

**Fungicide evaluation for the control of downy mildew of baby lima beans, 2001.**

The trial was conducted at the University of Delaware Research and Education Center near Georgetown, DE. The baby lima bean cultivar ‘Packer’ was planted on 11 July and 10 gal/A of a 30% UAN solution was applied during planting. The soil type was Falsington loamy sand. Plots were arranged in a randomized complete block design with four replications. Each plot consisted of five rows, 20 ft long and spaced 30 in. apart. The three middle rows of each plot were sprayed and the border rows prevented spray drift. The center row of each plot was evaluated for percentage of infected pods and plants for the middle 10 ft of the row. Additionally 150 lb/A of 0-0-60 and 34-0-0 fertilizers were applied broadcast and incorporated prior to planting. At planting, Ridomil PC GR was applied in a 7-inch band over the row for two of the treatments. On 6 Sep the plots were inoculated with a sporangial suspension of *Phytophthora phaseoli* race E in the afternoon, using a backpack sprayer. After inoculation, plants were misted nightly with a low pressure PVC misting system equipped with low volume misting nozzles. The system was operated continuously from dusk to dawn to increase humidity and favor infection. One inch of irrigation per week was applied if rainfall was inadequate. Ridomil PC GR 0.75lb/A was applied at planting in a 7- inch band over the row and lightly incorporated. On 5, 12, 19, and 26 Sep, fungicides were applied with a backpack, CO<sub>2</sub> pressurized sprayer in 30 gal water/A at 50 psi. Applications were made four inches above the plant canopy with a broadcast boom equipped with 4 hollow cone nozzles (D4 disks, #45 cores). The plots were sprayed with Asana at 9 oz/A on 13 Sep for corn earworm control. On 3 Oct, the center ten feet of each middle row was evaluated for the percentage of plants infected. On 3-4 Oct, this section was harvested and evaluated for percent-infected plants and pods.

Downy mildew severity was high in the control plots. Products that performed well included Ridomil Gold Copper WP 2 lb , Phostrol 4 pt, Bravo Ultrex 82.5 WDG 1.8 lb, Quadris 2.08 SC 9.2 fl oz and Kocide 2000 DF 2 lb. Ridomil PC GR applied at planting did not persist long enough to provide control at flowering. Kocide 2000 DF 1 lb was too low a rate for effective control compared to the 2 lb rate. Most of the fungicides provided acceptable control of downy mildew under the conditions of this test. There was some variability in the test as seen in the incidence of downy mildew on the pods on the two controls. This small plot variability also influences yield data which made it difficult to get good statistical separation of yields. No phytotoxicity could be associated with any treatment.

Treatment and rate/A	Incidence (%) of downy mildew		Yield lb/A
	Plants	Pods	
Control .....	100.0a <sup>b</sup>	49.6a	671.6 d
Ridomil PC GR 0.75 lb .....	90.6a	40.9ab	885.9 cd
Control .....	78.2a	34.3 b	628.6 d
Tri-basic Copper Sulfate 2 lb (A,B,C,D) <sup>a</sup> .....	41.6 b	14.0 c	1206.1 bcd
Kocide 2000 DF 1 lb (A,B,C,D).....	30.4 bc	9.3 c	1183.9 cd
Champ DP 2 lb (A,B,C,D).....	26.7 bcd	6.5 c	1801.3ab
Ridomil PC GR 0.75 lb/A + Quadris 2.08 SC 15.4 fl oz (A,B,C,D).....	23.4 bcde	6.1 c	1885.1ab
Ridomil Gold/Copper WP 2 lb (A,C) alt. w/Kocide 2000 DF 2 lb (B,D).....	11.6 cde	1.7 c	2114.3a
Quadris 2.08 SC 15.4 fl oz (A,C) alt. w/Kocide 2000 DF 2 lb (B,D).....	9.4 cde	2.4 c	1855.1ab
Quadris 2.08 SC 9.2 fl oz (A,C) alt. w/Kocide 2000 DF 2lb (B,D).....	8.2 cde	2.3 c	1228.0 bcd
BAS 500 F 12 fl oz (A,B,C,D) .....	8.2 cde	0.2 c	1791.7ab
RH 7281 80 WP 0.25 lb (A,B,C,D).....	7.2 de	0.3 c	1813.6ab
Quadris 2.08 SC 15.4 fl oz (A,B,C,D).....	7.1 de	0.5 c	1420.4abcd
Acrobat 50 WP 6.4 oz + Champ DP 1 lb (A,B,C,D).....	6.9 de	0.5 c	1521.0abc
Champ 2F 2 pt (A,B,C,D).....	6.9 de	1.3 c	1488.8abc
Quadris 2.08 SC 9.2 fl oz (A,B,C,D).....	4.0 de	0.8 c	1376.3abcd
Kocide 2000 DF 2 lb (A,B,C,D).....	2.9 e	1.0 c	1220.7 bcd
Bravo Ultrex 82.5 WDG 1.8 lb (A,BC,D).....	2.9 e	0.3 c	1976.8ab
Phostrol 4.0 pt (A,B,C,D).....	1.9 e	0.1 c	1657.7abc
Ridomil Gold/Copper WP 2 lb (A,B,C,D).....	0.5 e	1.0 c	1714.6ab

<sup>a</sup> Application timings A=5 Sep, B=12 Sep, C= 19 Sep, D= Sep 26

<sup>b</sup> Means followed by the same letter are not statistically different from each other (Fisher’s Protected LSD, P=0.05).