



Cultural Calendar for Commercial Bramble 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.

**BLOOM****PETAL FALL****PRE-HARVEST****HARVEST**

GROWTH STAGE		Planting	Dormant	Vegetative growth	Bud break ¹	During bloom	Harvest	End of season
Diseases	Anthracnose	Remove cane portions of plant leaving only the roots.	Remove and dispose of canes that fruited during previous season, if not completed in autumn.	Prune to improve air circulation; Remove weeds since they may serve as inoculum sources.	Remove weeds to improve air circulation; Avoid excessive nitrogen fertilizer.			Remove and dispose of canes that fruited the previous season.
	Botrytis Fruit Rot		Prune to improve air circulation.	Remove weeds to improve air circulation.	Avoid excessive nitrogen fertilizer.	Remove and dispose of diseased fruit.	Remove and dispose of diseased and fallen fruit.	
	Cane Blight	Remove cane portions of the plant, leaving only the roots.	Remove and dispose of canes that fruited during previous season, if not completed in autumn.	Prune to improve air circulation; Remove weeds since they may serve as inoculum sources.	Remove weeds to improve air circulation; Work carefully to minimize damage to newly emerging canes.			Remove and dispose of canes that fruited the previous season; Work carefully to minimize damage to newly emerging canes.
	Leaf Spots (Cercospora, Phyllosticta, Septoria)		Remove and dispose of dead, dying, or diseased wood; Prune to improve air circulation.	Prune to improve air circulation; Remove weeds since they may serve as inoculum sources.	Remove weeds to improve air circulation; Avoid working around plants when wet to limit disease spread.			Remove and dispose of canes that fruited the previous season.
	Orange Rust			Prune to improve air circulation; Remove and dispose of diseased plants including roots; Remove nearby wild brambles, since they may serve as inoculum sources.	Remove and dispose of diseased plants including roots.	Remove and dispose of diseased plants, including roots.		Remove and dispose of diseased plants including roots; Rogue wild brambles.

¹BUDS SHOW SILVER

GROWTH STAGE		Planting	Dormant	Vegetative growth	Bud break ¹	During bloom	Harvest	End of season
Diseases	Spur Blight		Remove and dispose of canes that fruited during the previous season, if not completed in autumn.	Prune to improve air circulation; Remove weeds since they may serve as inoculum sources.	Remove weeds to improve air circulation; Avoid excessive nitrogen fertilizer.			Remove and dispose of canes that fruited the previous season.
	Viruses	Purchase virus-free plants.	Remove weeds since they may serve as inoculum sources.				Remove and dispose of diseased plants, including roots.	Remove and dispose of diseased plants, including roots.
Insects	Protect Pollinators				Regularly remove or mow weeds in and around the field to reduce flowers that attract pollinators.	Regularly remove or mow weeds in and around the field to reduce flowers that attract pollinators.	Regularly remove or mow weeds in and around the field to reduce flowers that attract pollinators.	
	Green June Beetles						Cover plants with fine netting to exclude insects; Harvest frequently.	
	Japanese Beetles						Cover plants with fine netting to exclude insects; Harvest frequently; Avoid placing beetle traps close to planting.	

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GROWTH STAGE		Planting	Dormant	Vegetative growth	Bud break ¹	During bloom	Harvest	End of season
Insects	Raspberry Cown Borer		Remove and dispose of plants with noticeably swollen crowns.	Remove nearby wild brambles.			Inspect plants with wilted or weak canes; Look for holes with sawdust at base or canes that break easily by pulling.	Remove and dispose of plants with noticeably swollen crowns; Look for pupal skins near soil line; Rogue wild brambles.
	Rednecked Caneborer		Remove canes with noticeable galling (1 to 2 inch swellings).	Remove nearby wild brambles.				Remove canes with noticeable galling (1 to 2 inch swellings); Rogue wild brambles.
	Spotted Wing Drosophila & Other Fruit Flies		Prune to improve air circulation, reduce canopy shading, and reduce relative humidity.	Avoid excessive nitrogen fertilizer to prevent development of dense canopy growth.		Remove weeds around plants to eliminate habitat, improve light penetration, and increase air flow.	Cover plants with fine netting to exclude insects; Gather and remove damaged fruit; Pick berries frequently and store immediately at a temperature below 40°F.	
Weeds	Broad Leaf & Grass Weeds	Plant and till in cover crop before planting brambles; Control weeds in and around planting.	Remove winter annuals in row before they set seed.		Mow between rows as needed; Hoe or hand pull weeds in rows.	Mow between rows as needed; Hoe or hand pull weeds in rows.	Mow between rows as needed; Hoe or hand pull weeds in rows.	Mow between rows as needed; Hoe or hand pull weeds in rows.

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GROWTH STAGE		Planting	Dormant	Vegetative growth	Bud break ¹	During bloom	Harvest	End of season
Wildlife	Birds, Rabbits & Voles		Check and repair wildlife exclosures.		Mow to reduce rodent habitat.	Prepare netting to limit bird access to plants.	Install and check bird netting regularly to ensure it is functional, repairing holes as needed.	Install raptor perches; Protect predators like coyotes; Check and repair wildlife exclosures; Scout for voles and treat as needed.
Abiotic	Plant Health	Plant healthy, disease-free plants.	Prune to improve air circulation; Remove and dispose of canes that fruited the previous season; Thin remaining canes; Fertilize in March.	Thin remaining canes; Irrigate as needed to prevent drought stress.	Work carefully to minimize damage to newly emerging canes; Irrigate as needed to prevent drought stress.	Irrigate as needed to prevent drought stress.	Irrigate as needed to prevent drought stress.	Collect leaf tissue for nutrient analysis in August; Remove and dispose of canes that fruited the previous season.

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