SOYBEAN: *Glycine max* 'Pioneer Roundup Ready''

GRAY GARDEN SLUG CONTROL IN SOYBEAN, 2005

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Gray garden slug (GGS): *Deroceras reticulatum* Müller

Four molluscicide baits were tested against the GGS in a soybean field near Mt. Vernon, OH, in Knox County. The tests were designed as a RCB with 6 treatments and an untreated check plot, and 4 replications. Plot size was 50 ft (80 rows on 7.5 in centers) x 50 ft. Soybeans were in the V1 growth stage and just beginning to show feeding injury at the beginning of the experiment. Molluscicide baits were applied using a hand spreader on 3 June, respectively. The treatments were 3 rates of Metarex, and single rates of Deadline MPs, the standard Sluggo bait, and Sluggo minipellets. Metarex and Deadline are both metaldehyde baits, whereas Sluggo is an iron phosphate bait. For comparative purposes, the average number of bait particles that was applied per ft^2 for all the baits was determined. An attempt was made to count the numbers of GGS per individual corn plant at dusk in each field at weekly intervals. Soybeans in an area of approximately 3 by 3 ft (9 ft^2) in the middle of the plots were examined for slugs. Observations were taken weekly on continued feeding injury. Yield data were not obtained.

The greatest number of bait particles per ft^2 was for the high rate of Metarex, followed by the Sluggo minipellets, and then the middle rate of Metarex. The low rate of Metarex and Deadline MPs and the standard Sluggo bait had similar rates. Whereas Deadline MPs were highly variable in their size of bait particles, the other baits were fairly similar in size.

Based on the number of eggs and small GGS juveniles sampled prior to the start of the experiment, we had anticipated that this field would have severe injury, making it an excellent study site. However, after little rain had fallen in the last half of May, temperatures climbed to the 90s (°F) beginning the first week if June. The remainder of June was extremely hot and dry. Little slug feeding and very low activity occurred following treatment. Weekly visits at dusk over a 3 week period were made in an attempt to count slugs, which proved fruitless; on the evenings that visits were made, few if any slugs were observed. Nevertheless, there was some activity and feeding occurring. By the second and third week, the check plots were obvious to the observer based on additional feeding on the unifoliate leaves; however, feeding was not observed in any of the treatment plots except for Metarex at the 4.0 lb per acre rate where there was slight additional feeding. If given a rating on a 1 (no feeding) to 5 (severe feeding), the check was a 2, Metarex at 4.0 lb a 1.5, and all other treatments a 1. We did not see feeding on

any of the trifoliate leaves in any of the plots, including the check plots, which would have been characteristic of normal slug activity.

In summary, based on this experiment, all treatments provided reduction of feeding, albeit the slug density and environmental conditions were not conducive to high slug activity and injury.

Treatment/ formulation	Rate/ acre	Particles/ ft^2
Untreated check	--	--
Metarex 4%	4.0 lb	3.1
Metarex 4%	6.0 lb	4.6
Metarex 4%	8.0 lb	6.1
Deadline MPs 4%	10.0 lb	3.3
Sluggo standard	10.0 lb	3.5
Sluggo MPs	7.5 lb	5.6