

Section VII
Foliage & Seed Insects

WESTERN BEAN CUTWORM CONTROL WITH FOLIAR SPRAYS, 1996

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Experimental plots were established on the UI Research and Extension Center, Kimberly, Idaho. Beans were planted 31 May and furrow irrigated. The soil type was Portneuf silt loam. Eight treatments and one untreated check were replicated four times in a randomized complete block design. Each plot was 6 rows by 25 ft long. Western bean cutworm larvae were reared from egg masses in laboratory petri plates on garden bean leaves. Approximately 100 larvae per plot were applied on 26 Jul and again on 29 Jul by placing bean leaflet sections containing larvae within the plant canopy on randomly selected plants in the center two plot rows. All treatments were applied on 6 Aug, a second application of both Bt formulations on 12 Aug, and a third application of both Bt formulations on 19 Aug. A broadcast spray was applied with a backpack CO₂ sprayer at a rate of 20 gpa (30 psi; 4, 10X hollow cone nozzles). On 27-28 Aug pods were collected from the center two plot rows. These pods were inspected for percentage of damage. Damaged pods were examined for total number of beans and a percentage of damaged bean per treatment was determined. Data were analyzed using ANOVA and Newman-Keul's multiple means comparison.

There was a significant reduction in both the amt of pod damage and seed damage with both the Asana and Spinosad treatments. No significant reduction in damage was observed in any of the Bt treatments from the untreated check, but a slight reduction in seed damage was observed with Javelin at two and three applications over a single application.

Treatment/ formulation	Rate	Percent damage	
		Pods	Seed
Check	-----	6.01 b	1.38 b
Javelin 1 application	1 lb FP/acre	6.58 b	1.63 b
Javelin 2 applications	1 lb FP/acre	4.74 b	1.08 ab
Javelin 3 applications	1 lb FP/acre	5.51 b	1.02 ab
Condor 1 application	1 pt FP/acre	9.49 b	2.45 b
Condor 2 applications	1 pt FP/acre	8.31 b	2.17 b
Condor 3 applications	1 pt FP/acre	5.48 b	1.43 b
Asana	0.05 lb AI/acre	0.24 a	0.00 a
Spinosad	100.00 g AI/ha	0.83 a	0.005 a

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