

Grapes: Those Darn Weeds!

Growing grapes, like other forms of the noble profession of farming, has both its good sides and its bad. The first really pleasurable time each year is the early spring (as this is being written), when the dormant buds awake to show the first green growth of annual renewal; the last is when the grapes are finally harvested and safely delivered to their final fermenting place. The time in between, however, can be frustrating, discouraging, and even downright depressing when unwanted plants rejoice in your beautifully prepared vineyard soil by growing several times as fast your precious grapevines. (Note—because of the broad range of topics in this article, quite a number of internet links are provided. Please see them for safe use of materials described, and how to avoid creating more problems than you solve).

Off-Season

The area of greatest concern is the ground in the vine rows around the grapevines themselves. Weeds in any area are unsightly, but in this area they can interfere with vine growth or worse, wind up complicating and contaminating the harvest in the fall. Only the most orthodox organic growers are willing to put up with weeds in the wine row, so most growers use a “strip-spray” well before bud-break to suppress weed growth. The most common ingredient is Round-Up®, which is one of the safest and most effective herbicides. One of the reasons it is relatively safe to use is that it biodegrades quickly to harmless compounds, but this has a drawback as well. It is effective to eliminate plants that are already growing, but any that sprout after its application are unaffected. At a slightly escalated level of chemical warfare, you can add a pre-emergent herbicide with greater persistence to carry the weed protection well into the spring. (A warning here: if you intend to apply any restricted materials—herbicides or pesticides—to your grapes, you will need to apply to become a Certified Private Applicator from the El Dorado Department of Agriculture. This involves studying and taking a test, and may require filing a report each year disclosing what was applied, how much and when. It’s not difficult, and worth the effort to become educated so we can minimize runoff and pollution from herbicides and pesticides in our vineyards. See the County Department of Agriculture website at <http://www.atasteofeldorado.com/pesticide.html>).

Non-Chemical Methods and Cover Crops

Mechanical methods of weed control are well established, and include mowing, which will likely have to be done two to four times in the spring, disking and a tractor-mounted device called a “Weed Badger®” (<http://www.weedbadger.com/>). This ingenious device uses a hydraulically-driven rotating rake to clear the weeds, even from the vine rows. A sensor arm detects the vine, and as long as it has been properly set up, moves the rotating head out of the way to keep the plants safe from harm. The disadvantage is a fairly high initial cost, and a fairly complicated attachment to a good-sized tractor.

Another approach that uses no chemicals is a tractor-mounted propane burner. While this may strike fear into the hearts of your neighbors, if it is used early in the season (on days when burning is allowed), it provides truly broad-spectrum weed control. One generous soul has even donated his invention to the public domain, as “a gift to humanity:” <http://agronomy.ucdavis.edu/LTRAS/itech/flame.html>. Finally, a new and relatively untested technique has been proposed that uses ultraviolet light to do the killing: <http://www.kaj.dk/weed-by-uv.htm>.

The best defense in weed suppression is often a good offense. By planting an effective mix of beneficial plants between the vineyard rows, you can minimize the production of weeds in a gentle and non-toxic fashion. It won't solve every problem, and later in the summer the rows can have an unkempt appearance, but it's nice to know that an organic alternative exists. A couple of sources of good information are <http://www.agroecology.org/cases/vineyardcover.htm>, for the basic philosophy, and <http://www.albrightseed.com/biologicalrealism.htm>, for mixtures of seeds that are well adapted for vineyard and orchard cover crops.

Perennial Problems

Some weeds are problems that come back year after year, and are scattered all over our area. Blackberry bushes, as welcome as they are in locations other than the vineyard, are a real problem. They were undoubtedly cut back when the land was cleared, but a few years of heavy irrigation to give the vines a good start are ideal to bring them back to heavy growth. They are resistant to Round-Up and most other herbicides, so the best measure is a shovel and elbow grease. You can probably also count on coming back to the same locations every couple of years—the roots are especially difficult to eliminate. The same treatment is recommended for poison oak and common mullein, the weed with velvet leaves and the tall, ugly stalk loaded with seeds in late summer. Dig deep for both; the roots go way below the visible plant.

Another perennial that is a problem in vineyards is the morning glory vine. It loves to travel up the stake or the vine trunk, and left unchecked, will surround and eventually strangle the vine. Pull the plants out as soon as you see them, and dig out the roots if you can find them.

The Noxious Ones

Some weeds are worse than others, and have been officially designated as “noxious weeds” by the California Department of Food and Agriculture and even detailed on a special website: <http://pi.cdfa.ca.gov/weedinfo/>, home of the “encycloveedia.” Probably none is more familiar or a worse problem here than yellow star thistle (YST). It has an amazing ability to out-compete most cultivated and wild plants, and can take over an entire field in just a few years. It hides as almost invisible green leaves near the ground in the spring while it grows a prodigious taproot, then begins its spurt of above-ground growth in summer when most of the other plants have died from lack of water. More than

you ever cared to know about it is available at
http://www.calacademy.org/calwild/fall2000/star_thistle.html.

Various methods for its control have been proposed, including hand pulling (ugh!), mowing (but only at 'just the right time,' when 10% of the yellow blooms have appeared), and biologic controls, such as the yellow star thistle weevil. Unfortunately, none of these is very effective, and for real suppression, we have to again look to chemicals. The single effective herbicide for YST, which is not yet approved for vineyard use, is Transline®, and it is a serious chemical, indeed. The best bet for vineyards is to suppress the growth of YST in surrounding fields and roadways using Transline, then pull, mow and pray to control it inside the vineyard. You can learn more about Transline at <http://www.tasteldorado.com/transline.html>.

Homework Assignment

However you decide to control the weeds in your vineyard, two things are sure: no two years are ever the same, and there's no way to keep any field completely weed-free. By doing some research over the internet, you can educate yourself and develop a compromise between appearance, potential damage to your grapes, and potential damage to the neighborhood ecology. Each person will likely reach a different compromise, but we all have to consider the regulations, the environment, and the health and welfare of our neighbors.