


Fungicide Groups for Apple Scab (Scab) & Powdery Mildew (PM) in Nova Scotia

	Fungicide Group # / Name Abbreviation											
	M1	M2	M3	M4	1	3	7	9	11	U12	29	44
	inorganic	inorganic	EBDC	phthalimide	MBC	DMI	SDHI	AP	QoI	guanidine	fluazinam	Bacillus subtilis
Sulphur	✓											
Copper		✓										
Dithane			✓									
Ferbam			✓									
Manzate			✓									
Penncozeb			✓									
Polyram			✓									
Maestro				✓								
Supra Captan				✓								
Senator					✓							
Fullback						✓						
Nova						✓						
Inspire Super*						✓		✓				
Aprovia Top*						✓						
Aprovia							✓					
Fontelis							✓					
Sercadis							✓					
Luna Tranquility*							✓	✓				
Pristine*							✓		✓			
Scala								✓				
Vangard								✓				
Flint									✓			
Sovran									✓			
Equal										✓		
Syllit										✓		
Allegro											✓	
Serenade OPTI												✓

*Note: Products contain two fungicide groups. Colours blended on the same row to indicate groups.

Resistance Risk in NS	Low	Low	Low	Low	High	High	High	Med	High	High	Low	Low
Resistance in Scab?	None	None	None	None	Past	Yes	None	?	Yes	Past	None	None
Resistance in PM?	None	✗	✗	✗	?	None	None	✗	Yes	✗	✗	None

Management Notes

- Group M fungicides** have a multi-site mode of action and a low potential for resistance development. Fungicides from Group M can be used season-long without rotating to another fungicide group. The limitations of Group M are non-systemic movement, more limited post-infection activity, and no protection for powdery mildew with the exception of sulphur.
- Group 1, 3, 7, 9, 11, and U12 fungicides** all have a single-site mode of action which means resistance potential is medium to high for these fungicides. These groups should be rotated with fungicides from other groups according to the product label. Be aware of premixes with two fungicide groups for Inspire Super, Aprovia Top, Luna Tranquility, and Pristine. Consider tank mixing Group 1, 3, 7, 8, 9, 11, and U12 fungicides with a Group M fungicide, especially when using a product where resistance has been confirmed in Nova Scotia. Fungicide resistance in apple scab has recently been confirmed in Group 3 (myclobutanil) and 11 (trifloxystrobin) fungicides in Nova Scotia. In the past, fungicide resistance to Group 1 (benomyl) and U12 (dodine) fungicides has occurred in apple scab in Nova Scotia. Some fungicide resistance in powdery mildew has recently been confirmed in Group 11 (trifloxystrobin, kresoxim-methyl) fungicides in Nova Scotia. Groups 29 and 44 are relatively new and have not been used widely enough to suspect resistance development. For more information on fungicide resistance, see the Perennia publication *Managing Apple Scab Resistance in Nova Scotia Orchards*.

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Adapted from OMAFRA: 'Making Sense of Fungicide Groups' (Kristy Grigg-McGuffin)