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## SMALL FRUIT SPRAY SCHEDULE (GRAPES, BLUEBERRIES AND BRAMBLES)

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### GRAPES

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When to Spray	Pests to Control	Spray Materials in 1 Gallon
1. Dormant spray	Scales	<p><b>Superior oil 1%</b>-- Follow manufacturers' recommendations.</p> <p><b>or</b>  <b>Copper sulfate (bluestone)</b>-- 6 tsps; apply after pruning; burn all pruned vines.</p> <p>Complete coverage is important for scale control. Do not use dormant oils after buds start to open.</p>
2. Just before bloom	Grape berry moths Leaf chewing insects	<p><b>Carbaryl 50WP</b>-- 2 TBS/gal water PHI=7 days; Carbaryl is highly toxic to bees. Read label.</p> <p><b>or</b>  <b>Imidan 70W</b>-- 1<math>\frac{1}{3}</math>-2<math>\frac{1}{8}</math> lbs/acre PHI=14 days; do not use Imidan in home and gardens.</p>
3. Post bloom sprays- just after bloom and then at 10- to 14-day intervals to harvest	Same as No. 2.  European red mites Two-spotted mites	<p>Same as No. 2.</p> <p><b>Vendex 50WP</b> – PHI=14 days; apply 1-2 lbs/acre when mites first appear. Limit to 2 applications/season; efficacy reduced at temperatures below 70°F.</p> <p><b>or</b>  <b>Kelthane 50WSP</b> – PHI=7 days; use 2<math>\frac{1}{2}</math> lbs/acre when mites first appear. Limit to 2 applications/season.</p>
	Leafhoppers Mealybugs	<p><b>Provado Solupak (75WP)</b> – 0.75-1.0 oz/acre; no pre-harvest interval limitation. Allow 14 days between applications. Limit to 2 ozs/acre/year.</p>
	Citrus blackfly Citrus whitefly Citrus leafminer	<p><b>Esteem 0.86EC</b>-- 10 fl. ozs/acre; be sure to apply in sufficient water to ensure thorough coverage of tree. Apply before populations build; 1 day pre-harvest interval. Do not make more than 2 applications/season. Allow 21 days between applications.</p>

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**Warning: Re-entry times for workers entering groves and/or treated fields should be strictly observed. Be sure to check the label for this information.**

**BLUEBERRIES (Homeowners schedule)**

<b>Time of Application</b>	<b>Insecticide/Gallon</b>	<b>Pest to Control</b>	<b>Remarks</b>
Delayed dormant buds 0.25-0.25 inch green	Summer or Superior Oil (2%-3% actual oil)	Scales	Follow manufacturer's directions. Thorough coverage necessary when using spray products to control scale insects.
Petal fall	Malathion 57EC--2 tsps	Fruit worms Weevils Maggots	Allow 1 day before harvest; toxic to fish and highly toxic to bees. Follow label.
	<b>or</b> Carbaryl 50W--1 TBS	Fruit worms Weevils Maggots	Allow 7 days before harvest; highly toxic to bees.
	<b>or</b> SpinTor 2SC (4-6 fl. ozs/acre)	Fruit worms (suppression)	SpinTor is toxic to bees exposed to treatment within 3 hours of spray; toxic to aquatic invertebrates. Rotate product after 2 continuous applications. Limit to 29 fl. ozs/acre/season. Allow 3 days before harvest.
Covers sprays-- 10 days after petal fall to harvest	Same as above.	Maggots	Follow labels.

**BLUEBERRIES (Commercial schedule)**

<b>Time of Application</b>	<b>Insecticide</b>	<b>Pest to Control</b>	<b>Remarks</b>
Dormant Spray Oil	Summer or Superior Oil (2%-3% actual oil)	Scales	Follow manufacturer's directions when using or mixing oil. Thorough coverage is necessary when using any foliar product to control scale insects.
	<b>or</b> Esteem 0.86EC – 16 ozs/acre + Oil-- 1.5 gals	Scales	PHI=7days; limit to 2 applications/growing season. Allow 14 days between Esteem applications.
Petal fall and cover spray-- 10-14 days apart	Lannate SP-- ½ lb/acre	Weevils Maggots	PHI=3 days; highly toxic to bees. Do not apply during bloom. Toxic to fish, aquatic invertebrates and mammals. Limit to 4 applications/season. Use with care.
	<b>or</b> Lannate (2.4) LV-- 1½ pts/acre		
	<b>or</b> Carbaryl 50WP 3-4 lbs/100 gals	Weevils Maggots	PHI=7 days; highly toxic to bees. A diluted spray of 125-150 gals/acre is recommended first application- 3 weeks before harvest. Repeat 10 days later if needed.
	<b>or</b> Esteem 0.86EC– 16 ozs/acre	Fruitworm	PHI=7 days; see preceding remarks; follow label.

**BLUEBERRIES (Commercial schedule)**

<b>Time of Application</b>	<b>Insecticide</b>	<b>Pest to Control</b>	<b>Remarks</b>
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Petal fall and cover spray-- 10-14 days apart (cont'd)	<b>or</b> SpinTor 2SC-- 4-6 fl. ozs/acre	Fruitworm (suppression)	PHI=3 days; see preceding remarks.
	<b>or</b> Imidan 70W-- 1 1/3 lbs/acre	Fruitworm Weevils Maggots	PHI=3 days; do not make more than 5 applications/acre/year.
Post harvest	Thiodan 50WP-- 3 lbs/acre	Mites	Apply immediately after harvest and repeat 6-8 weeks later. Mix in 300 gals of water. Limit to 2 applications/year.
	Extinguish IGR--1.0-1.5 lbs/acre (Broadcast)	Fire ants	Apply in April when ants are actively foraging and in October prior to cool weather. Apply to dry soil.

## BRAMBLES

Time of Application	Insecticide/Gallon	Pest to Control	Remarks
Dormant	Summer or Superior Oil	Scales, Mites	Follow manufacturer's directions. Complete spray coverage is necessary.
Delayed dormant as buds begin to break	Summer or Superior Oil	Scales	Follow manufacturer's directions. Complete spray coverage is necessary.
Pre-bloom just before blossoms open	Carbaryl 50 W--1 TBS  <b>or</b> SpinTor 2SC-- 4-6 fl. ozs/acre	Thrips Leafhoppers Leafrollers Sawflies	PHI=7 days; highly toxic to bees; do not apply at bloom or when bees may be exposed.  SpinTor is toxic to bees exposed to treatment within 3 hours of spray; toxic to aquatic invertebrates. Rotate products after 2 continuous applications of SpinTor. Limit to 29 fl. ozs/acre/season. Allow 3 days before harvest.
	Brigade WSB-- 16 ozs/acre 8-16 ozs/acre	Mites Leafrollers	PHI=3 days; highly toxic to bees and extremely toxic to fish and aquatic invertebrates. May not be used if endangered species may get in contact with treatment. Read label. Consult local agents.
	Malathion 57EC-- 3 pts/acre	Aphids	PHI=1 day; highly toxic to bees. Do not apply at bloom or when bees may be exposed.
	Malathion 57EC-- 1½ pts/100 gals water	Mites Thrips	See previous remarks on Malathion.
After blossom to harvest	Same as above.	Sawflies Thrips Leafhoppers Mites Blackberry and Raspberry crown borers	August-September: ideal time for fall applications; see preceding remarks and restrictions of products used.
April/October	Extinguish-- 1.0-1.5 lbs	Fire ants	Broadcast in April when ants are actively foraging and in October prior to cool weather. Apply on dry soil.

**Note: Various borers cause problems in the canes. Infested, galled canes should be cut out and destroyed. Thorough spray coverage is important for any foliar product used. The volume of spray used should increase throughout the season.**