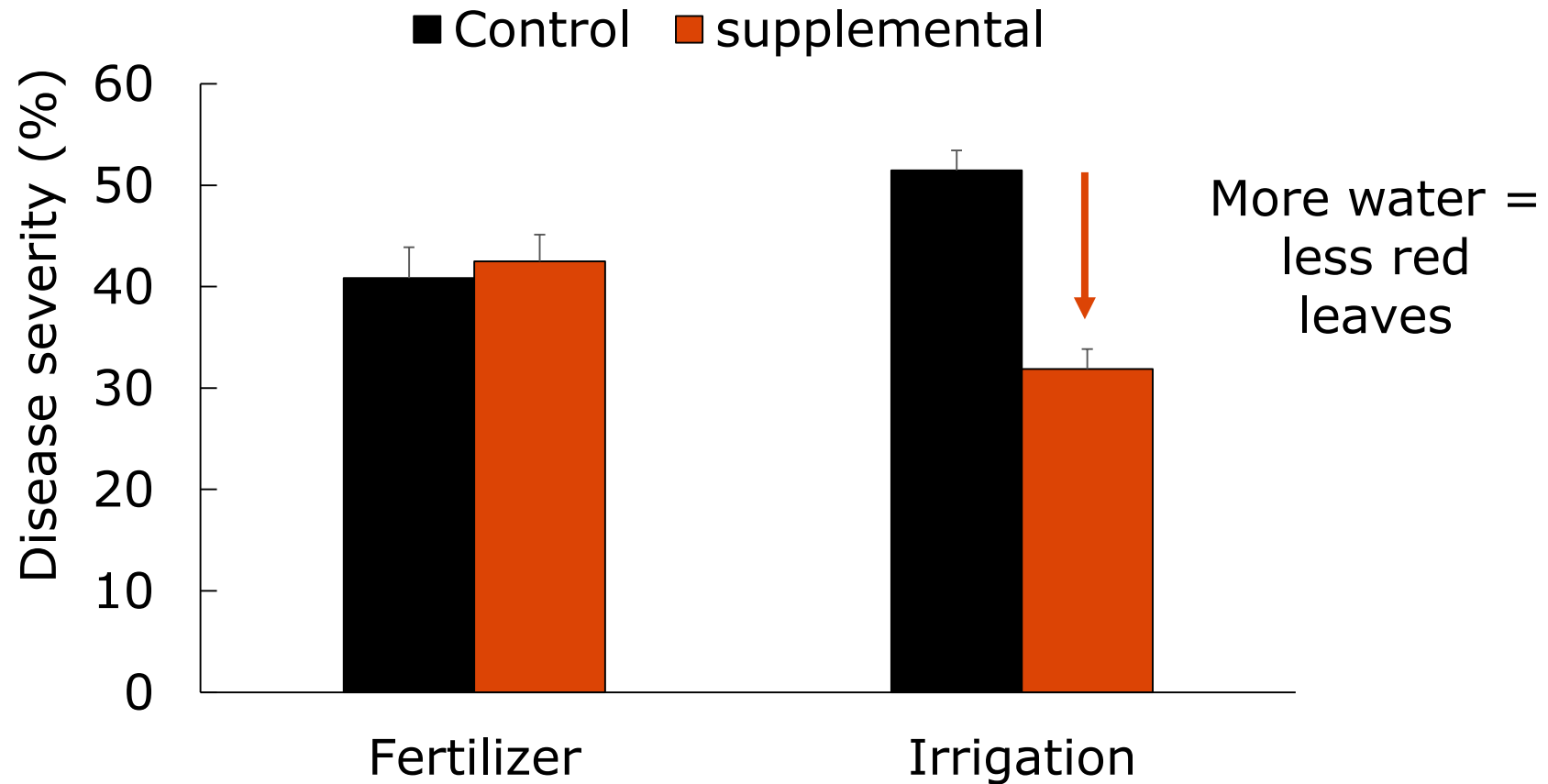
**DISEASE SEVERITY**



# Disease Severity: Deficit Irrigation Trial



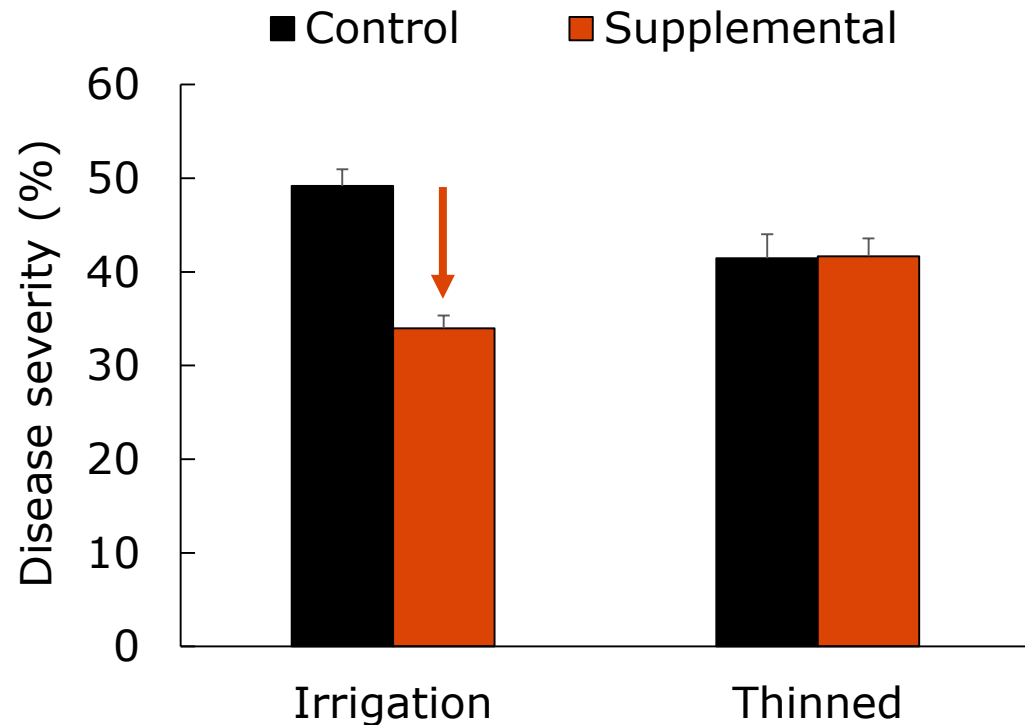
# Disease Severity: Irrigation/Fertilization



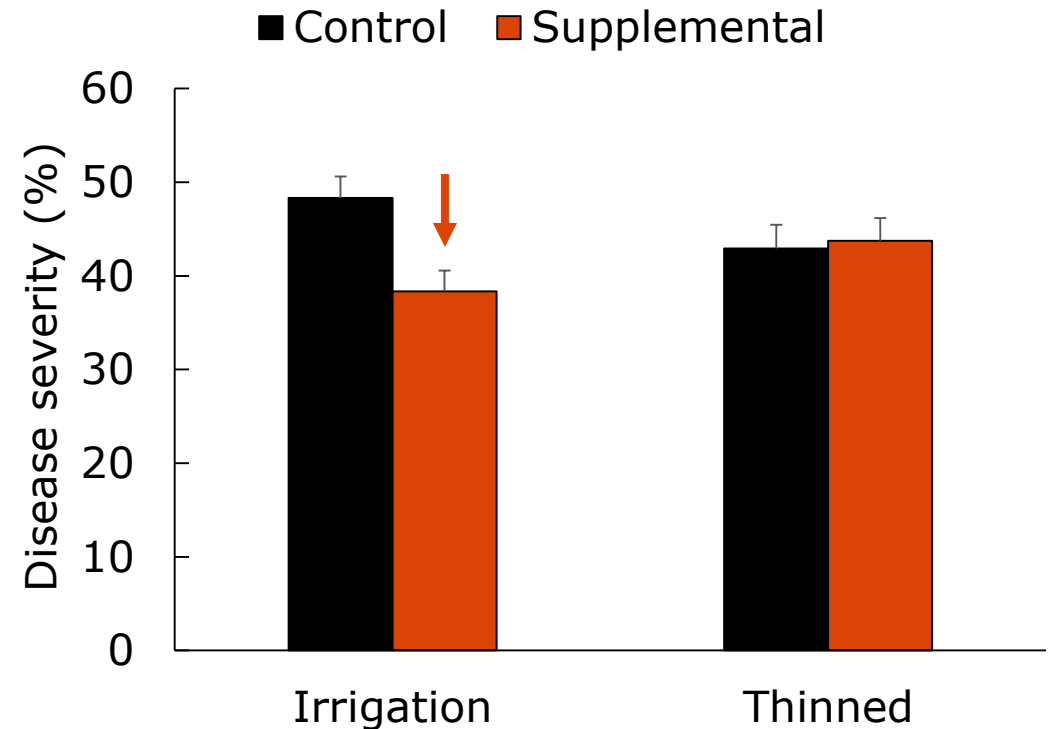


# Disease Severity: Irrigation/Thinning

**3309**



**Riparia Gloire**

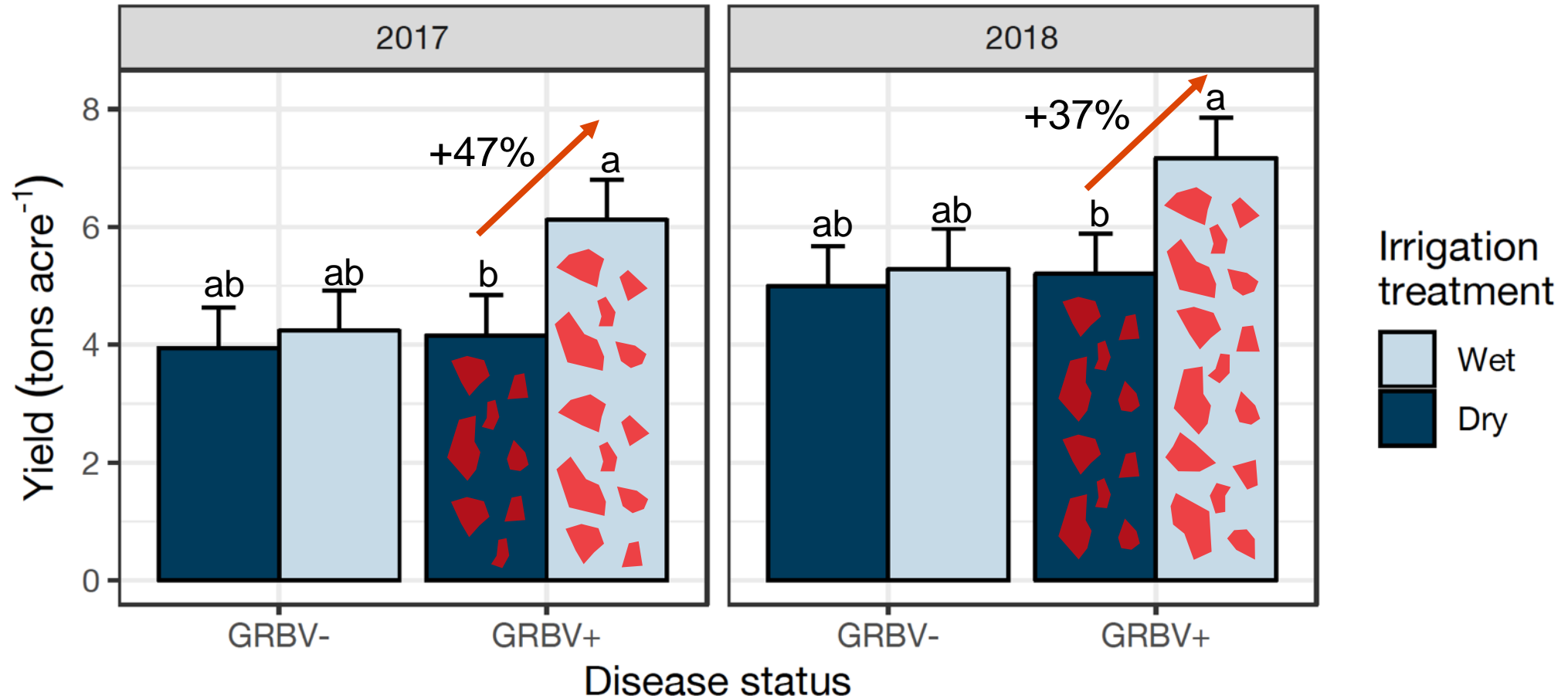


Results:

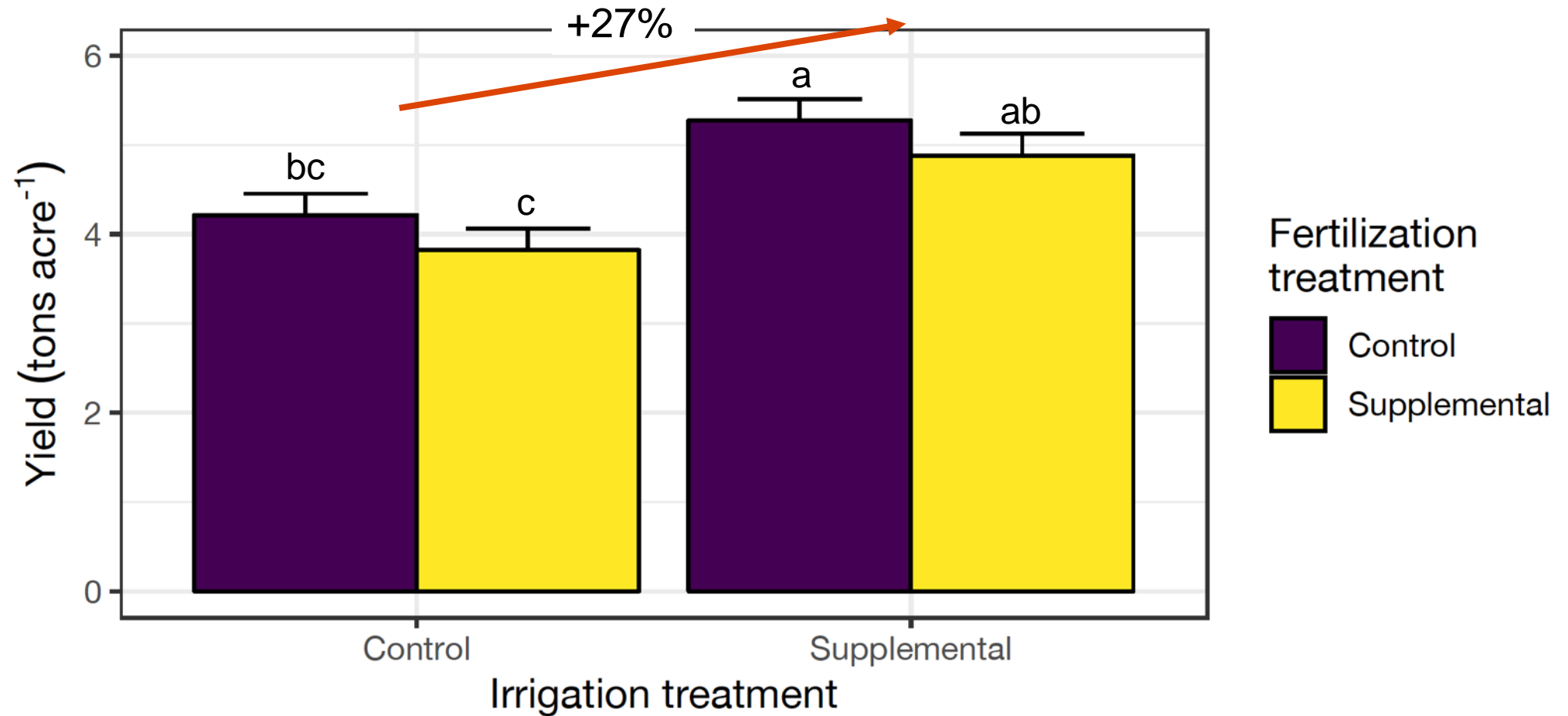
**PRODUCTION**



# Yield response: Deficit Irrigation Trial

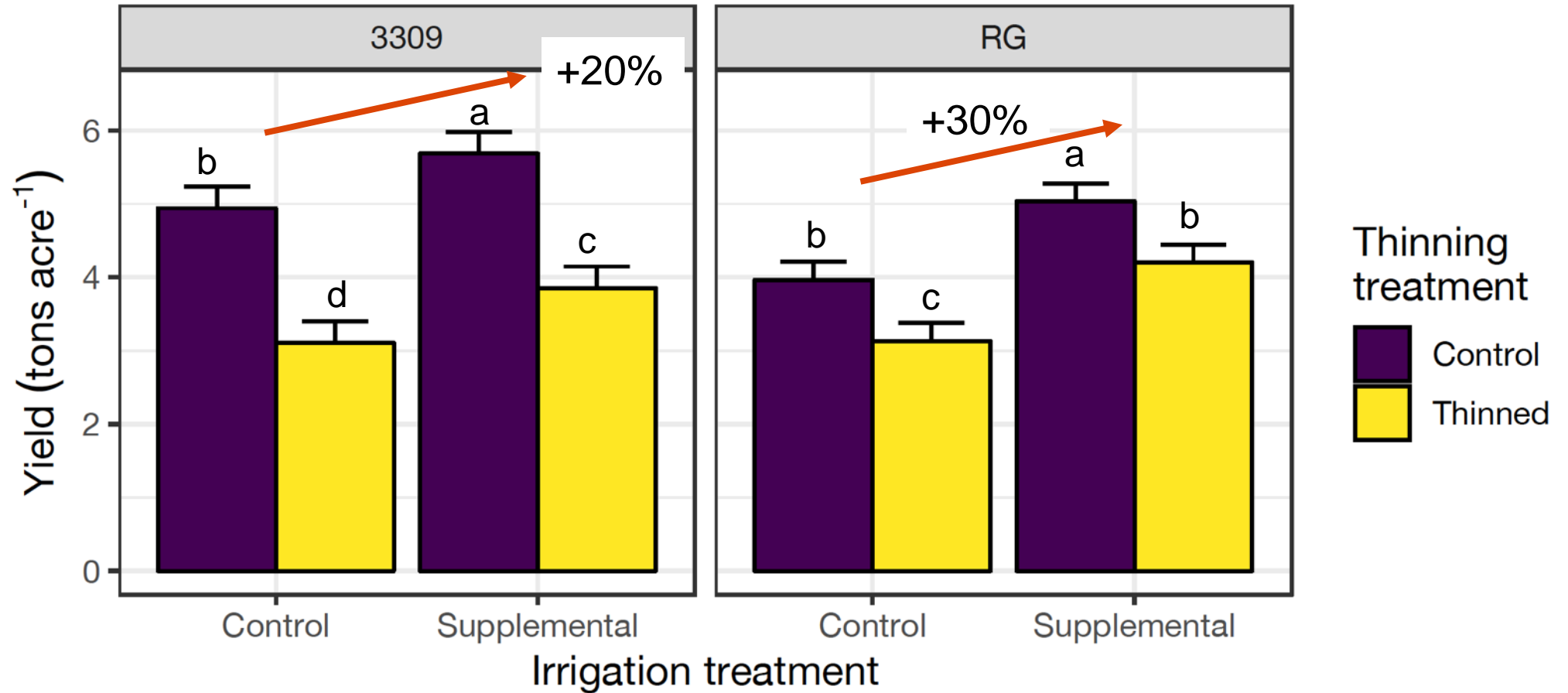


# Yield response: Irrigation/Fertilization





# Yield response: Irrigation/Thinning



Results:

**FRUIT QUALITY**



# Brix response: Deficit Irrigation Trial

Treatment		Year	
		2017	2018
GRBV-	Wet	23.9 a	23.5 a
	Dry	23.0 b	22.6 b
GRBV+	Wet	22.4 b	22.0 b
	Dry	21.5 c	21.1 c

# Brix response: Irrigation/Fertilization

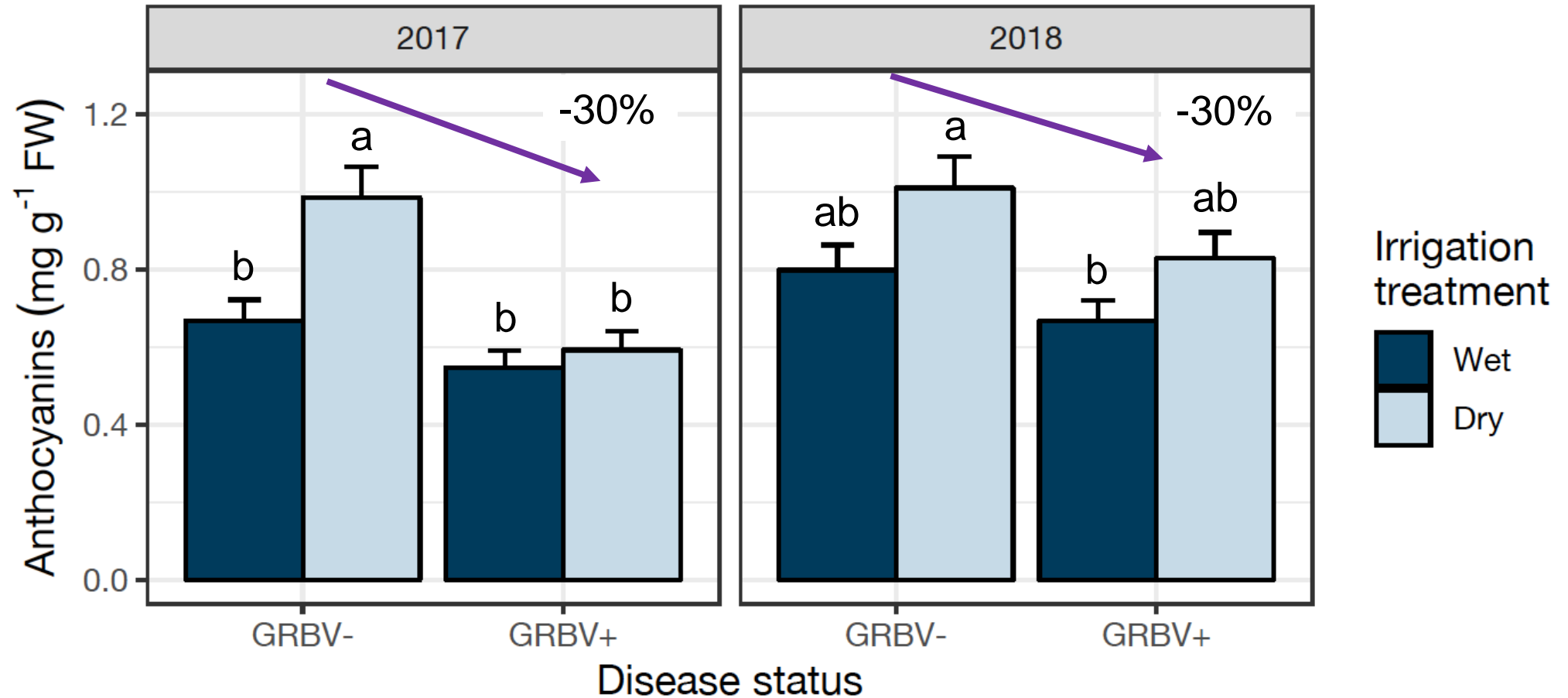
<b>Irrig.</b>	<b>Fert.</b>	<b>°Brix</b>
Control	Control	21.0 a
	Supp.	21.2 a
Supp.	Control	20.3 a
	Supp.	20.4 a

# Brix response: Irrigation/Thinning

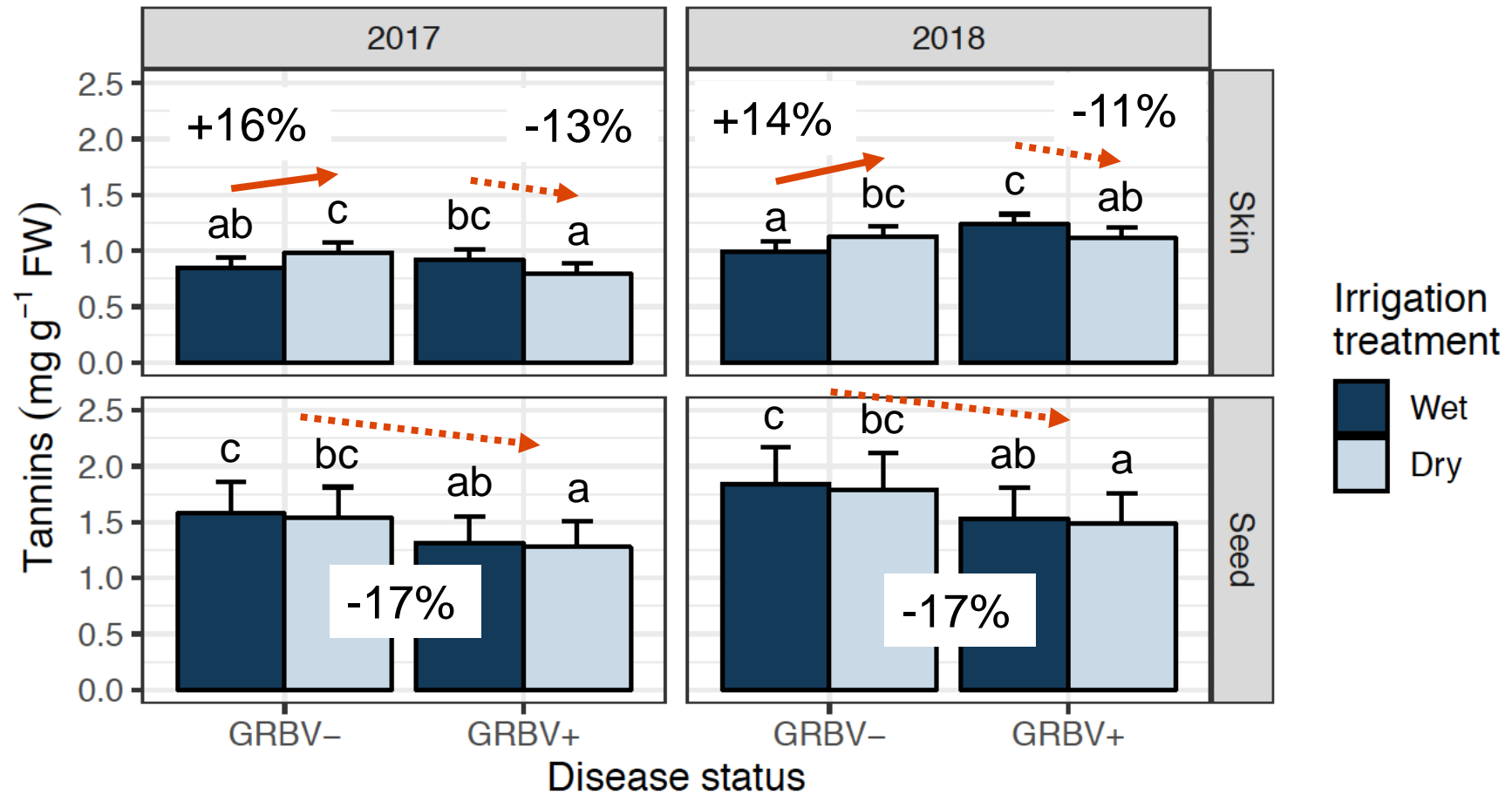
<b>Irrig.</b>	<b>Thin</b>	<b>Rootstock</b>	
		<b>3309</b>	<b>RG</b>
Control	Control	24.4 a	23.1 a
	Supp.	24.6 a	24.4 a
Supp.	Control	24.9 a	22.9 a
	Supp.	25.1 a	23.2 a



# Anthocyanins: Deficit Irrigation Trial



# Tannins: Deficit Irrigation Trial



So, what're ya gonna do about  
**RED BLOTCH?**



# So, what're ya gonna do about Red Blotch?



# Some BMPs for GRBD

- Make an honest assessment of the problem.
- PLANT MATERIAL.
- Recognize and mark symptomatic vines.
- Avoid environmental stress.

# Acknowledgements

## Levin Lab

- Topher Jenkins
- Judy Chiginsky
- Joey DeShields

Dr. Achala KC and KC Lab

Rick Hilton and Hilton lab

OWRI Red Blotch Study Team

Quail Run Vineyards

Results Partners



**Oregon**  
Department  
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