Potato leafhopper: Empoasca fabae (Harris)

Soil type was a poorly drained, Colland clay loam. Plots, 1.8 m x 4 rows (76-cm centers), were planted on May 15. Granular insecticides were applied at planting by 2 methods (in surface band (B), in-furrow (IF) to the glabrous (= susceptible) isoline. A 2-row buffer of the glabrous isoline surrounded each plot. Treatments were arranged in a randomized complete block design with 8 replications. Emergence occurred on May 21. Stand counts were taken 18 days postemergence to detect phytotoxic effects. Adults were sampled using a D-Vac vacuum insect sampler (1 ft² cone) with 8 subsamples/plot at 18, 33, 49, and 66 days postemergence. Soybean development on these dates corresponded to the 2 trifoliate, 5 trifoliate, 9 trifoliate, and midbloom stages respectively. Yield response was assessed on Oct 8 by harvesting 3 row-m/plot.

PLH populations in the glabrous treatments increased up to 37 times those in the pubescent (= resistant) check. Significant reductions in these populations were evident within 33 days for all Temik and Counter in-furrow treatments. In contrast, Counter band treatments failed to significantly reduce PLH abundance on all sample dates. Counter in-furrow treatments exhibited greater efficacy and seasonal persistence than Temik treatments, reflecting higher application rates in the Counter treatments. Within in-furrow treatments, PLH abundance declined with increasing application rates of each compound. Yield increases paralleled midseason (49 day) reductions in these populations were evident within 33 days for all Temik and Counter in-furrow treatments. In contrast, Counter band treatments failed to significantly reduce PLH abundance.

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SOYBEANS: Glycine max 'Clark'

SOYBEANS: Glycine max 'Tracy m'

Bean leaf beetle: Chrysomela trifurcata (Foster)

THREE-CORNERED ALFALFA HOPPER CONTROL ON SOYBEANS IN ALABAMA, 1982: This field test was conducted in soybeans planted on Vaiden soil at the Auburn Univ., Blackbelt Substation, Marion Jct., AL. Ten treatments and an untreated check were replicated 4 times in a randomized complete block design. Each of the 0.01-acre plots was 4 rows wide (38-in row spacing) and 37 ft long. Treatments were applied on Aug 31 with a CO2-pressurized sprayer equipped with 3 D-2 nozzles per row, operating at 30 psi, and delivering 22 gal/acre. Insect populations were sampled by placing a standard 3-ft beatsheet between the rows and beating the plants on both sides. Insects were identified, counted and recorded. Immature three-cornered alfalfa hoppers (3CAH) were rated as small, medium, and large. Two samples from each plot were taken prespray (Aug 31) and 24 h, 72 h and 1 wk post spray (Sep 1, 3 and 7).

Pre-emergence treatments of bean leaf beetle (BLB) and medium 3CAH were not significantly different. Slight differences existed in pre-emergence counts of small and large 3CAH immatures. However, when all immature 3CAH were considered together (not shown on table) no pretreatment differences existed. At 24 h post spray, all products tested except the fungicide Super-Tin significantly reduced BLB and small 3CAH populations. Lannate, Ambush, Amo and S3206 reduced medium 3CAH population while only Lannate and S3206 significantly reduced large 3CAH populations at the 24 h sample. At 72 h, all treatments except Super-Tin significantly reduced populations of all sizes of 3CAH. Very few differences existed between treatments. At 7 days, populations of medium and large 3CAH were still smaller in nearly all treatments than in the control. Small 3CAH populations however, were not significantly lower than control populations due to the small numbers found in the control plots. BLB populations were smaller in all test treatments than in control plots at 7 days. Amo and S3206 were most effective at this sampling period.