Progress Report of Pesticide Affects on Target Pests and Honey Bees in Central California Alfalfa Seed Fields.

O. G. Bacon, E. L. Atkins, W. R. Sheesley*

PESTICIDES	TARGET PEST CONTROL: LYGUS	SAA	PEA APHID & BLUE APHID	STINK BUGS	MITES	WORMS	HONEY BEE AFFECTS: Expected hazard from night treatments.	Expected hazard from early morning treatments.	Expected no. of days of suppressed visitation.	Waiting period before placement of bees, if any.	SPECIAL CONDITIONS AND COMMENTS
Bidrin					↑		M	M-MH	2-5 DAYS	5 DAYS	Before bloom & bee placement.
Carzol		↑	↑			↑	N/L-L	L	2 DAYS		Stimulates SAA on susceptible varieties.
Comite							N/L	N/L	0		
Dibrom			NO DATA	NO DATA	NO DATA		L-(H)	ML-(H)	1 DAY	2 DAYS	Short residual unless spray does not dry; then effects possible.
Dimethoate (Cygon & Defend)					↑		NO DATA	M-VH	3-5 DAYS	5 DAYS	Before bloom & bee placement.
Dylox	R					small ones	NO DATA	N/L-LM	1 DAY		Safe at 1 Lb. ai/A
Kelthane					R		N/L	L	1 DAY		By ground sprayer in early season
Lorsban							LM-M	M-MH	3 DAYS	3 DAYS	Safe at 0.5 Lb. ai/A
Meta-Systox-R							LM-MH	M-H	2 DAYS	1 DAY	Safe at 0.5 Lb ai/A
Methomyl (Lannate or Nudrin)					↑		L-LM	LM-M	2 DAYS	1 DAY	Safe at 0.5 Lb. ai/A
Methyl Parathion EC					↑		L-M	M-H	2 DAYS	5 DAYS	Before bloom & bee placement.
Monitor				NO DATA			L	LM	3 DAYS		Safe at 0.5 Lb. ai/A
Phosdrin	R						NO DATA	NO DATA	1/2 DAY		Safe at 0.25 Lb. ai/A
Supracide					↑		M	M-H	2 DAYS	5 DAYS	Before bloom & bee placement.
Systox		R			R		N/L	L	1-2 DAYS		Bee repellance at 0.25 Lb. ai/A
Temik Granules	✓	✓	✓ (see discussion note on reverse)		✓		N/L	N/L			Data at 3 Lb. ai/A
Thiodan							N/L-L	L	2 DAYS		Safe at 1 Lb. ai/A.
Vydate					↑		M-MH	MH-H	15-3 DAYS	2 DAYS	Moderately safe at 0.5 Lb. ai/A
Di-Syston			NO DATA				N/L	N/L	1-2 DAYS		Bee repellance at 0.5 Lb. ai/A
Thiodan 1 Lb. Lannate 0.5 Lb.			NO DATA				LM-M	LM-M	2 DAYS	2 DAYS	Similar to Lannate alone.
Lannate 0.75 Lb. Phosdrin 0.25 Lb.							L-LM	LM-M	2 DAYS	1 DAY	Similar to Lannate alone

KEY: = EFFECTIVE CONTROL OR KILL; = EXPECT 75% CONTROL; = 50% CONTROL; = SLIGHT KILL EXPECTED

N/L = NONHAZARDOUS L = LOW LM = MODERATELY LOW M = MODERATE
MH = MODERATELY HIGH H = HIGH ↑ = POPULATION MAY INCREASE AFTER USE
R = RESISTANCE DOCUMENTED

This chart is tentative, based on experiments conducted in Central San Joaquin Valley. Proper timing and accurate application is imperative. Additional information may warrant changes.

*Dept. of Entomology, U.C. Davis; Dept. of Entomology, U.C. Riverside; U.C. Farm Advisor, Fresno.

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REVIEW OF TEMIK U.C. EXPERIMENTS ON ALFALFA SEED:

A general retardation in SAA, lygus & mite populations for up to four weeks resulted from the application of TEMIK granules and irrigation water during four years of experiments in seed alfalfa. This effect was sufficient to reduce the total number of pesticide applications by one for SAA control compared to the check plots without TEMIK. Applications were made with 3.0 a.i. TEMIK per acre in 10% granules injected 6" deep on both sides of each row. Timing of applications relative to plant growth stage was investigated, with applications at 25% bloom and at five weeks prior to 25% bloom. Although a three to four week population reduction of lygus, aphid and mites was seen following irrigation of some TEMIK treated plots, none of these plots showed economic population control of these insects for longer than four weeks regardless of time of application. The costs of a topically applied pesticide application has generally been much less than the costs of the granule application discussed here.

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To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in their original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Recommendations are based on the best information currently available, and treatments based on them should not leave residues exceeding the tolerance established for any particular chemical. Confine chemicals to the area being treated. THE GROWER IS LEGALLY RESPONSIBLE for residues on his crops as well as for problems caused by drift from his property to other properties or crops.

Consult your County Agricultural Commissioner for correct methods of disposing of leftover spray material and empty containers. **Never burn pesticide containers.**

1720 SOUTH MAPLE FRESNO, CALIFORNIA 93702 TELEPHONE 453-5831

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