

SMALL FRUIT DISEASES (Commercial)

Aaron Cato

Growth Stage	Disease	Product	Active Ingredient	FRAC Code	Rate/Acre	Re-entry Interval	Days to Harvest	Comments
GRAPES								
Dormant	Anthracnose Black rot Eutypa Phomopsis	Nu-Cop 50 DF	cupric hydroxide	M1	2 lb	24 hours	Dormant	Begin applications late dormancy before bud break.
		Liquid lime-sulfur (hard to find)	calcium polysulfides	M2	Rate depends on product name. See label.	48 hours	Dormant only	Apply in late winter before buds swell.
	Powdery mildew	Sulfurix	calcium polysulfides	M2	1 - 2 gallon per acre in sufficient water	48 hours	Dormant	Early sprays are critical for control of black rot if the disease has been a historical problem.
	Phytophthora root rot	Ridomil Gold SL	mefenoxam	4	3.6 pt or 0.25 pt/1,000 row ft	48 hours	60	Apply in spring before plants begin to grow. Two more applications may be made when conditions are favorable for disease.
Bud Break to Bloom	Angular leaf scorch Black rot Downy mildew Phomopsis	Abound FL	azoxystrobin	11	10 - 15.4 fl oz	4 hours	14	Early sprays are critical for control of black rot if the disease has been a historical problem.
		Quadris Top	azoxystrobin + difenoconazole	11 + 3	12 - 14 oz	12 hours	14	
		Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.
		Captan 50 WP	captan	M4	2 - 4 lb	48 hours	0	
		Sovran 50 WG	kresoxim-methyl	11	3.2 - 6.4 oz	12 hours	14	
		Manzate Pro-Stick	mancozeb	M3	1.5 - 4 lb	24 hours	66	
		(continued)	Revus	mandipropamid	40	8 fl oz	4 hours	14

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GRAPES (cont.)								
Bud Break to Bloom (cont.)		Revus Top	mandipropamid + difenoconazole	40 + 3	7 fl oz	12 hours	14	
	Black rot Downy mildew Bunch rot Powdery mildew Phomopsis	Topguard EQ	azoxystrobin + flutriafol	11 + 3	5 - 6 fl oz	12 hours (5 days for cane tying, turning or girdling)	14	For powdery mildew, begin applications at 6- to 10-inch shoots.
	Alternaria Rot Angular Leaf Spot Anthracnose Black Rot Bunch Rot Powdery Mildew Septoria Leaf Spot	Inspire Super	difenoconazole + cyprodinil	3 + 9	16 - 20 fl oz	12 hours	14	PRECAUTION: On V. labrusca, V. labrusca hybrids and other non-vinifera hybrids such as Concord and Thomcord where sensitivity is not known, the use of Inspire Super by itself or in tank mixtures with materials that may increase uptake (adjuvants, foliar fertilizers) may result in leaf burning or other phytotoxic effects.
	Black Rot Powdery Mildew	Rhyme	flutriafol	3	4-5 fl oz	12 hours	14	Begin application at 10-inch shoots. Repeat 14-21 day intervals.
	Phytophthora root rot Pythium Fusarium Rhizoctonia Powdery mildew Downy mildew	Fosphite	mono- and di-potassium salts of phosphorous acid	33	1 - 3 qt/100 gallon	4 hours	0	Foliar, aerial, root dip, or irrigation or trunk injection. See label for rates and complete instructions.
	Bunch rot Dead arm Downy mildew	Flint 50 WG	trifloxystrobin	11	1.5 - 4 oz	12 hours	14	DO NOT APPLY FLINT OR ADAMENT TO CONCORD OR RELATED VARIETIES AS INJURY MAY RESULT.
		Ziram Granuflo	ziram	M3	3 - 4 lb	48 hours	21	
		Aliette WDG	aluminum tris	33	3 - 5 lb	12 hours	15	
		Reason 500 SC	fenamidone	11	2.7 fl oz	12 hours	30	
		Gavel 75 DF	mancozeb + zoxamide	M3 22	2 - 2.5 lb	48 hours	66	Apply Gavel in sufficient water to provide thorough coverage starting when new shoots are 1/2 to 1 1/2 inches long. Repeat when shoots are 3 to 5 inches long, when shoots are 8 to 10 inches long, and then at 7 - 10 day intervals.

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GRAPES (cont.)								
Bud Break to Bloom <i>(cont.)</i>	Bunch rot Dead arm Downy mildew <i>(cont.)</i>	Topsin M WSB	thiophanate-methyl	1	0.75 - 1.5 lb	48 hours	7	
		Presidio	fluopicolide	43	3 - 4 fl oz	12 hours	21	
	Powdery mildew	Abound FL	azoxystrobin	11	10 - 15.4 fl oz	4 hours	14	
		Quadris Top	azoxystrobin + difenoconazole	11 + 3	12 - 14 oz	12 hours	14	Apply at bud break and at 10 - 21 day intervals for powdery mildew. Do not make more than 2 sequential applications before changing to a fungicide with a different mode of action.
		Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.
		Inspire Super	difenoconazole + cyprodinil	3 + 9	16 - 20 fl oz	12 hours	14	For powdery mildew, begin Inspire Super at bud break and apply on a 10 - 21 day interval.
		Sovran 50 WG	kresoxim-methyl	11	3.2 - 4.8 oz	12 hours	14	Apply prior to disease on a 14 day interval. Rotate with other chemistry.
		Quintec	quinoxifen	13	4 oz	12 hours	21	Apply when conditions are favorable for disease but before disease develops. Apply on a 14 day interval. (Do not apply to Concord grapes as injury may result.)
		AmTide	tebuconazole	3	3 - 4 fl oz	12 hours	14	

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GRAPES (cont.)								
Bud Break to Bloom (cont.)	Powdery mildew (cont.)	Flint	trifloxystrobin	11	1.5 - 4 oz	12 hours	14	DO NOT APPLY FLINT OR ADAMENT TO CONCORD OR RELATED VARIETIES AS INJURY MAY RESULT.
		Procure 480 SC	triflumizole	3	4 - 8 fl oz	12 hours	7	
Bloom	Same as Bud Break							
	Botrytis bunch rot*	Quadris Top	azoxystrobin + difenoconazole	11 + 3	12 - 14 oz	12 hours	14	Suppression only.
		Topguard EQ	azoxystrobin + flutriafol	11 + 3	8 fl oz	12 hours (5 days for cane tying, turning or girdling)	14	Do not apply more than 6 times a season.
		Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.
		Vanguard 75 WG	cyprodinil	9	10 oz	12 hours	7	Begin Vanguard at early bloom. Continue through berry touch, veraison and pre-harvest on a 7 day interval.
		Botran 75 W	dicloran	14	2 lb	14 days	14	Cane turning and girdling are prohibited for 30 days after using Botran 75 W.
		Inspire Super	difenoconazole + cyprodinil	3 + 9	16 - 20 fl oz	12 hours	14	PRECAUTION: On V. labrusca, V. labrusca hybrids and other non-viniferea hybrids such as Concord and Thomcord where sensitivity is not known, the use of Inspire Super by itself or in tank mixtures with materials that may increase uptake (adjuvants, foliar fertilizers) may result in leaf burning or other phytotoxic effects.
		Elevate 50 WG	fenhexamid	17	1 lb	12 hours	0	Do not make more than 2 consecutive applications.

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GRAPES (cont.)									
Bloom <i>(cont.)</i>	Botrytis bunch rot* <i>(cont.)</i>	Rovral 4 FL	iprodione	2	1 - 2 pt	24 hours	7	Begin at early bloom. Continue through berry touch, veraison and pre-harvest.	
		Scala	pyrimethanil	9	18 fl oz	12 hours	7		
Shatter	Black rot Downy mildew Powdery mildew	Abound FL	azoxystrobin	11	10 - 15.4 fl oz	4 hours	14	Apply Abound prior to disease on a 7 - 14 day interval. No more than 2 sequential applications before alternating with a fungicide with a different FRAC code.	
		Aprovia	azoxystrobin + difenoconazole	11 3	8.6 - 10.5 fl oz	12 hours	21		For Phomopsis diseases, apply at bud break, before shoots are 0.5 inches in length, and then again when shoots are 5 - 6 inches in length.
		Quadris Top	azoxystrobin + difenoconazole	11 + 3	12 - 14 oz	12 hours	14		
	Angular leaf spot Anthracnose Black rot Leaf blight Phomopsis Powdery mildew Rotbrenner Septoria	Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.	
		Captan 50 WP	captan	M4	2 - 4 lb	72 hours	0		
		Sovran 50 WG	kresoxim-methyl	11	3.2 - 5.6 oz	12 hours	14		
		Dithane DF Rainshield	mancozeb	M3	1.5 - 2.5 lb	24 hours	66		
		Revus	mandipropamid	40	7 oz	4 hours	14		
		Revus Top	mandipropamid + difenoconazole	40		12 hours	14		
	Scala	pyrimethanil	9	18 fl oz	12 hours	7			

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GRAPES (cont.)								
Shatter (cont.)	Angular leaf spot	Flint 50 WG	trifloxystrobin	11	1.5 - 4 oz	12 hours	14	
	Anthraco nose	Procure 480 SC	triflumizole	3	4 - 8 fl oz	12 hours	14	
	Black rot							
	Leaf blight	Ziram Granuflo	ziram	M3	3 - 4 lb	48 hours	21	
	Phomopsis							
Powdery mildew								
Rotbrenner								
Septoria (cont.)								
	Black rot	Topguard EQ	azoxystrobin + flutriafol	11	5 - 6 fl oz	12 hours (5 days for cane tying, turning or girdling)	14	
	Downy mildew							
	Bunch rot							
	Powdery mildew							
	Phomopsis							
	Alternaria rot	Inspire Super	difenoconazole + cyprodinil	3 + 9	16 - 20 fl oz	12 hours	14	PRECAUTION: On V. labrusca, V. labrusca hybrids and other non-vinifera hybrids such as Concord and Thomcord where sensitivity is not known, the use of Inspire Super by itself or in tank mixtures with materials that may increase uptake (adjuvants, foliar fertilizers) may result in leaf burning or other phytotoxic effects.
	Angular leaf spot							
	Anthraco nose							
	Black rot							
	Bunch rot							
	Powdery mildew							
	Septoria leaf spot							
	Phytophthora root rot	Fosphite	mono- and di-potassium salts of phosphorous acid	33	1 - 3 qt/ 100 gallon	4 hours	0	Foliar, or aerial, or root dip, or irrigation or trunk injection. See label for rates and complete instructions.
	Pythium							
	Fusarium							
	Rhizoctonia							
	Powdery mildew							
	Downy mildew							
First Cover to Veraison	Black rot Downy mildew Powdery mildew	Same as Shatter						
Veraison to Harvest	Botrytis bunch rot*	See Bloom Section						
	Powdery mildew	Abound FL	azoxystrobin	11	10 - 15.4 fl oz	4 hours	14	
		Topguard EQ	azoxystrobin + flutriafol	11 + 3	5 - 8 fl oz	12 hours (5 days for cane tying, turning or girdling)	14	Do not apply more than 6 times per season.

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SMALL FRUIT DISEASES (Commercial) – continued

Growth Stage	Disease	Product	Active Ingredient	FRAC Code	Rate/Acre	Re-entry Interval	Days to Harvest	Comments
GRAPES (cont.)								
Veraison to Harvest (cont.)	Powdery mildew (cont.)	Quadris Top	azoxystrobin + difenoconazole	11 + 3	12 - 14 oz	12 hours	14	
		Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.
		Sovran 50 WG	kresoxim-methyl	11	3.2 - 4.8 oz	12 hours	14	
		Quintec	quinoxifen	13	4 oz	12 hours	21	Apply when conditions are favorable for disease but before disease develops. Apply on a 14 day interval. (Do not apply to Concord grapes as injury may result.)
		AmTide	tebuconazole	3	3 - 4 fl oz	12 hours	14	
	Flint 50 WG	trifloxystrobin	11	1.5 - 4 oz	12 hours	14		
	Procure 480 SC	triflumizole	3	4 - 8 fl oz	12 hours	7		
	Downy mildew	Abound	azoxystrobin	11	11 - 15.4 fl oz	4 hours	14	
		Pristine	boscalid + pyraclostrobin	7 + 11	8 - 12.5 oz	12 hours (5 days for cane tying, turning or girdling)	14	DO NOT APPLY PRISTINE TO CONCORD, WORDEN, FREDONIA AND RELATED VARIETIES AS LEAF INJURY MAY RESULT – SEE LABEL.
		Captan 50 WP	captan	M4	2 - 4 lb	48 hours	0	
Topguard EQ		azoxystrobin + flutriafol	11 + 3	5 - 6 fl oz	12 hours (5 days for cane tying, turning or girdling)	14		

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SMALL FRUIT DISEASES (Commercial) – continued

Growth Stage	Disease	Product	Active Ingredient	FRAC Code	Rate/Acre	Re-entry Interval	Days to Harvest	Comments
GRAPES (cont.)								
Veraison to Harvest (cont.)	Downy mildew (cont.)	Alude	mono- and di-potassium salts of phosphorous acid	33	2.5 - 5 pt/A	4 hours	0	Due to varietal sensitivity, test for sensitivity prior to use.
		Adament 50 WG	tebuconazole + trifloxystrobin	3 + 11	3 - 7.2 oz	12 hours	14	DO NOT APPLY ADAMENT TO CONCORD OR RELATED VARIETIES AS INJURY MAY RESULT.
	Alternaria rot Angular leaf spot Anthracnose Black rot Bunch rot Powdery mildew Septoria leaf spot	Inspire Super	difenoconazole + cyprodinil	3 + 9	16 - 20 fl oz	12 hours	14	PRECAUTION: On <i>V. labrusca</i> , <i>V. labrusca</i> hybrids and other non-vinifera hybrids such as Concord and Thomcord where sensitivity is not known, the use of Inspire Super by itself or in tank mixtures with materials that may increase uptake (adjuvants, foliar fertilizers) may result in leaf burning or other phytotoxic effects.
	Phytophthora root rot Pythium Fusarium Rhizoctonia Powdery mildew Downy mildew	Fosphite	mono- and di-potassium salts of phosphorous acid	33	1 - 3 qt/ 100 gallon	4 hours	0	Foliar, or aerial, or root dip, or irrigation or trunk injection. See label for rates and complete instructions.