






GRAPES

Product Use Overview



| California |





	Product	Key Problems / Uses	Product Benefits and Use Recommendations
Fungicides	Actinovate® AG Biological Fungicide	Botrytis bunch rot (suppression), powdery mildew (suppression)	Labeled rate range: 3–12 oz/A. Reapply every 7–14 days. For best results, use with a spreader-sticker. REI: 1 hour. PHI: 0 days. 
	Intuity™ Fungicide	Botrytis bunch rot, powdery mildew (suppression)	Delivers preventive and residual Botrytis control, locally systemic and translaminar activity, and powdery mildew suppression. Labeled rate: 6 fl oz/A. REI: 12 hours. PHI: 10 days.
Insecticides—Soil	Belay® Insecticide	Leafhoppers, mealybugs, <i>Phylloxera</i> spp. (suppression), sharpshooters	Long-lasting, broad spectrum insect control that is effective in all soil types and readily available for uptake. Labeled rate range: 6–12 fl oz/A per year. (Regardless of the application method, do not apply more than 0.2 lb clothianidin per acre per year.) REI: 12 hours. PHI: 30 days.
	Esteem® Ant Bait	Ants	For long-lasting control of protein-feeding ants only (such as fire ants). Apply 1.5 lb/A at the first signs of protein-feeding ants foraging and actively moving across the vineyard. REI: 12 hours. PHI: 1 day.
	Venom® Insecticide	Glassy-winged sharpshooter, leafhoppers, mealybugs, <i>Phylloxera</i> (suppression), thrips	Super-systemic action with rapid protection against sucking and chewing pests. Labeled rate range: 5–6 oz/A. Apply one time per season. REI: 12 hours. PHI: 28 days.
Insecticides—Foliar	Belay Insecticide	Beetles, grape berry moth, leafhoppers, mealybugs, sharpshooters and more	Contact / Ingestion activity with translaminar properties for reliable, broad spectrum control of beetles, leafhoppers, mealybugs and more. Labeled rate range: 2–6 fl oz/A. Use two 6 fl oz/A foliar applications when controlling mealybugs. (Regardless of the application method, do not apply more than 0.2 lb clothianidin per acre per year.) REI: 12 hours. PHI: 0 days.
	Danitol® 2.4 EC Spray	Cutworm, grape berry moth, Japanese beetle, leafroller, leafhoppers, obliquebanded leafroller, sharpshooters, stink bugs (excluding Brown) and more	Quick, broad spectrum pyrethroid insecticide proven not to flare mites. Labeled rate range: 5½–10½ fl oz/A for leafhoppers, 16–21½ fl oz/A for cicada and 10½–21½ fl oz/A for other pests. REI: 24 hours. PHI: 21 days. Danitol is a restricted use pesticide.
	DiPel® DF Biological Insecticide Dry Flowable	European grapevine moth, grape berry moth, grape leafroller, grapeleaf skeletonizer (ground only), light brown apple moth, obliquebanded leafroller	NOP compliant and OMRI listed control of grape-damaging worms. Apply when most worms are early instar. Use in combination with other insecticide chemistries for broader spectrum control. Apply 1 lb/A when insects are feeding. REI: 4 hours. PHI: 0 days. 
	Knack® Insect Growth Regulator	Lecanium scale	Highly effective IGR with proven long-lasting scale control. Apply when crawlers first appear. Two applications per season max. Labeled rate: 16 fl oz/A. REI: 12 hours. PHI: 21 days.
	PyGanic® Crop Protection EC 1.4_{II} / 5.0_{II}	Aphids, leafhoppers, stink bugs	Apply when target pest(s) threshold populations are observed. Labeled rate range: <i>PyGanic</i> 1.4 _{II} : 16–64 fl oz/A. Use 32 fl oz/A for moderate infestations. <i>PyGanic</i> 5.0 _{II} : 4.5–17 fl oz/A. Use 9 fl oz/A for moderate infestations. Maximum 10 applications per season. REI: 12 hours. PHI: 0 days. 
	Tersus® Insecticide	Aphids, armyworms, katydid, leafhoppers, leafrollers, lygus, mites, thrips, whiteflies	On contact, <i>Tersus</i> will knock down a wide range of economically damaging insects. Use for late-season cleanup just before harvest. <i>Tersus</i> is a great option for growers who face strict MRL regulations. REI: 12 hours. PHI: 0 days.
	Venom Insecticide	Leafhoppers, mealybugs, multi-colored Asian lady beetle, sharpshooters	Quick control of yield-depleting pests. Labeled rate range: 2–3 oz/A for mealybugs; 1 oz/A for leafhoppers. Apply up to 6 oz/A per season by foliar application. REI: 12 hours. PHI: 1 day.
Miticide	Zeal® Miticide¹	Mites—European red mite, Pacific, two-spotted, Willamette	Long-lasting mite control with translaminar and ovicidal features. One application per season. <i>Zeal</i> is a mite growth regulator that affects all mite life stages, including eggs. Labeled rate range: 2–3 oz/A per season. REI: 12 hours. PHI: 14 days.



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Nematicide	DiTera® DF Biological Nematicide Dry Flowable	Nematodes	Protects roots from nematode damage. Labeled broadcast rate range: 0.31–2.4 lb/A 1,000 sq ft (13.5–104.5 lb/A). Apply after harvest and at spring root flush for best results. REI: 4 hours. 
Synergist	Exponent® Insecticide Synergist	Promotes more consistent and reliable control for classes of chemistries, such as pyrethroids, organophosphates, carbamates and mectins, due to its synergistic insecticidal properties	Tank mix with insecticides and acaricides to improve their performance when control deficiencies have been observed. Labeled rate: 8 fl oz/A. REI: 12 hours. <i>Exponent</i> will not act as a synergist to control insect populations that have developed full resistance to a given class of chemistry.
Herbicides	Chateau® Herbicide SW	More than 90 tough winter annual broadleaf and grass weeds, including annual morningglory, fleabane and marestail	Long-lasting, residual preemergence herbicide. Won't leach or volatilize. <i>Chateau</i> can also be used on newly planted grape vines. Apply before bud break or after final harvest. In juice, raisin and wine grapes you may apply after budbreak only if using a shielded sprayer and spray drift will not contact fruit or foliage. Labeled rate: 12 oz/A. Maximum 24 oz per year. Clean out sprayer thoroughly after each use. REI: 12 hours. PHI: 60 days.
	Select Max® Herbicide with Inside Technology™ (non-bearing)	Annual and perennial grasses	Superior postemergence for systemic grass control with outstanding crop safety (non-bearing only). Labeled rate range: 9–16 fl oz/A. Lower volatile organic compound (VOC) formulation than other clethodim formulations. NIS okay. REI: 24 hours. PHI: 1 year.
Plant Growth Regulators	ProGibb® Plant Growth Regulator	Cluster elongation / thinning and increased berry size	ProGibb 40%: Superior uptake and absorption. Volatile organic compound (VOC) compliant. ProGibb LV Plus: Low VOC liquid formulation. See product labels for rates and timings by variety. REI: 4 hours. PHI: 0 days. 
	ProTone® SG Plant Growth Regulator Soluble Granule	Enhances red coloration of grapes resulting in earlier harvest, improved harvest management and improved pack-out yield	Early timing: Apply 1 bottle (150 grams AI) per acre between veraison, i.e., when 50% of the harvestable fruit has softened and 3 weeks following veraison. Flame Seedless: Apply at veraison. Crimson Seedless: Apply 1–3 weeks after veraison. Red Globe: Apply 1–2 weeks after veraison. Late timing (all varieties): Apply ½ to 1 bottle per acre when clusters contain marketable sugar levels, yet significant green color. Fruit must have the potential to remain firm through harvest (2–3 weeks). REI: 4 hours. PHI: 0 days. <i>ProTone</i> is exempt from a requirement for a tolerance. 
Soil / Plant Health	MycoApply® EndoMaxx	Enhances crop performance by delivering root mass expansion, nutrient efficiency and water acquisition	Vines (new plantings) Bare root spray or dip: 5 grams mixed in 3 gallons of water. Spray or dip plant roots prior to planting. Container drench: 8 grams applied to a single container in water to the point of run-through. In-field drench: 10 grams in sufficient water volume to move product into the root zone. 



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