UNIVERSITY OF IDAHO
College of Agriculture

Protect Your Pollinators

IDAHO Agricultural Extension Service

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1) Watch the insect populations in your fields closely.
2) Look for beneficial species as well as for the pests.
3) Be prepared to treat the field before large numbers of a pest insect develop.

Alfalfa, clover, and vegetable seed crops must be cross-pollinated by insects for maximum seed production. Honeybees and wild pollinators must be protected to insure this cross-pollination.

Hundreds of colonies of honeybees were killed last year by improper treatment of seed fields with parathion. These high losses occurred in fields heavily infested with aphids. Every year some worker bees are killed by insecticides because the bees do not leave the fields in the evening.

Many kinds of insects live in every field. Most of them do little or no damage to plants and are definitely beneficial. Some of the important beneficial insects are the pollinators, such as honeybees, wild bees, bumblebees, alkali bees and leaf cutter bees. Other beneficial insects – the predators or natural enemies of such insects – are the minute pirate bugs, big-eyed bugs, lacewing flies, syrphid flies, assassin bugs, damsel bugs and ladybird beetles.

There is a continual conflict between the predators and the insect pests on which they feed. If weather conditions favor development of the pests, they increase rapidly and become very numerous. With increased food and more favorable weather for predator development, the predator population grows quickly. The amount of time between the increased number of pests and the predator build-up depends upon weather and whether predators have been reduced by improper use of insecticides. You can protect these beneficial insects by proper use of insecticides.

None of our insecticides, even the most toxic, will eradicate all insects. Pollinators and beneficial insects are generally easily killed. When an extremely toxic insecticide, like one of the organic phosphates, is applied improperly to a seed field in bloom, the results are often disastrous. Honeybees, wild pollinators and predators are killed along with the pests. Because the pest species multiply rapidly, they soon become very numerous again without natural enemies to suppress their increase, and the field will require another treatment. Also, in the absence of the pol-

4) See your county extension agent or seed dealer for the proper control recommendations.
5) Before applying any insecticide, read and follow the label container instructions.

linators many blossoms go unpollinated and little seed is produced.

Growers should periodically walk through their fields to check the insect population. At this same time, they should distinguish between the destructive and beneficial insects. This may be done while they are checking the plant growth or soil moisture conditions. As soon as a pest-insect population that is not held in check by natural enemies is found, treat the field with the proper insecticide at a time when the application will do the least harm to the pollinators.

Idaho law states: "No insecticide, fungicide or herbicide, as defined in this act, required to be applied to any agricultural crop at a stage when bees and other pollinating insects are at work on said crop, shall be sprayed or dusted except during the three hours after sunrise and the three hours before sunset."

Be prepared to treat immediately when you find a damaging insect population, but avoid the use of extremely toxic insecticides. Insecticides for the control of pest insects in blooming alfalfa, clover and vegetable seed crops can be either relatively safe or extremely toxic. **Never apply parathion, malathion, TEPP, lindane, benzene hexachloride, chlordane, aldrin, and dieldrin to BLOOMING seed fields.** They are very destructive to pollinators and other beneficial insects.

If a pest-insect population appears—for example aphids—look for natural enemies, such as the ladybird beetles. Watch the fields for a few days. If the aphids continue to increase, it may be necessary to treat the field. Organic phosphates are effective insecticides for aphid control. Examples are parathion, malathion and TEPP. These are also very toxic to our pollinators. **When using an organic phosphate, apply it only in the evening, no earlier than one hour before sunset.** An organic phosphate applied late in the evening will lose most of its killing power by morning when pollinators again leave their hives in search of nectar and pollen. **Never treat a blooming field with an organic phosphate in the morning.** Many pollinators will be killed at that time. This is especial-

ly true when the nights are hot, since the bees will leave their hives earlier than usual in the morning.

Before using any insecticide, read and follow the directions on the label of the container. Improper application may result in excessive amounts of chemical residue on the hay or chaff. **Do not feed hay or chaff containing insecticide residues to milking dairy animals or to beef animals being finished for slaughter.**

Material in this publication prepared by the Department of Entomology, University of Idaho, in cooperation with the Agricultural Chemicals Industry, Idaho Honey Producers Association, Insecticide Applicators Association, Idaho Seed Council and Seed Producers.

You can get the following bulletins on control of pests associated with forage and vegetable seed production from your county extension agent or seed dealer.

Extension Circular No. 122
"Alfalfa and Clover Pests in Idaho," by R. W. Portman and W. F. Barr.

Extension Bulletin No. 216
"Idaho Recommendations for Insect Control," by R. W. Portman and H. C. Manis.

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