

Western Connection

Quarterly Newsletter Courtesy of Western Farm Service

Grape Growers Get Extra Value with Versatile Material

The recent introduction of new fungicides gives growers more flexibility for controlling powdery mildew. But the availability of a material that also curbs mites adds another dimension to product rotations aimed at getting maximum mildew control.

Last year's results on 1,000 acres of different grape varieties indicate that JMS Stylet-Oil® can also deliver good miticidal activity, says Ron Avila of Western Farm's Five Points branch. The PCA and a Kings County grower used the versatile material in a mildew control program that alternated oil with sulfur and Rubigan®.

Based on his first experience, Avila believes that applying oil to eradicate or control mildew when mites are active can stop both pests. "It did a good job, but we probably need to learn how to use it more efficiently," says the PCA. Depending on mildew and mite pressure, shifting early-season applications to the mid-season or later could provide greater benefit, he speculates.

Mike Gatzman of Wente Brothers Winery in Livermore has settled on a program of two applications of the mineral oil, followed by wettable sulfur and sterol inhibitor fungicides. Barring unforeseen changes he'll use the same program that worked well last season. In 2000 he applied Stylet-Oil for mildew protection at about two to four-inch shoot growth and tank mixed it with copper for the second application.

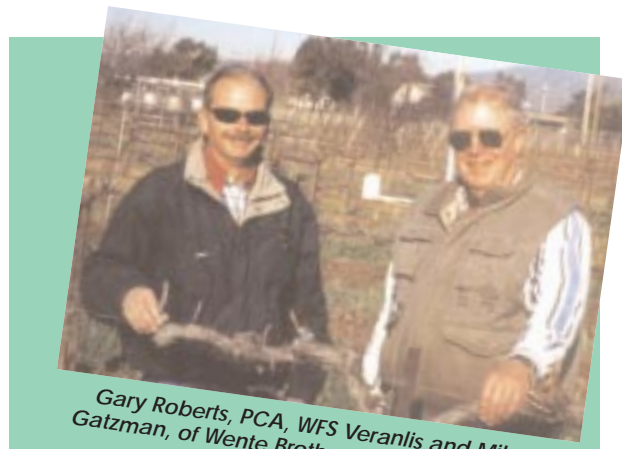
Varying Pressures

The 2000 season was "an up and down year" for mildew pressure, notes Gatzman. "It stayed high, dropped and then came back and stayed late." He uses Adcon® weather stations to help monitor disease development and time fungicide sprays. He's used the in-field stations for several years and has added wireless capacitance or C-probes for more precise irrigation. "We also run insect models," he adds. Gatzman updates climate data each morning and says the weather network has yielded accurate information.

Gatzman works in the Ruby Hills area of the Livermore Valley where housing developments dot the area. He observes that a Class III material like Stylet-Oil is a good addition to his spray program. Most applications have been made to Chardonnay grapes.

"Three years ago," he recalls, "we sprayed about 5% of the acreage for mites." Since he added oil for mildew control, however, he hasn't sprayed for Willamette mites. While he's not completely sure, he believes that oil has likely made the difference.

The potential for knocking out a mite spray is a significant benefit, notes Gatzman's PCA, Gary Roberts of WFS, Veranlis. Willamette mites have come on strong the past three years and pressures were especially heavy in 2000.



Gary Roberts, PCA, WFS Veranlis and Mike Gatzman, of Wente Brothers Winery, Livermore


Last year, a grower in Gatzman's area didn't use oil and had to treat for mites, Roberts observes.

Eradicant And Protectant

The PCA says Stylet-Oil is an effective protectant and eradicant. "In some places we cleaned up mildew with one application." But, "coverage is everything" with the contact material and he prefers a spray volume of 100 gallons per acre.

Growers he works with are using the mineral oil two to three times per season. He cautions against stretching spray intervals or applying micronized sulfur within 10 days, or wettable and dusting sulfur within 14 days. Roberts uses Adcon stations and the WFS Weather Information Network to help pinpoint spray timing. In 2000, oil applications were normally made about 14 days apart. Growers who followed a 14-day interval kept mildew in check. This year he plans to recommend starting the season with oil, followed by sulfur and then Rubigan.

PCA Ron Avila says Stylet-Oil's miticidal activity is prompting him to reevaluate when to apply the material. The Kings County grower he worked with made the first application March 17. "We were hoping to get some mite benefit," he notes. Two follow-up applications were made at 1-1/2 gallons of oil in 100 gallons of water. By July, hot weather and dusty conditions had stirred up mites. Despite a "bad mite situation", oil did a surprisingly good job and the grower didn't use a miticide.

Mildew was well controlled and didn't appear until close to veraison. Stylet-Oil has an unsulfonated residue rating of 99 and Avila didn't see signs of phytotoxicity when it was used in summer. "It's soft chemistry that growers are looking for," he points out, adding that its versatility appears to give it added value if mites are present. 

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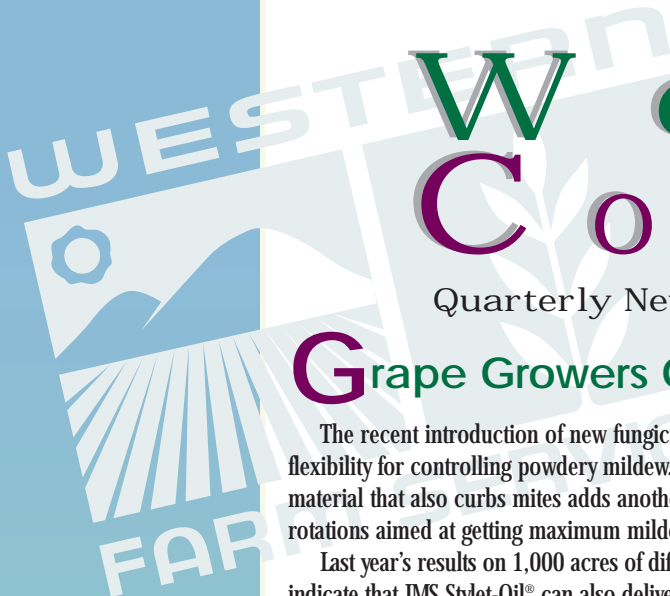
Ron Avila
Western Farm
Service PCA,
Five Points



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Rubigan is a registered trademark of DowAgro.
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Meeting Grower needs for Economical Stand Insurance

Ron Hardy, WFS PCA, Five Points

The benefits of Pop-Up fertilizer are well documented for crops such as tomatoes that need a nutrient boost in moist, cool soil. In response to grower requests, WFS offers an economical Pop-Up fertilizer that's available with zinc.

First Choice Pop-Up (6-21-0) was formulated when growers requested a high-quality, safe N-P Pop-Up that provides an economical and effective nutrient package. Grower response has been excellent and Pop-Up is a popular option in the Five Points-Huron area. Pop-Up is formulated with the highest quality raw products.

First Choice Pop-Up fertilizer is economical "stand insurance" for growers. The readily available phosphate and organic acids help stimulate early root growth, cell division, and development of new tissue during the seedling stage.

First Choice Pop-Up is available with or without zinc. Zinc deficiencies have become more common, due in part to land leveling and soil compaction, and are often more severe early in the season. In vegetables and field crops, high phosphorus levels can restrict zinc movement within plants. The added zinc in WFS' Pop-Up is highly economical and adds to the goal of better plant populations and uniformity. 🌱

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Foliar Feeding Program Increases Brix

Dave Silva, WFS Coastal Division Agronomist

Two years of multiple trials with First Choice® Coastal CalMax® are showing a trend of higher Brix with the potential for higher yields under adverse growing conditions. Trials with large wineries and wine grape growers were initiated in 1999 and continued in 2000.

Coastal CalMax, a 9% calcium suspension balanced with macro and micronutrients, increased sugar by an average of 1% to 2%. Depending on variety and location, the extra sugar can advance harvest by several days to more than a week. Based on two years of trials, the foliar fertilizer is also an economical insurance policy for enhancing yields when weather conditions cause low to medium production.

Silva recommends four applications of CalMax applied at a rate of two quarts per acre. The first treatment is at bud swell and the next three sprays are made at seven to ten-day intervals.

The response to Coastal CalMax is attributed to balanced nutrition and a formulation that enhances nutrient absorption. Calcium, one of the more difficult nutrients to take up from the soil, is immobile once in plant tissue. CalMax is a highly water soluble formulation that improves calcium absorption. CalMax also supplies 10% nitrogen, 2% boron, 0.3% zinc, and other micronutrients.

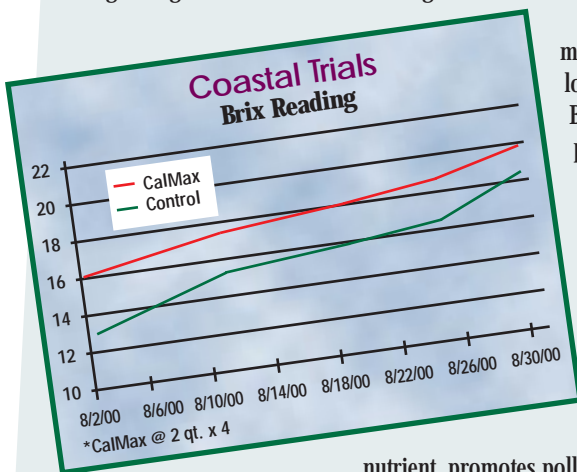
Calcium helps prevent necrotic leaf margins, shoot and berry cracking, drying of clusters and relieves plant stress due to factors such as improper irrigation. Boron, another immobile

nutrient, promotes pollen tube growth and sugar transport. It also helps increase the number of seeded berries,

avoiding a problem commonly called 'hen and chicken phenomenon.'

Zinc, which is included in Coastal CalMax, promotes photosynthesis and auxin synthesis. It plays an important role in increasing berry size and promoting tight clusters. 🌱

CalMax is a registered trademark of Omex Agrifluids.



A Window of Opportunity for Better Nut Crop Production

Bud swell to petal fall is a critical period for nut crop nutrition, especially calcium and boron. Both nutrients are receiving more attention due to research that has shown significant responses to supplemental applications.

In recent UC research, for example, calcium has been identified as an important factor in reducing almond bud drop. Calcium strengthens cell walls and cell membranes and helps promote optimum flowering and fruit development.

Boron research by Dr. Patrick Brown of UC Davis revealed widespread deficiencies. In Fresno County trials, supplemental boron increased yields by 50% or more and by up to 40% in Glenn County. Studies revealed that seed set is more sensitive to a boron deficiency than vegetative growth, prompting higher sufficiency levels.

Omex Agrifluids of Madera, CA formulates a readily available source of foliar calcium and boron for almonds, walnuts and pistachios. CalMax for Nuts is a low chloride suspension with 10% calcium and 2% boron to increase cell strength, permeability and the pollination/fertilization process. It also contains 10% N, plus small amounts of magnesium, and chelated copper, iron, manganese and zinc.

Omex Agrifluids developed CalMax and the foliar fertilizer is being formulated for specific crops. Local trials and grower experience have shown rapid plant absorption. Research indicates that carbohydrates in CalMax enhance calcium uptake. A balanced mix of essential nutrients also aids plant uptake.

Besides CalMax for Nuts, Western Farm Service offers a number of scientifically formulated First Choice Foliar fertilizers. WFS and independent agronomists test all products under local conditions. Contact your Western Farm PCA for more information. 🌱

New Kocide® 4.5LF

The Premier Liquid Copper



Rainfast in stormy weather...The superior technology in Kocide 4.5LF improves the availability of its copper hydroxide per acre through better dispersion, suspension, and tenacity. The result is a higher level of disease control from greater coverage and rainfastness, especially in stormy weather.



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WFS Joins Clean Fertilizer Effort with New Products

The concept of “clean fertilizer” hasn’t received major headlines like other environmental issues that affect agriculture. But, Western Farm Service (WFS) is taking a leading role in meeting tighter regulations being considered by the U.S. EPA and the California Department of Food and Agriculture. At the same time, it’s helping contribute to a cleaner environment with a unique new line of high-quality liquid fertilizers.



Wayne Collins
Itronics Metallurgical
Consultant

Working with Wayne Collins, Metallurgical Consultant for Itronics Metallurgical, Western Farm Service is now offering the Itronics’ Gold’n Gro™ product line, which is being expanded to fit a wider range of crops.

Itronics recycles photochemicals from sources such as hospitals, photo processing centers and data storage companies, explains Collins. After recovering silver and removing other heavy metals from waste products, Itronics supplements the “base liquid” with N, P and K.

The base liquid is an aqueous solution of mixed thiosulfates, which are highly efficient forms of sulfur. All Gold’n Gro fertilizers are ammonium thiosulfate supplemented. A key feature is the presence of EDTA chelating agents, notes Collins. Citrate/EDTA chelates are added to improve the ability of plants to extract micronutrients from soil and all products contain guaranteed levels of chelated iron. Low-biuret urea is used to minimize the potential for fertilizer burn and raw phosphate materials are selected for low metal content. Distilled water is used in making the formulations.

Expanding Agricultural Use

Western Farm’s Alpaugh plant in the San Joaquin Valley has geared up to produce Gold’n Gro fertilizers, says Collins. While product introductions have centered around turf and ornamentals, more emphasis is being placed on meeting agricultural needs for crops such as berries and most fruit trees. Liquid nutrition programs are also being developed for citrus and wine grapes. WFS is currently offering Gold’n Gro fertilizers in bulk containers of 55 gallons or larger.

Itronics has had a good response to its liquid nutrients since testing began in 1995 at the University of California, Riverside. For example, Gold’n Gro 20-1-7 with 0.15% iron and 5% sulfur was the top-ranked fertilizer in two years of comparative turfgrass trials at UC Riverside.

Collins says the technology developed by Itronics represents “recycling at its best. Gold’n Gro products are environmentally compatible and meet future needs. The end result is that everyone wins,” he says. 🌱

Gold’n Gro is a trademark of Itronics Metallurgical.

