SNAP BEAN (*Phaseolus vulgaris* 'Delmonte 04-88')
White Mold; *Sclerotinia sclerotiorum*

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Evaluation of fungicides to control white mold in snap beans, Plover, WI, 2017.

A trial to evaluate the efficacy of fungicides to control white mold on snap bean was established on 25 Jun with cultivar DM88-04 (Del Monte) seeded at approximately 10 per foot. Plots were 25 ft long with 2 rows spaced 22 in apart. Seed was commercially treated with thiram for damping off and root rot protection. There were 4 replications and plots were arranged in a randomized complete block design. Sunflowers were planted between every six rows of beans in the trial area. Naturally occurring inocula was the only source for disease development. Fungicide applications for control of white mold were applied twice (depending upon fungicide treatment) at 10% bloom (18 Aug) and 7 days later (25 Aug). Fungicides were applied using a backpack CO2 sprayer with a 4 nozzle spray boom with 19 in. spacing between standard flat fan spray nozzles (Tee Jet 8002VS) at a rate of 35 gallons per acre at 40 psi. On the day of harvest, 12 Sep, both rows of each plot were evaluated for white mold with the total number of symptomatic plants for each plot recorded. Five feet of a single, treated row was hand-harvested and weighed.

Weather conditions during bloom were moderately conducive to infection of flowers and subsequent disease spread. Natural precipitation provided 1.74 in of rainfall. Supplementary overhead irrigation was provided to maintain crop health and promote disease. Thus, the occurrence of infections was low in the flowers/pods with most disease incidence coming from infection through ground contact. There were no significant differences in yield across all treatments. Fungicide treatments that included either Topsin M, an early spray of Endura, or Proline, Quadris, and Priaxor significantly reduced the number of infected plants compared to the non-treated control. No phytotoxicity was noted for any of the treatments included in this trial.

Treatment and rate/acre	Application Timing[z]	Yield (ton/A)	# of Infected Plants/Plot	
Non-treated Control	NA	14.4	27.8	de[y]
Topsin M 70WSB 1.0 lb	1	13.7	12.3	ab
Topsin M 70WSB 1.0 lb	2	14.5	14.8	a-c
Topsin M 70WSB 1.0 lb	1,2	14.1	13.5	a-c
Endura 70WDG 8.0 oz + 0.1%v/v NIS	1	13.8	15.0	a-c
Endura 70WDG 8.0 oz + 0.1%v/v NIS	2	14.0	21.3	b-e
Endura 70WDG 8.0 oz + 0.1%v/v NIS	1,2	14.1	16.5	a-d
Proline 480SC 5.7 fl oz	1,2	14.3	8.0	a
Quadris 2.08SC 9.0 fl oz	1,2	15.3	8.5	a
Priaxor 4.17SC 10.3 fl oz	1,2	17.1	5.8	a
MBI-110 AF5 32 oz	1,2	14.0	29.0	e
MBI-110 AF5 64 oz	1,2	15.1	20.8	b-e
MBI-10612 32 oz	1,2	15.2	17.0	a-d
MBI-110 AF5 64 oz	1			
MB-110 AF5 32 oz	2	15.6	23.8	cde

[z] Foliar applications were applied at either the 10% bloom stage on 18 Aug (1) and/or 7 days later on 25 Aug (2).
[y]Column numbers followed by the same letter are not significantly different at P=0.05 as determined by Fisher's Least Significant Difference (LSD) test.