

# KEEPING BERMS BARE

*By: Pedro Hernandez, Product Development Senior Project Manager*

Weed control in perennial crops (TNV) is an important agronomic practice a grower must implement throughout the year to grow a high-quality crop with maximum yields. Weeds not only compete for sunlight, water, and nutrients, but they can also interfere with irrigation and harvest and may harbor damaging insects and diseases that can transfer to the crop.

Over the years, growers have relied heavily on a rotation of postemergence herbicides such as glyphosate, paraquat, and glufosinate to manage troublesome weeds, and they have been successful with this strategy until certain weeds started to develop resistance to these herbicides. Marestalk, fleabane, annual bluegrass, palmer amaranth, junglerice, and Italian ryegrass are among those weeds that have developed resistance to postemergence herbicides in California orchards and vineyards. Further, there are weeds such as stinging nettle, lambsquarters, malva, knotweed, filaree, henbit, panicle willowherb, primrose, and yellow nutsedge that may not be resistant but can be tolerant to herbicides, making them very difficult to control. These hard-to-control weeds have caused growers to adopt a different strategy requiring the incorporation of preemergence herbicides into weed control programs. In the past, growers utilized old chemistry like oryzalin, oxyfluorfen, pendimethalin, simazine, and trifluralin. But in recent years, more efficacious herbicides such as indaziflam, rimsulfuron, and flumioxazin have entered the market, providing longer residual and a broader spectrum of control. Even with the introduction of newer herbicides, weeds continue to be problematic, and growers need new tools to aid in managing troublesome weeds.

CRAZE® from Nichino America, Inc. is a broad spectrum and long-lasting preemergence herbicide for use in all tree nut crops (including almond, walnut, pistachio, pecan, and hazelnut), grapes, and nonbearing stone fruit crops. The active ingredient in CRAZE is orthosulfamuron, a HRAC Group 2 Herbicide. This herbicide, an ALS inhibitor, works by inhibiting the enzyme responsible for the production of branched chain amino acids (valine, leucine, and isoleucine) essential for plant growth. CRAZE has demonstrated broad spectrum and long residual control of many broadleaf weeds including marestalk and fleabane and strong suppression of grasses and yellow nutsedge. Unlike other preemergence herbicides which only provide preemergence efficacy, CRAZE offers excellent pre- and postemergence control of many broadleaf weeds. CRAZE has proven excellent control of weeds known to be resistant to postemergence herbicides, making it an essential tool to manage herbicide resistance. CRAZE has demonstrated excellent crop safety and compatibility with other pre- and postemergence herbicides. CRAZE alone will provide excellent control of some of the most difficult weeds including marestalk, fleabane, malva, henbit, stinging nettle, filaree, panicle willowherb, knotweed, primrose, and lambsquarters. In combination with other preemergence herbicides, CRAZE offers excellent residual control of a variety of grass weeds. One of the features that separates CRAZE from other Group 2 herbicides is its strong preemergence and postemergence suppression of yellow nutsedge and solanaceous weed species. CRAZE is an excellent tankmix partner with standard herbicides as it offers a different mode of action and strengthens the control spectrum, especially on troublesome weeds like fleabane and marestalk.

Preemergence Efficacy of  
Craze on Fleabane in Almond



Untreated



4.5 Months After Treatment  
Craze @ 8.6 oz/A

**CRAZE**<sup>®</sup>  
HERBICIDE

