STRAWBERRY (*Fragaria* x *ananassa* 'Wendy')
Powdery mildew; *Podosphaera aphanis*
Botrytis gray mold; *Botrytis cinerea*

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Evaluation of fungicides for control of powdery mildew and botrytis fruit rot in matted-row strawberry, 2024.

The experiment was conducted in a commercial, matted-row strawberry planting in Camden, MI. Rows were spaced 42 in. apart. Treatments were applied to 10-ft sections of row and were replicated four times in a randomized complete block design. Sprays were applied with a RYOBI ONE+ 18v Cordless Battery 4 Gallon Backpack Chemical Sprayer with the adjustable nozzle. Spray volume was 50 gpa. Spray dates and corresponding phenological stages were as follows: 15 May (green up), 22 May (green up/bloom), 29 May (bloom), 5 June (bloom/green fruit), and 12 June (red fruit). The field was overhead irrigated during dry periods. Field ratings for powdery mildew and botrytis gray mold were taken on 19 June. Powdery mildew was visually assessed on 25 randomly selected leaves from each plot and botrytis gray mold was assessed on 25 fruit per plot. Incidence for botrytis and powdery mildew was calculated as percentage of leaves or berries with disease. Powdery mildew severity was calculated as the average percentage of symptomatic leaf surface on diseased samples. Botrytis gray mold severity on the fruit was rated on a 0-3 scale: 0 = no disease, 1 = 1-25% disease, 2 = 30-40% disease, and 3 = greater than 50% disease. Overall severity of powdery mildew was calculated as (incidence x severity)/100. Bracketed values denote percent control relative to the untreated check. All plots were monitored for phytotoxicity throughout the study, and none was observed.

		Powdery mildew on the leaf, rated 19 June			
Treatment, rate/A	Application timing[z]	Incidence (%)	Severity (% Average)[x]	Overall Severity (%)[x]	Control [%][y]
Untreated		84.0 a	60.8 a	51.1 a	
Microthiol Disperss 10lbs	1, 2, 3, 4, 5	47.0 b	6.0 b	2.82 b	[94]
Quintec 6floz	1, 2, 3, 4, 5	18.0 c	2.0 c	0.36 bc	[99]
Gatten 8floz	1, 2, 3, 4, 5	10.0 d	1.4 c	0.14 bc	[99]
Pristine 23oz	1, 2, 3, 4, 5	9.0 d	1.0 c	0.12 bc	[99]
Vivando 15.4floz	1, 2, 3, 4, 5	6.0 de	0.6 c	0.07 c	[99]
Torino 3.4oz	1, 2, 3, 4, 5	0.0 e	0.0 c	0.0 c	[100]
Rally 40WSP 5oz	1, 2, 3, 4, 5	0.0 e	0.0 c	0.0 c	[100]

[z]Spray dates: 1 = 15 May (green up), 2 = 22 May (green up/bloom), 3 = 29 May (bloom), 4 = 5 June (bloom/green fruit), 5 = 12 June (red fruit).

[y]Bracketed values denote percent control of overall disease severity relative to the untreated check.

[x] Data did not pass Bartlett's test for homogeneity of variance; some assumptions of the ANOVA may have been violated.

Treatment, rate/A	Application Timing[z]	Incidence of botrytis gray mold on the fruit, rated 19 June	
		Incidence (%)[x]	Control (%)[y]
Untreated		86.0 a	
Microthiol Disperss 10lbs	1, 2, 3, 4, 5	49.0 b	[43]
Quintec 6floz	1, 2, 3, 4, 5	26.0 c	[70]
Gatten 8floz	1, 2, 3, 4, 5	19.0 d	[78]
Pristine 23oz	1, 2, 3, 4, 5	14.0 d	[84]
Vivando 15.4floz	1, 2, 3, 4, 5	5.0 e	[94]
Torino 3.4oz	1, 2, 3, 4, 5	0.0 e	[100]
Rally 40WSP 5oz	1, 2, 3, 4, 5	0.0 e	[100]

[z]Spray dates: 1 = 15 May (green up), 2 = 22 May (green up/bloom), 3 = 29 May (bloom), 4 = 5 June (bloom/green fruit), 5 = 12 June (red fruit).

[y]Bracketed values denote percent control of incidence relative to the untreated check.

[x] Data did not pass Bartlett's test for homogeneity of variance; some assumptions of the ANOVA may have been violated.

Treatment, rate/A	Application Timing[z]	Severity of botrytis gray mold on the fruit, rated 19 June[y]			
		# of '0' Ratings[x]	# of '1' Ratings[x]	# of '2' Ratings[x]	# of '3' Ratings
Untreated		4 e	2 c	9 a	10 a
Microthiol Disperss 10lbs	1, 2, 3, 4, 5	13 d	5 a	7 b	0 b
Quintec 6floz	1, 2, 3, 4, 5	19 c	5 a	1 c	0 b
Gatten 8floz	1, 2, 3, 4, 5	20 b	4 b	1 c	0 b
Pristine 23oz	1, 2, 3, 4, 5	21 b	4 b	0 c	0 b
Vivando 15.4floz	1, 2, 3, 4, 5	24 a	1 d	0 c	0 b
Torino 3.4oz	1, 2, 3, 4, 5	25 a	0 e	0 c	0 b
Rally 40WSP 5oz	1, 2, 3, 4, 5	25 a	0 e	0 c	0 b

[z]Spray dates: 1 = 15 May (green up), 2 = 22 May (green up/bloom), 3 = 29 May (bloom), 4 = 5 June (bloom/green fruit), 5 = 12 June (red fruit).

[y] Severity based on total number of leaves out of 25 in each rating category. 0= 0%, 1=1-25%, 2=30-40%, 3=>50% disease.

[x] Data did not pass Bartlett's test for homogeneity of variance; some assumptions of the ANOVA may have been violated.