2016 Shoot Thinning Trial
AHC Agri-Business AG121-141
Instructor: Ric Fuller

Investigation:

- What is the actual yield of the AHC chardonnay compared to regional expectations?
- What is the effect of Regulated Deficit Irrigation?
- Does shoot thinning have an effect on yield?
- Does shoot thinning have an effect on juice quality?
- Does RDI have an effect on yield?
- Does RDI have an effect on juice quality?

Methods:

On April 15, 2016, the class shoot thinned the western 5 rows of Chardonnay in the student vineyard. The eastern 5 rows were left unthinned as a control.

On April 22, 2016, the class did a cluster count on both halves with the following results:

Clusters per vine	Shoot thinned vines	Unthinned vines
	22	55
	43	45
	29	56
	44	33
	22	54
	27	38
	46	43
	28	
	49	
total	**310**	**324**
Average per vine	**34.4**	**46.28**

The crop load was reduced by an average of 11.88 clusters per vine from 46.28 clusters to 34.4 clusters. (11.88 / 46.38 => a crop reduction of 25.61%)

Unthinned crop estimation:

46.28 clusters x .25 #/cluster x 1361 vines/acre = 15,746.77 #/acre (= 5.85 tons / acre)

RDI Strategy:

Four of 10 rows have been designated for RDI as follows:

row	treatment
Chard #1	Unthinned, regular irrigation
Chard #2	Unthinned, regular irrigation
Chard #3	Unthinned, RDI
Chard #4	Unthinned, RDI
Chard #5	---------- unthinned ----------
Chard #6	Thinned, regular irrigation
Chard #7	Thinned, regular irrigation
Chard #8	---------- thinned ----------
Chard #9	Thinned, RDI
Chard #10	Thinned, RDI

Irrigation will be monitored and documented for entire trial. RDI rows will have their irrigation restricted by turning off the irrigation valve associated with the row. Target moisture difference is TBD.

Next:

Maintain RDI, weigh clusters at harvest and evaluate quality in the winery between the four treatments.