



Options for Controlling Marestalk and Hairy Fleabane in Vineyards

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Marestalk (*Conyza canadensis*; aka horseweed) and hairy fleabane (*C. bonariensis*; aka flax leaf fleabane) are serious weed problems in vineyards in Monterey County. Both plants are summer annuals that germinate in the fall at the onset of the rainy season (October – February), or germinate in the spring (March – May). Seeds of both species are not long lived (2-3 years) and are ready to germinate when conditions allow as soon as they mature on the plant; they germinate on the soil surface or from no greater than 0.2 inch deep. The seedlings of the two species look very similar to each other until they bolt at which time they can be easily distinguished (for detailed information on these species go to: <http://anrcatalog.ucdavis.edu/Items/8314.aspx>). Mature plants of marestalk and hairy fleabane produce upwards of 200,000 and 40,000 thousands of seeds, respectively; seeds are disseminated over long distances (i.e. ¼ mile) by the wind. Both plants are more adapted to undisturbed environments and even minimal tillage in the fall or spring can effectively control them. As evidence of this point, in a five year study that we conducted comparing a pure postemergence weed control program vs cultivation (with a Clemens[®]), marestalk was shown to emerge as a specific weed problem in the postemergence treatment program and was not a problem where cultivation was used (<http://californiaagriculture.ucanr.org/landingpage.cfm?article=ca.v062n01p19&fulltext=yes>).


Marestalk and hairy fleabane can become problems in vineyards for a number of reasons. In strip sprayed vineyards, they can emerge along the edge of the sprayed strip or other untreated areas. Seeds flying in from surrounding areas can also contribute to emergence of these weeds. There are a number of effective preemergence materials that can provide good control of marestalk and hairy fleabane (see table below) and these materials should be considered in areas where these weeds are a problem. In addition, there are a number of postemergence options for controlling these weeds. Glyphosate resistant strains of both of these weeds have evolved following years of use of this herbicide. This has been documented in the central valley of California and is assumed to be the case in Monterey County. Glufosinate (Rely) has been a key herbicide for controlling marestalk and hairy fleabane in vineyards that are not controlled by standard postemergent programs (i.e. glyphosate and oxyfluorfen (Goal)). However, in 2013 there will likely be a shortage of glufosinate as supplies of this herbicide are being diverted to the Midwest and South to combat roundup resistant strains of marestalk, Palmer amaranth, and other weeds in corn, soybean, and cotton production systems (see <http://ucanr.org/blogs/blogcore/postdetail.cfm?postnum=8877>). The situation is not entirely settled, as glufosinate is now off patent and other smaller producers may start production, but indications are that there may be limited supplies of glufosinate available for the tree and vine market in 2013 and 2014. In that sense it is important to consider your options carefully and plan ahead for controlling marestalk and hairy fleabane.

Table 1. Herbicides registered for use on grapes with activity on marestail and hairy fleabane

Preemergence Control		
Material	Trade Name	
Isoxaben	Gallery, Trellis	Good control
Rimsulfuron	Matrix	Good control
Simazine	Princep	Good control
Flumioxazin	Chateau	Effective on marestail but less effective on hairy fleabane
Postemergence Control		
Glufosinate	Rely	Good control but see above
2,4D	Various	Good control
Glyphosate	Roundup and others	Provides variable control in most parts of California because both of these weeds have developed partial or total resistance to this herbicide
Carfentrazone	Shark	Partial control
Flazasulfuron	Mission	Listed on the label to provide pre and post control of both weeds; this is a recent registration, but we have no firsthand experience with this material
Paraquat	Gramoxone	More effective on hairy fleabane
Pyraflufen	Venue	Partial control

This article has also been posted on the UC Weed Science blog:

<http://ucanr.edu/blogs/UCDWeedScience/>

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