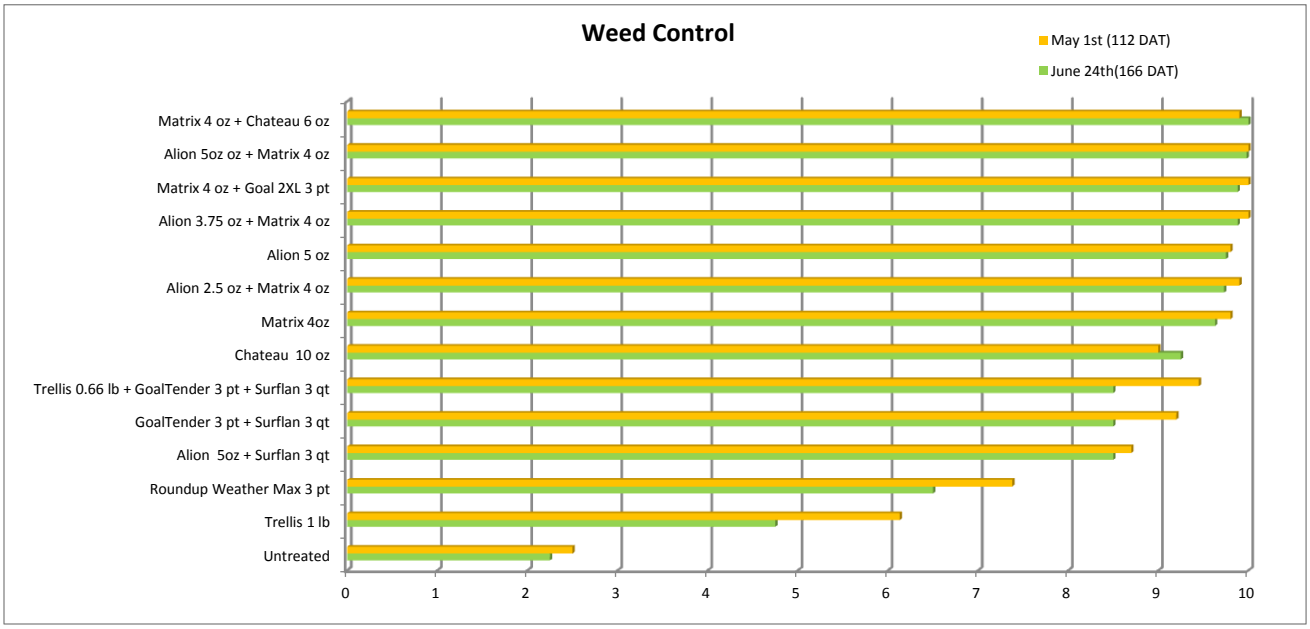
2013 Weed Control Trial.

Willowherb control.

Methods. We initiated a test on January 9, 2013 in American Canyon, Napa County, CA. Several herbicides and combinations were tested for control of vineyard weeds, primarily willowherb. All treatments were applied at 30 GPA with a CO 2 backpack sprayer using a single 8004E nozzle. All treatments (except untreated control, UTC) contained 3 pints/ac Roundup WeatherMax (glyphosate) and ProAMS at 0.25%. All grape leaves were removed from the trial site prior to herbicide applications.

Evaluations. A visual rating of 1 means that the weed was not controlled; a rating of 10 means complete control of the weed. Willowherb was the predominant weed present in this study while whitestem filaree and broadleaf filarre (*Erodium botrys*) were the next most prominent, but in much lower concentrations.

Results and discussion. (see Table 2) This test was conducted under less than desirable conditions. The current California drought began in January 2013. This site received 10 inches of precipitation prior to application, a rain event of 0.23 inches occurred 13 days after application, but only a total of 2.17 inches of rain fell between application and the end of the growing season. This lack of precipitation caused a high degree of variability in the results. Matrix (rimsulfuron), Alion (indaziflam), Chateau (flumioxazin) (all combined with glyphosate) and combinations of these treatments provided very good season long control. Trellis (isoxaben) and Surflan (oryzalin) did not perform as well under these trial conditions for the control of willowherb.



Conclusions. After six years of testing herbicides for the control willowherb several trends became evident. Glyphosate alone is not effective on willowherb, especially those four inches or larger. Rely (glufosinate) has been very effective on willowherb, but it's availability to grape growers has been limited in recent years. The herbicides that have been the most effective on willowherb in several tests are Chateau and Matrix. Under 'normal' winter conditions both herbicides control willowherb effectively. Other herbicides such as Goal (oxyfluorfen), Prowl (pendimethalin), Surflan and Trellis are effective on many broadleaf weeds but have shown variable, though less than complete control of willowherb in the north coast when used as a

single preemergent herbicide when mixed with glyphosate. The realization that many weeds are tolerant, or have developed resistance to glyphosate has demonstrated that the dependence on any one herbicide will lead to decreased weed control.