

FAIR

**Section II
Foliage and Seed-Feeding & Mining Insects**

**EVALUATION OF NEW INSECTICIDES FOR THE CONTROL OF
LEPIDOPTEROUS PESTS ON LETTUCE**

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Cabbage looper, beet armyworm, and budworm/corn earworm are major pests of California lettuce. Because of these lepidopterous pests' ability to rapidly develop a tolerance to available insecticides, a continuing efficacy evaluation of new insecticides is essential. Treatments included methomyl (Lannate®/Nudrin®), several new pyrethroids, and an untreated check.

Small plot field tests were conducted on iceberg lettuce in 1986 with pyrethroids from FMC and ICI. The lettuce plots were located in Orange county (coastal region) and Imperial Valley (desert region) at the University of California Field Stations. Treatments were applied by a handsprayer with 60 gallons of water per acre at 30 psi. The experiments were arranged in randomized complete block designs with each treatment replicated 4 times. Individual plots were 2 beds, 50 feet long with a buffer bed between plots. After each application, samples of 25 plants per replication were checked at 3 days and at 7 days until harvest. All data were analyzed by Duncan's Multiple Range Test at the 5% level.

Results and Discussion

All pyrethroids and methomyl (Lannate®/Nudrin®) significantly controlled cabbage looper for 14 days and beet armyworm for seven days, after one application. The efficacy of all chemicals, except Brigade®, declined after 14 days, necessitating a second application to keep the infestation level below 5%.

These data indicated that one or two applications may prevent significant yield loss by cabbage looper, beet armyworm, and budworm/corn earworm.