

STRAWBERRY - FUNGICIDE EFFICACY - BIOCONTROLS AND NATURAL PRODUCTS

Fungicide	Active ingredient	Resistance risk (FRAC) ¹	Gray mold	Powdery mildew	Anthr. acnose	Common leaf spot	Rhizopus/ Mucor rot	Phytophthora diseases	Angular leaf spot
Actinovate	<i>Streptomyces lydicus</i> WYEC 108	unknown (BM2)	0	2	NL	NL	NL	0	1
All Phase	potassium sorbate; sodium lauryl sulfate	unknown (NC)	ND	4	ND	ND	NL	NL	ND
Aviv, etc. ²	<i>Bacillus subtilis</i> IAB/BS03	unknown (NC)	0	ND	ND	ND	NL	ND	NL
Botector	<i>Aureobasidium pullulans</i> DSM 14940; DSM 14941	unknown (NC)	0	NL	ND	NL	NL	NL	NL
Cinnerate	cinnamon oil	unknown (NC)	0	ND	NL	NL	NL	NL	NL
Copper containing fungicides ²	copper	low (M01)	0	0	0	0	0	0	4
Double Nickel	<i>Bacillus amylo-liquefaciens</i> D747	unknown (BM2)	0	2	0	NL	NL	0	1
Howler	<i>Pseudomonas chlororaphis</i> AFS009	unknown (BM2)	0	NL (2)	NL	ND	NL	ND	0
Kaligreen, MilStop, etc. ²	potassium bicarbonate	unknown (NC)	NL	3	NL	NL	NL	NL	NL
Microthiol Disperss, etc. ²	sulfur	low (M2)	NL	4	NL	NL	NL	NL	NL
M-Pede, etc. ²	potassium salts of fatty acids	medium (28)	NL	2	NL	NL	NL	NL	NL
Oso, etc. ²	polyoxin D zinc salt	medium (19)	3	4	3	ND	NL	NL	NL
Oxidate, Perasan, etc. ²	hydrogen peroxide; peroxyacetic acid	unknown (NC)	0	0	NL	ND	NL	NL	2
ProBlad Verde, etc. ²	Banda de <i>Lupinus albus</i> doce	unknown (NC)	0	3	ND	ND	ND	NL	NL
Procidic, etc. ²	citric acid	unknown (NC)	0	NL	NL	NL	NL	0	NL
Rango	cold pressed neem oil	unknown (NC)	2	ND	ND	0	NL	0	NL
Regalia	<i>Reynoutria sachalinensis</i> extract	unknown (P5)	0	2	ND	NL	ND	ND	NL
Serenade ASO, etc. ²	<i>Bacillus subtilis</i> QST 713	unknown (NC)	0	3	0	NL	NL	NL	NL
Sonata	<i>Bacillus pumilis</i> QST 2808	low (BM02)	NL	3	0	NL	NL	NL	NL
Stargus	<i>Bacillus amylo-liquefaciens</i> F727	unknown (BM2)	0	ND	ND	NL	NL	NL	NL
Serifel	<i>Bacillus amylo-liquefaciens</i> MBI 600	low (BM02)	0	2	0	ND	NL	0	2
Taegro	<i>Bacillus amylo-liquefaciens</i> FZB24	low (BM02)	0	2	0	NL	NL	ND	NL (2)
Theia	<i>Bacillus subtilis</i> AFS032321	low (BM02)	0	2	0	NL	NL	0	NL
Timorex Act	tea tree oil	unknown (BM1)	0	3	ND	NL	0	ND	ND
VEG'LYS, etc. ²	garlic oil	unknown (NC)	0	NL	0	0	NL	0	ND

Rating: 5 = excellent and consistent, 4 = good and reliable, 3 = moderate and variable, 2 = limited and/or erratic, 1 = minimal and often ineffective, 0 = ineffective, NL = not on label, ND = no data.

¹ Group numbers are assigned by the Fungicide Resistance Action Committee (FRAC) according to different modes of actions (for more information, see <http://www.frac.info/>).

² When there are many generic products, "etc." indicates that other products may be available that have the same active ingredient.

³ Efficacy rating determined with fungicide susceptible populations of pathogen.

⁴ Ratings are a representation of fungicide performance over several years as determined through replicated fungicide performance experiments.

