



Cultural Calendar for Commercial Grape Production

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Integrated pest management (IPM) includes the combination of biological, cultural, physical, and chemical tools in efforts to manage diseases and pests while minimizing risks associated with pesticides. Cultural practices are an integral part of an IPM program and should be incorporated into all commercial systems whether large or small, conventional or organic. This publication provides recommended practices at approximate growth stages and/or production periods. However, these timelines are approximate and may require adjustment for particular conditions. Growers who encounter situations that may not align with suggestions here should contact their county Extension office for assistance. Extension offices can also provide updated pest management recommendations. This cultural guide serves as a supplement to published spray guides and scouting guides.



NEW GROWTH



PRE-BLOOM



BLOOM



HARVEST

	TIME OF YEAR [~]	March	Mid-April/Late April	Late April/Early May	Mid-May	Mid-May/Late May	June	July to Sept	Sept/Oct through Winter
	GROWTH STAGE	Dormant	New growth (2" to 4" long)	New growth (6" to 12" long)	Pre-bloom ¹	Bloom	Post-bloom	Summer growth	Post-harvest
Diseases	Anthracnose	Prune and dispose of old infected wood, canes, and fruit mummies.	Prune and dispose of old infected wood, canes, and fruit mummies.	Thin shoots for increased air circulation.					
	Black rot	Prune and dispose of old infected wood, canes, and fruit mummies.	Thin shoots for increased air circulation; Prune and dispose of fruit mummies.	Thin shoots for increased air circulation.		Position shoots for increased air circulation and sunlight to the canopy.	Remove and dispose of infected leaves and fruit; Remove leaves around clusters to increase air circulation.	Remove and dispose of infected plant tissue, including infected or damaged fruit; Remove leaves around clusters to increase air circulation and sunlight penetration.	Mow or rake to remove fallen leaves; Remove all fruit from vines and fallen fruit.
	Downy mildew		Thin shoots for increased air circulation.	Thin shoots for increased air circulation.		Position shoots for increased air circulation and sunlight to the canopy.	Remove and dispose of infected leaves and fruit; Remove leaves around clusters to increase air circulation.	Remove and dispose of infected plant tissue, including infected or damaged fruit; Remove leaves around clusters to increase air circulation and sunlight penetration.	

NOTES: ~THE GROWTH STAGE INDICATED TYPICALLY OCCURS DURING THIS TIME OF YEAR; HOWEVER, THIS MAY VARY FROM YEAR TO YEAR DEPENDING ON ENVIRONMENTAL CONDITIONS.

¹ JUST BEFORE BLOOMS OPEN

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	GROWTH STAGE	Dormant	New growth (2" to 4" long)	New growth (6" to 12" long)	Pre-bloom ¹	Bloom	Post-bloom	Summer growth	Post-harvest
Diseases	Fruit rots (Bitter rot, Sour rot, Botrytis gray mold, Ripe rot)	Prune to remove old infected wood, canes, and clusters with fruit mummies.	Thin shoots for increased air circulation; Prune to remove fruit mummies.	Thin shoots for increased air circulation.		Position shoots for increased air circulation and sunlight to the canopy.	Remove infected fruit; Remove leaves around clusters to increase air circulation.	Remove infected fruit; Remove leaves around clusters to increase air circulation and sunlight penetration.	Mow or rake to remove fallen leaves; Remove all fruit from vines and clean up all fallen fruit.
	Phomopsis (Cane and rachis rot and leaf spot)	Prune and dispose of old infected wood, canes, and fruit mummies.	Thin shoots for increased air circulation; Remove and dispose of fruit mummies.	Thin shoots for increased air circulation.					Mow or rake to remove fallen leaves; Remove all fruit from vines and clean up all fallen fruit.
	Powdery mildew	Prune and dispose of old infected wood, canes, and fruit mummies.	Thin shoots for increased air circulation; Remove and dispose of fruit mummies.	Thin shoots for increased air circulation.		Position shoots for increased air circulation and sunlight to the canopy.	Remove and dispose of infected plant tissue; Position shoots for increased air circulation and sunlight to the canopy.	Remove and dispose of infected plant tissue and fruit; Remove leaves around clusters to increase air circulation and sunlight penetration.	Rake and remove fallen leaves; Remove all fruit from vines and clean up all fallen fruit.

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Insects	Grape berry moth	Manage weeds; Remove plant debris in and around vineyard.	Manage weeds.			Scout for feeding, egg laying, and webbing on shoots, leaves, and flower clusters; Remove leaves that have been rolled or webbed shut.	Remove infested canes and developing fruit.	Remove and dispose of infested leaves and fruit.	Mow or rake and remove fallen leaves; Remove all fruit from vines and clean up all fallen fruit.
	Grape cane gallmaker	Prune to remove canes damaged the previous season; Remove galls on canes (1 inch swollen areas); Reduce bud density to 4 to 6 shoots per foot of row.	Manage weeds.						
	Green June beetle							Remove and dispose of infested leaves and damaged or infested fruit; Remove leaves around clusters to increase air circulation; Cover plants with fine netting to exclude insect.	

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Insects	Japanese beetle							Remove and dispose of infested leaves and fruit; Remove damaged fruit; Cover plants with fine netting to exclude insect (for small vineyards).	
	Phylloxera		Prune to remove damaged canes; Remove and dispose of leaves with galls; Thin shoots to 4 to 6 per foot of row for increased air movement; Manage weeds.		Remove and dispose of leaves with galls; Manage weeds.			Remove and dispose of leaves with galls and fallen leaves.	
	Stink bugs							Cover plants with fine netting to exclude stink bugs (for small vineyards); Remove and dispose of damaged fruit.	

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Insects	Spotted wing Drosophila							Remove and dispose of infested canes, leaves, and damaged or infested fruit; Remove leaves around clusters to increase air circulation and sunlight penetration; Cover plants with fine netting to exclude insect.	Remove all fruit from vines and clean up all fallen fruit; Remove and dispose of infested canes.
	Protecting pollinators			Mow row middles regularly to reduce flowering weeds that attract pollinators.	Mow row middles regularly to reduce flowering weeds that attract pollinators.	Mow row middles regularly to reduce flowering weeds that attract pollinators.	Mow row middles regularly to reduce flowering weeds that attract pollinators.	Mow row middles regularly to reduce flowering weeds that attract pollinators.	
Weeds	Broad leaf & Grass weeds	Begin weed management strategy before budbreak.	Manage weed escapes to keep row bed clean of plant debris.	Mow before bloom to eliminate blooms that compete for pollinators; Mulch.	Control ground cover as needed.	Control ground cover as needed.	Control ground cover as needed.	Control ground cover as needed.	Control ground cover as needed.
Wildlife	Birds							Apply bird netting at veraison.	
	Deer	Check and repair wildlife exclosures.					Check and repair wildlife exclosures.		Encourage deer hunting to reduce populations.

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Wildlife	Rodents & Small animals (Voles, Moles, Rabbits, Raccoons)		Mow to reduce rodent habitat.					Mow to reduce rodent habitat; Trap and remove problematic raccoons.	Install raptor perches; Protect predators like coyotes; Check and repair wildlife exclosures; Scout for voles and treat as needed; Mow to reduce undervine rodent habitat/feeding through the winter; Trap raccoons to reduce populations.
Abiotic	Plant health	Collect and weigh all 1-year old canes during pruning to check vine size; Compare to previous season's harvest weight from same vines to establish vine balance ratio.	Apply a maintenance application of nutrients; If Nitrogen is needed it should be applied later in the season (bloom-veraison).			Collect plant tissue samples for nutrient analysis at full bloom ; Fertilize if necessary.	Thin clusters starting 4 to 6 weeks after fruit set based on targeted vine balance ratio.	After veraison begin berry sampling to determine harvest timing; Monitor for nutrient deficiencies and collect leaf samples at veraison for analysis if needed.	Evaluate vine balance ratio using sentinel vine fruit and pruning weight.

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