

# SUMMER PROGRESS REPORT IRRIGATION MANAGEMENT OF CABERNET SAUVIGNON AND SAUVIGNON BLANC LAKE COUNTY, CALIFORNIA

Trials were set up in a Red Hills Cabernet Sauvignon and a Big Valley Sauvignon blanc vineyard to demonstrate the effect of irrigation timing and amount on grapevine growth and juice chemistry.

## Irrigation Management Treatments Compared

Treatment	Abbreviation
Grower standard irrigation rate	GS
½ the grower standard irrigation rate	½ GS
Double the grower standard irrigation rate	2 GS
Early supplemental irrigation, followed by double rate	E 2 GS
Early supplemental irrigation, followed by grower rate	E GS

### Location 1: Cabernet Sauvignon, Red Hills A.V.A., Lower Lake CA



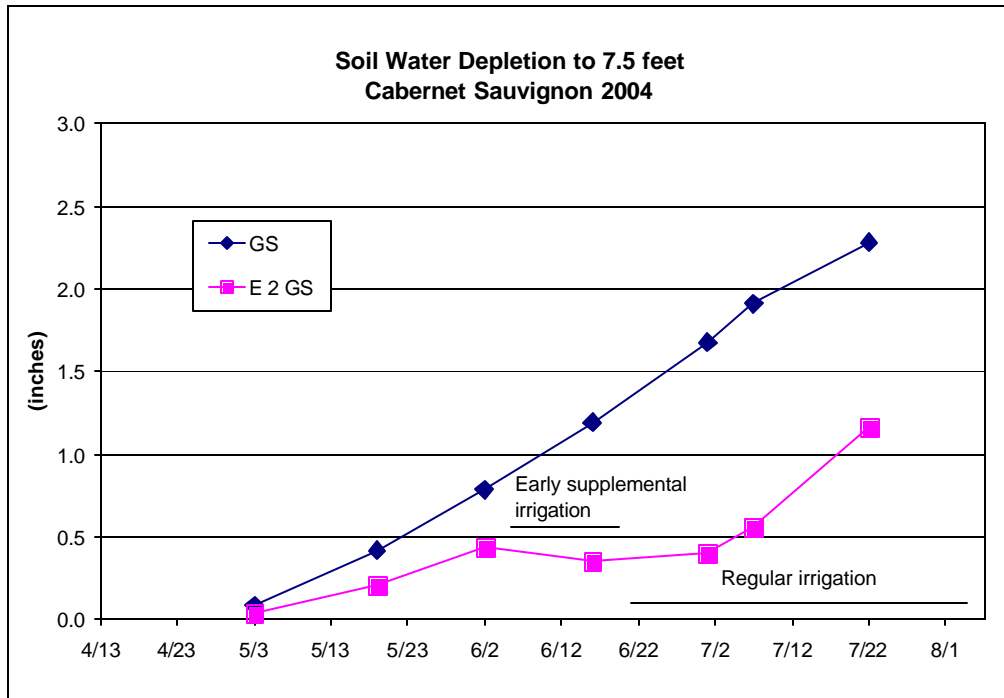
#### Site Description

**Plant Material:** Cabernet Sauvignon clone 337, 101-14 rootstock  
**Soil:** Neice-Sobrante-Hambright Complex, loam, variable depth, well drained, 15 to 30 % slopes.  
**Vineyard set up:** 5' X 8' spacing, 2- ½ gallon emitters per vine in GS

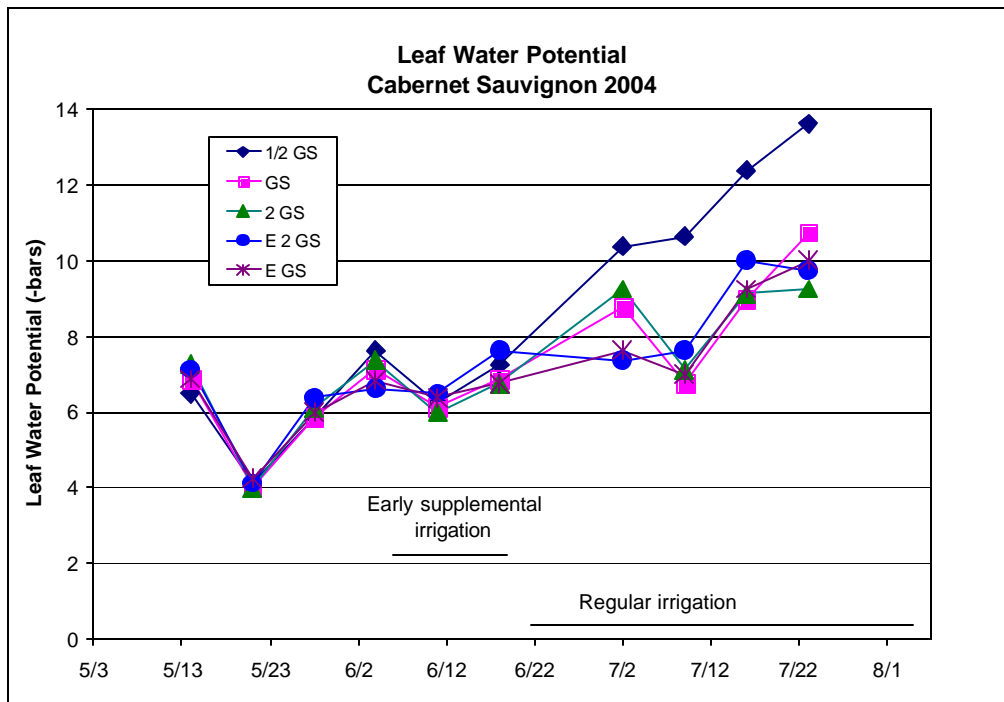
**Total irrigation water applied to the Cabernet Sauvignon trial from the start of the growing season through July 22, 2004.**

Irrigation Treatment	Gallons per vine
GS	31
½ GS	15.5
2 GS	62
E 2 GS	82
E GS	41

Soil water depletion was greater in the GS than E 2 GS treatment, and this difference increased following the start of irrigation when E 2 GS began to receive more water than GS.



Based on leaf water potential measurements, the early supplemental irrigation appeared to reduce vine water stress only briefly. The 1/2 GS treatment continues to experience greater water stress than the other treatments. (See chart below.)



Vine vigor and canopy size appear to be affected by the amount of applied irrigation water at the Red Hills Cabernet Sauvignon trial (photos below).



½ GS treatment, July 23, 2004



GS treatment, July 23, 2004



E 2 GS treatment, July 23, 2004

**Location 2: Sauvignon blanc, Big Valley, Kelseyville CA**



**Site Description**

**Plant Material:** Sauvignon blanc clone 1, rootstock 5BB

**Soil:** Cole clay loam, drained

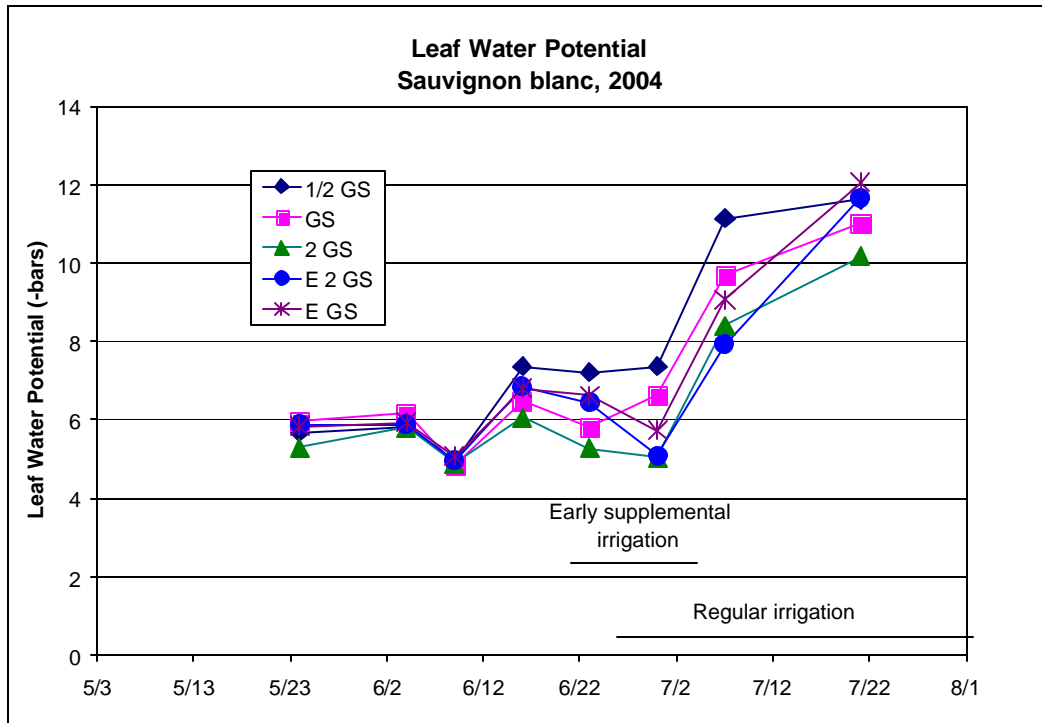
**Vineyard set up:** 7' x 10', quadrilateral, open lyre, each vine in GS has 2, ½ gallon emitters

The early supplemental irrigation was applied to E GS and E 2 GS over a 15 day period starting June 21, 2004. Regular irrigation to all treatments started on June 25, 2004. Therefore the E GS and E 2 GS treatments were receiving both supplemental and regular irrigation from June 25 to July 5, 2004. Total water applied up to July 23, 2004 is shown in the table below.

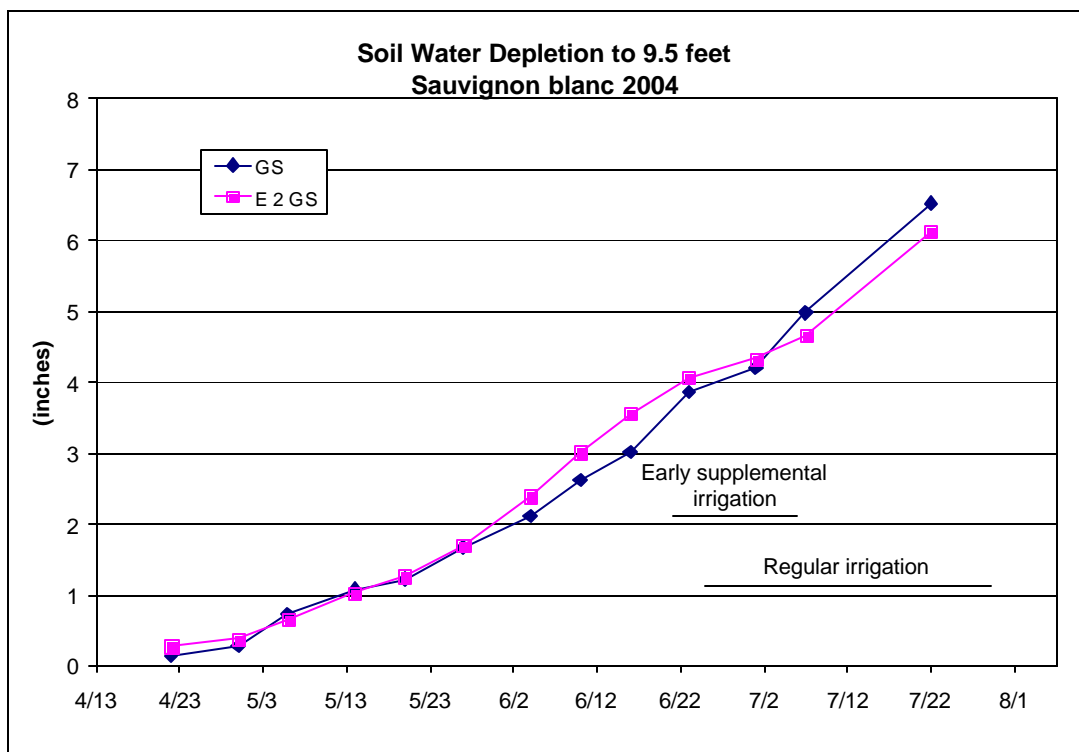
**Total irrigation water applied to the Sauvignon blanc trial from the start of the growing season through July 23, 2004.**

<b>Irrigation Treatment</b>	<b>Gallons per vine</b>
GS	30
½ GS	15
2 GS	60
E 2 GS	113
E GS	57

Early supplemental irrigation appeared to reduce the level of water stress (indicated by lower leaf water potential numbers in the chart below), but this effect did not continue after supplemental irrigation was stopped.



Soil water depletion was somewhat lower in the GS treatment than in the E 2 GS treatment before irrigation. (See chart below.) Following the start of irrigation soil water depletion increased in the GS relative to E 2 GS treatment.



Complete results from these trials including harvest and juice analysis data and detailed materials and methods will be posted in the winter and presented at a winter seminar.

To visit the plots this summer and see and taste the effects of irrigation management please attend our field day.

**Irrigation Management Field Day  
August 17, 2004**

Come and see for yourself the effects of irrigation management on vine growth and berry color, and taste the effect on berry maturity.

**Big Valley Sauvignon Blanc Trial: 8:30-9:30 a.m., Rooster Vineyard, 2505 Soda Bay Rd., Kelseyville CA** Enter by the house, and follow the signs to the back of the vineyard.

**Red Hills Cabernet Sauvignon Trial: 10:15-11:30 a.m., Snows Lake Vineyard, 11545 Perini Rd., Lower Lake CA.** Take Seigler Canyon Rd. to Perini Rd. After 1.3 miles you will pass a cattle guard and enter the vineyard. Continue on the paved road until you see the yellow winegrape commission sign adjacent to a large parking lot. There will be a shuttle to the trial site, so please be on time.

RSVP to (707) 995-3421 or to [erical@lakecountywinegrape.org](mailto:erical@lakecountywinegrape.org)