

Table 13 – Characteristics of Apple Scab Fungicides*

Fungicide and Rate/100 Gallons Dilute	Protection	Retention	Re-distribution	Hours Post-Infection Activity	Pre-symptom	Post-symptom
Captan 50WP, 2 lbs.	VG	VG	G	18–24	none	none
Dithane M45, DF; 1.5 lbs.	VG	VG	G	18–24	none	none
Ferbam 76WP, 2 lbs.	G	G	G	none	none	none
Flint 50WG, 0.67 oz.	VG	E	G	72–96 ²	E	---
Maneb 75DF, 1.5 lbs.	VG	VG	G	18–24	none	none
Manzate, Penncozeb 80W, 75DF; 1.5 lbs.	VG	VG	G	18–24	none	none
Nova 40W, 2 ozs.	F	VG	P	72–96	E	F-G
Polyram 80DF, 1.5 lbs.	VG	VG	G	18–24	none	none
Procure 50WS, 4 ozs.	F	VG	P	72–96	E	F-G
Rubigan 1EC, 4 fl. ozs.	F	VG	P	72–96	E	F-G
Sovran 50WG, 1.33 ozs.	VG	E	G	72–96 ²	E	---
Sulfur, 5 lbs. actual	F	F-G	F-G	none	none	none
Syllit 65WP ¹ , 1/2 lb.	VG	VG	G	18–24	E	VG
Thiram 65WP, 2 lbs.	F-G	F-G	F	15–20	none	none
Topsin M 70WP ¹ , 6 ozs.	G	G	P-F	18–24	E	VG
Vangard 75WG, 1.25 ozs.	---	---	G	48	none	none
Ziram 76WDG, 1.5 lbs.	F-G	P-F	F-G	---	none	none

Key: P = poor, F = fair, G = good, VG = very good, E = excellent, --- = Unknown or does not apply

1 – Not effective against resistant strains of the fungus.

2 - Post-infection activity may be reduced in orchards with resistance to sterol inhibitor fungicides.

Protection: Ability of a fungicide to kill or inactivate scab spores and prevent infection when the fungicide residue is present before an infection period occurs.

Retention: Ability to resist excessive wash-off by rain so that residue provides satisfactory scab protection.

Redistribution: Ability of a fungicide, which has been sprayed on leaves and fruit, to be washed by rains to unsprayed parts or to new growth developed after the spray was applied, thus providing protection against scab.

Post-Infection Activity (also called “Kickback”): Ability of a fungicide to kill or stop fungal growth and to prevent the establishment of scab lesions when applied within a given number of hours from the **beginning** of a scab infection period. The number of hours of post-infection activity given are accurate at average temperatures of 60°F and 50°F, respectively. At a lower average temperature, the period of post-infection activity for a fungicide may be longer than given in the table.

Pre-Symptom Activity: When applied beyond the time limit for Post-Infection activity, a fungicide with Pre-symptom activity will allow small yellowish-green scab lesions to develop, but will inhibit the production of secondary spores from those lesions. This will reduce the spread of secondary scab.

Post-Symptom Activity: Ability of a fungicide to prevent or inhibit the further production of secondary scab spores when applied to sporulating (active) lesions. Such applications do not kill the scab fungus, but merely suppress its development. The applications must be repeated to maintain this suppression. As with pre-symptom activity, reducing the number of secondary scab spores reduces the spread of secondary scab.

* **Adapted from:** 2002 *Pest Management Guidelines for Commercial Tree-Fruit Production*. A.M. Agnello, A.J. Landis, W.W. Turchek, D.A. Rosenberger, T.L. Robinson, J.R. Schupp, L. Cheng, P.D. Curtis, D. Breth, and S.A. Hoying. Cornell Cooperative Extension.