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Amt Paper

Efficacy of In-Furrow Insecticides For Control of Seedcorn Maggot in Fava Bean in Virginia, 2024

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Bean (broad, horse) | *Vicia faba*

Seedcorn maggot (SCM): *Delia platura* (Meigen)

The objective of this experiment was to assess the efficacy of 2 novel IRAC Group 30 insecticides, ISM-555 SC300 (Plinazolin = isocycloseram) and Nurizma (broflanilide), for control of SCM in fava beans.

The experiment was conducted in a field plot located at the Virginia Tech Hampton Roads AREC, Virginia Beach, VA. The field plot was heavily infested with SCM that destroyed a previous planting of fava beans the week prior to this experiment. The experiment was conducted in the same plots arranged in an RCB design with 4 replications. Individual plots were 1 row × 9.4 ft planted on 19 Apr 2024 with 16 seeds per plot. There were 4 treatments (untreated check, ISM-555 SC300, Nurizma, and Chlorpyrifos 4E). Insecticides were applied in-furrow over top of the freshly planted seeds before they were covered using a CO_2 backpack sprayer equipped with a single nozzle boom that applied 22 gpa. On 6 May, plots were assessed for the number of plants that emerged. Proportion plant emergence data were analyzed using ANOVA, and means were separated using Fisher's LSD at a 0.05 significance level.

There was a significant treatment effect on plant emergence with all 3 insecticide treatments (ISM-555 SC300, Nurizma, and Chlorpyrifos 4E) having a significantly higher percentage of plants emerging (seeds not killed by SCM) than the untreated check, and there were no differences among the insecticides. The 2 Group 30 insecticides (ISM-555 SC300 and Nurizma) each provided control of SCM equal to or better than the previous industry standard Chlorpyrifos 4E, which is no longer registered for use. No signs of phytotoxicity were observed in this experiment.[1]

Treatment/Form.	Rate fl oz product/acre	% emerged plants
Untreated check		65.6b
ISM-555 SC300	3.43	92.2a
Nurizma (2.5 lbs broflanilide per gal)	1.1	90.6a
Chlorpyrifos 4E	32	85.9a
$P > F$		0.018

Means within columns followed by a common letter are not significantly different (P ≤ 0.05, FPLSD).

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