CABBAGE LOOPER AND DIAMONDBACK MOTH CONTROL ON CABBAGE, SPRING 1991: Six week old 'Express' cv. cabbage plants were transplanted on 8 May into a Berow series fine, sandy loam soil at the Wes Watkins A.R.E.C. in Lane, OK. Single-row plots were arranged in a randomized complete block design with four replications and were 30 ft long. Rows were spaced 3 ft apart. One unplanted row between plots and 5 ft within rows were left as plot buffers. Thirty plants per plot were each spaced 12 inches apart. Trickle irrigation was used to apply recommended rates of fertilizer and meet irrigation needs. All treatments were applied with a CO₂-powered backpack sprayer and double-nozzle boom with TX-10 nozzles spaced 18 inches apart, directed toward the plants. The sprayer was calibrated on 28 May at 30.0 gallons per acre, 13 Jun at 28.2 GPA, and 17 Jun at 27.8 GPA. Insecticides were applied on 29 May, 7, 12, 17, 25, and 29 Jun. Five randomly selected plants per plot were sampled on 28 May, 5, 11, 14, 19, 24, and 28 Jun for CL, DBM, and other lepidopterous larvae. CL and DBM larvae were categorized as small (CL—instar 1 & 2, DBM—instar 1, 2 & 3) and large (CL—instar 3 & 4, DBM—instar 1, 2 & 3). All plots were harvested on 1 Jul and individual heads were rated using the following scale: 1 = no wrapper leaf damage, no head damage, 2 = wrapper leaf damage, no head damage, 3 = light head damage, 4 = moderate/severe head damage. Heads rated 1 or 2 were considered marketable according to U.S.D.A. standards.

CL populations were high during the test, averaging 19.5 larvae per five plants in untreated plots. Pounce 3.2 EC was the only treatment that achieved satisfactory CL control. DBM populations were low throughout the test. The highest percentages of marketable heads and undamaged heads were produced with Thiodan 3 EC. Insecticide cost ranged from $0.06 to $0.50 per acre.

CABBAGE: *Brassica oleracea* L. "Express"

Cabbage looper (CL); *Trichoplusia ni* Hiibner

Diamondback moth (DBM); *Plutella xylostella* L.

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(19E)
in Pounce 3.2 EC treated plots. All treatments except Biosafe, Cutlass WP at 1.0 lb/ac + Triton CS-7, and Cutlass WP at 1.0 lb/ac + Ortho X-77 were significantly different from untreated plots in percentage marketable heads with the highest percentages in Pounce 3.2 EC, Cutlass WP at 2.0 lbs/ac, Cutlass WP at 2.0 lbs/ac + Triton CS-7, and Cutlass WP at 2.0 lbs/ac + Ortho X-77. Addition of the adjuvants Ortho X-77, Triton CS-7, and Agri-Dex did not affect the marketability. No significant differences were found in head weights among plots, but when marketable weight per acre was calculated Pounce 3.2 EC and all Cutlass WP 2.0 lbs/ac treatments had the highest marketable yields.

**Means within a column followed by the same letter are not significantly different (P = 0.05; REGWQ).**

**All numbers expressed as per five plants.**

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### CANTALOUGE: *Cucumis melo* L. "Traveler"

Vegetable leafminer, *Liromyza sativa*e Blanchard
Leafminer, *Liromyza trifolii* (Burgess)

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### CONTROL OF LEAFMINERS ON CANTALOUGE, 1991:

Cantaloupe were direct seeded into "Yuma Beds" on 18 Mar. Plants were thinned at 12 inch intervals on 5 Apr. Plots consisted of six 60-ft long beds spaced 80 inches apart and bordered on each side by an untreated bed, arranged in a completely randomized block design with 5 replicates. Applications were made on 23 Apr, 6, 20, 25 May, and 3 Jun. Foliar insecticide treatments were applied with a tractor-mounted boom sprayer (4 nozzles/bed spaced 12 inches apart) operated at 60 psi, delivering 25 gal/acre. Sprayer-sticker (Raincoat) was included in all spray treatments at a rate of 5 gal/acre. Plots were sampled on 15, 22, 30 May, and 6 Jun. Samples consisted of 20 leaves collected from the center two rows of each replicate. Leaves were taken to the laboratory, and the numbers of live and parasitized leafminer larvae present were recorded for each plot. Data were analyzed for treatment differences using ANOVA and Ryan’s Q-test (Proc GLM).

Leafminer populations were low during the experimental period and consisted primarily of *L. satinae*. Agri-Mek and Monitor provided consistent control of leafminer larvae throughout the test. Leafminer populations were significantly greater in Lannate and Larvin plots than in the untreated plots on 6 Jun. No significant differences in the numbers of parasitized leafminer larvae were detected among treatments on the first two sample dates. On 30 May,