

Spray Guide for Small Vineyards

By Paul Hendricks, Master Gardener

The following spray program is intended for disease susceptible wine or table grapes in Missouri. Some varieties such as Concord or Norton don't require all the sprays listed.

Early sprays are most important, especially just before bloom, during bloom, and just after bloom. Bloom is made evident when the tiny caps fall off the flower buds.

There are three different classes of chemicals used for controlling fungi in grapes.

1. Protectant Fungicides provide a film over the surface of plants that kills spores on germination. Protectants need to be in place before infection. Once the fungus is established they do not work. They need to be reapplied if heavy rain occurs. Examples of protectant fungicides are **Captan, Sulfur, Rovral, and Mancozeb (Dithane)**.
2. Sterol-inhibiting (SI's) are systemic fungicides that are absorbed into the plant and kill fungi before symptoms appear. They have a curative effect and can effectively be applied up to three days after infection. SI's include **Nova, Rubigan, and Bayleton**.
3. Strobilurins are very effective protectants and they also have some systemic properties, which provide some level of "after-infection" activity. They are broad-spectrum fungicides and are effective against most grape diseases. Examples of Strobys are **Abound and Sovran**.

The problem with SI's and Strobys is the high risk of fungicide resistance development. Therefore, it is recommended that these products be alternated and mixed with protectant fungicides to reduce the probability.

EXAMPLE SPRAY PROGRAM for SMALL VINEYARDS

Approx. Time	Chemical	Pest Treated	Ref. Am't per acre	Amount* per gallon	Days to re-enter	Min days to harvest	Date Applied	Gals used
Late March	After pruning, while vines are Dormant							
	Lime Sulfur 29%	PM, Ph	12 gal	2 cups	2	0		
April	Bud swell							
	Sevin 80W**	if needed for GFB	2.5 lbs	1.5 Tbs	0.5	7		
	or Imidan 70W**	if needed for CC	2 lb	1.25 Tbs	1	14		
Early May	Starting when shoots are 1/2 inches long							
1	Dithane DF 75 W + Rubigan	BR, DM, Ph PM	4 lbs 6 fld oz	2 Tbs 1/3 tsp	1 1	66 30		
2	Nova 40W + Captan 50W	An, BR PM BR, DM, Ph	5 oz 4 lbs	3/4 tsp 1.5Tbs	1 4	14 1		
3	Dithane DF 75 W + Rubigan	BR, DM, Ph PM	4 lbs 6 fld oz	2 Tbs 1/3 tsp	1 1	66 30		
	Bloom							
4	Sovran +Rovral	BR, DM, Ph, PM Bo	5.6 oz 2 lbs	1/2 tsp 2 Tbs	0.5 0.5	14 7		
June	Post-Bloom							
5	Dithane DF 75 W + Rubigan	BR, DM, Ph PM	4 lbs 6 fld oz	2 Tbs 1/3 tsp	1 1	66 30		
6	Nova 40W + Captan 50W + Sevin 80W**	An, BR PM BR, DM, Ph if needed for GBM	5 oz 4 lbs 2.5 lbs	3/4 tsp 1.5Tbs 1.5 Tbs	1 4 0.5	14 1 7		
7	Sovran + Imidan 70W**	BR, DM, Ph, PM if needed for GBM	5.6 oz 2 lbs	1/2 tsp 1.25 Tbs	0.5 0.5	14 14		
July	8	Nova 40W + Captan 50W + Sevin 80W**	An, BR PM BR, DM, Ph if needed for GBM	5 oz 4 lbs 2.5 lbs	3/4 tsp 1.5Tbs 1.5 Tbs	1 1 0.5	14 1 7	
	9	Sovran + Rovral + Imidan 70W** or Sevin 80W**	BR, DM, Ph, PM Bo if needed for GBM if needed for GBM	5.6 oz 2 lbs 2 lb 2.5 lbs	1/2 tsp 2 Tbs 1.25 Tbs 1.5 Tbs	0.5 0.5 1 0.5	14 7 14 7	
August	Veraison							
	10	Captan 50W + Rovral + Sevin 80W**	BR, DM, Ph Bo if needed for GBM,JB	4 lbs 2 lbs 2.5 lbs	1.5Tbs 2 Tbs 1.5 Tbs	4 0.5 0.5	1 7 7	
September	Harvest							

11	Sulfur***	as needed for PM	5 lbs	2 Tbs	0	N/A
12	or Nova 40W	as needed for PM	5 oz	3/4 tsp	1	N/A

* Amounts calculated using, Ref Am't per acre, and an application rate of 100 gal per acre

**Use insecticides only if insect are observed or known to be a problem

*** Don't use on sulfur sensitive varieties, such as Norton, Concord, Foch, Chancellor, and Rougeon

Anthracoise (An), Black Rot (BR), Botrytis (Bo), Downy Mildew (DM), Phomopsis (Ph), Powdery Mildew (PM)

Climbing Cutworms (CC), Grape Berry Moth (GBM), Grape Flea Beetle (GFB), Japanese Beetle (JB)