SUMMARY OF RESEARCH ON INSECTS AFFECTING SEED ALFALFA, 1972

O. G. Bacon[1], T. F. Leigh[1], B. Sheesley[2], W. D. Riley[3], and R. H. James[3]

Research was continued on the control of lygus bugs, aphids, and spider mites and on the biology and population dynamics of the consperse stink bug.

Thirteen insecticides and insecticide combinations were evaluated for lygus bug control in four separate experiments. Several experimental insecticides were investigated for lygus bug control. The most highly effective of these were Supracide, Dursban, Orthene, Vydate, and Ciba-Geigy 13608. Carzol and Temik also received much attention. Temik applied to the soil as a granule at three pounds active ingredient per acre gave fair control of lygus bugs, and good control of aphids and spider mites for three to four weeks after the material was activated with irrigation water. Results with foliar sprays of Carzol in most instances were good and control was effective for two to three weeks. In addition to controlling lygus bugs, Carzol also controlled spider mites.

Two experiments were conducted specifically for control of aphids, especially the spotted alfalfa aphid. One new aphicide, Uni Royal K840, appears highly promising. This material resulted in excellent control and is also reported to be non-toxic to honey bees. A second new aphicide (Pirimicarb) was investigated but was not effective at the low dosage levels (0.25 lb./A) used. Plans are to work further with this material at higher dosage levels.

Stink bug populations were monitored in seven alfalfa seed fields on the west side of the San Joaquin Valley from November 16, 1971 through August, 1972. Overwintering populations were small, and generally very low populations were encountered in alfalfa seed fields during the 1972 season. Populations were sufficiently high in three of the survey fields to obtain excellent data on seasonal population trends and to again correlate population levels with seed damage. As was observed in 1971, two generations of the stink bug occurred. Nymphs of the first generation were observed on May 17th. Nymphs of the second generation began to appear on July 5th and the population of the second generation peaked from about August 1st to the 22nd.

Because of the low stink bug populations no experiments were conducted with insecticides for their control.

Data were obtained on the effects of the experimental insecticides used in 1972 on eight groups of predatory and parasitic insects and spiders. Those compounds that appeared to have the least detrimental effects on the beneficial forms were sprays of Pirimicarb, Carzol, and the granular formulations of Temik and Thimet.

Detailed studies on honey bee toxicity resulting from the application of Carzol spray and Temik granules were conducted by Mr. L. E. Atkins, Department of Entomology, U. C., Riverside. The results of his experiments revealed that neither of these treatments adversely affected the bees. Data were not obtained on alkali or leaf-cutter bees.

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1 Entomologists, Department of Entomology, University of California, Davis.

2 Farm Advisor, Fresno County.

3 Staff Research Associates, Department of Entomology, University of California, Davis.

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* The use of trade names is sometimes necessary to convey *
* information more clearly. No endorsement of products *
* named in this publication is intended nor is criticism *
* implied of similar products not mentioned. Some of the *
* chemicals mentioned in this summary are experimental *
* materials and are not now registered for use in alfalfa *
* seed crops. *
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