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# COMMERCIAL SPRAY SCHEDULE FOR DISEASE AND INSECT CONTROL ON GRAPES

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Pest Management Guide 18  
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Time of Application	Pesticides to Use		To Control Principle Pest	Remarks
	Fungicides Insecticides	/ 100 gal.		
DORMANT (before buds open)	Copper Sulfate 8.0 lb Hydrated lime 8.0 lb (Bordeaux mixture)		Anthracnose	This spray is only necessary in vineyards where Anthracnose has been a problem.
NEW SHOOT SPRAYS	No Insecticides			
1) (when new shoots are 1 to 2" long)	Captan 50W 2.0 lb <i>or</i> Folpet 50W 2.0 lb <i>or</i>		Black rot, Downy mildew, Anthracnose*	Important for black rot control. If powdery mildew is a severe problem, use either benomyl or folpet.
2) (when new shoots are 6 to 8" long)	Ferbam 76W 2.0 lb <i>or</i> Dithane M-45 80W 2.0 lb		Dead arm, Powdery mildew	Ferbam is approved only for black rot. Do not use captan over three times after bloom. Dithane is not approved for powdery mildew nor is Captan.
PRE-BLOOM SPRAY (just before blossoms open)	Benomyl 50W 0.5 lb <i>or</i> Folpet 50W 2.0 lb <i>or</i> Dithane M-45 80W 2.0 lb <i>or</i> Captan 50W 2.0 lb		Same as new shoot	Important for black rot control. Benomyl is not approved for downy mildew or dead arm. If a problem, use one of the other fungicides. Be sure of complete coverage. Do not use Ferbam later than pea-size spray.
	Plus Sevin 50W 2.0 lb <i>or</i> ** Malathion 25W 2.0 lb <i>or</i> ** Guthion 50W 0.5 lb <i>or</i> ** Imidan 50W 2.0 lb**		Berry moth Leaf hopper Colaspis	Important for insect control. Do not apply Guthion within 28 days of harvest. Do not apply Imidan within 14 days of harvest.
POST-BLOOM SPRAY (immediately after bloom)	Same as above		Same as above	Same as above
PEA-SIZE SPRAY (when berries are about pea size but before they touch in cluster)	Same as above		Same as above	Do not apply Dithane M-45 within 66 days of harvest. Same as Post-bloom. Be sure and control Japanese beetles.
BERRIES TOUCH IN CLUSTER (10-14 days after pea-size spray)	Same as above		Same as above	Same as above. Plus Benomyl is not effective for bitter rot but it is for ripe rot control.
JUNE and JULY (apply at 2-week intervals until harvest)	Same as above		Same as above plus June beetles, Wasps, Japanese beetles	Do not apply Benomyl within 7 days of harvest. Folpet may be applied during harvest. During this period, Maneb 80W (dithane M-22 special or Manzate D) 2.0 lb can be used to within 7 days of harvest. If Japanese beetles are a problem, sevin can be used within one day of harvest.

Trade and brand names are used only for the purpose of information and the Virginia Cooperative Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

### KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
  2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
  3. Dispose of empty containers in the manner specified on the label. SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.
- \* There are no organic fungicides approved for Anthracnose. But if a good control program is used for other diseases, Anthracnose usually will not be a problem.
- \*\*Sevin is not approved for Wasp; Malathion is not approved for Wasp, Berry moth, Colaspis or June beetle; Guthion is not approved for Colaspis, June beetle, Japanese beetles, or Wasps; Imidan is not approved for Colaspis, June or Japanese beetles, but if these insecticides are used for the insects listed on the label those unlisted insects usually will not be a problem.

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