Soybean aphid strip trial results for dimethoate
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Replicated strips in a soybean field on the Bean and Beet Research Farm were sprayed on July 10, 2001 for soybean aphid. Plants were in the R2 stage (full flower). Before treatment, 40 whole-plant samples were evaluated for soybean aphid (SBA). All of the plants were infested with SBA, and all rated a "4" on the rating scale used by the Multistate Aphid Survey.* In actuality, there were simply too many aphids to count; we estimate at least 1,000 aphids per plant, plus copious amounts of honeydew and cast (shed) skins. Four treated strips (16 rows by 900 feet) were sprayed with dimethoate at a rate of 1 pint per acre, using flat fan nozzles and 50 lbs pressure. Three strips (about 16 rows by 900 feet) were not sprayed. Strips were evaluated on July 13 by sampling whole plants.

3 days after treatment	Treated	Untreated
Number of whole plant samples	40	30
Percent of plants infested	100%	100%
Average rating on 0-4 scale*	2.75	3.97
Numbers of aphids observed per plant	Generally less than 100	Hundreds to thousands

Dimethoate treatment did reduce aphid numbers, from 1,000 or more aphids per plant, to generally around 50 to 100 aphids. But no treated plant was free of aphids. Aphids on the lower portions of the plant and on the hairiest areas of the stem were still alive and giving birth. Smaller plants covered by larger plants also tended to have a significant number of live aphids. Coverage is obviously critical. I suspect a similar pattern would hold for products other than dimethoate.

A 90 percent reduction in aphids sound like a good deal, but the aphids remaining in the treated area are already reproducing in the absence of natural enemies. We will evaluate the strips again next week to determine if and how aphid numbers change with time. Return to this web site for updates.

* Multistate survey scale, based on number of aphids per plant:
0 = none; 1 = 1-10 aphids; 2= 11-25 aphids; 3 = 26-99 aphids; 4 = 100 or more.