

# Right Way To Use Insecticides

Application Is  
Very Important

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The application of insecticides by air or ground equipment is essential for the production of most agricultural crops in Arizona. It is important that recommended materials and schedules be followed since the improper use of insecticides may cause injury or create hazards affecting the health or property of others. During the past year the Department of Entomology studied the problems associated with the improper use of insecticides and made suggestions for improving the situation.

## Many Groups Involved

A proper solution to these problems begins with an awareness that various individuals and groups are involved, that each has definite rights and responsibilities, and that mutual understanding, respect, and cooperation must be present. Among those affected by the use and application of insecticides to agricultural crops are farmers, insecticide dealers, insecticide applicators, beekeepers, and the general public.

The importance of the agricultural industry in Arizona is now at an all-time peak, as measured by annual income. It is essential that insecticides be generally used in the production of crops and that no unreasonable restraint should interfere with the farmer's right to grow and protect a crop as long as his neighbors are not adversely affected. It is the farmer's responsibility, as the owner of the crop, and as the person ordering and paying for the insecticides and the application services rendered, to act wisely and in accordance with the best available information.

This involves a personal knowledge of the injurious insects likely to be

present, an ability to determine when insecticides are actually needed (or are not needed), and which insecticides and application methods will give the most suitable protection to the crop and the least injury to neighboring property such as livestock, bees, and crops intended for hay or forage.

## Recommendations Available

A greater awareness by growers of the insect control recommendations issued by the Agricultural Extension Service through the local County Agents, on the basis of research findings would do much to eliminate problems which have recently arisen. Farmers operating small acreages in the vicinity of residential areas should consider using ground equipment whenever possible to reduce drift hazards.

Persons and organizations engaged in the sale of insecticides perform an essential service to agriculture although they have an important responsibility in the exercise of their power to control the sale, and therefore the use, of potentially hazardous materials. The dealer should make every effort to encourage the safe and proper use of such materials by his customers.

This involves a knowledge of recent research work and official control recommendations. Field representatives should be well trained in the identification and control of common injurious insects and should be able to accurately evaluate infestations to determine whether or not insecticides are needed.

Most agricultural insecticides used in Arizona are applied by custom applicators using aircraft. The responsibility of the applicator normally begins after materials, dosages, and locations have been determined by others, although the competent and ethical operator will refuse assign-



▲ An early morning view of an experiment by the Department of Entomology of the University of Arizona in which ground and air applications of insecticidal sprays were compared. Hugh Johnston farm, Yuma.

ments involving particularly hazardous materials or unsafe flying conditions. Applications should be scheduled to avoid injury to bees, livestock, or other property from the drifting of insecticides to adjacent areas.

Commercial beekeeping in Arizona involves the production of honey and the furnishing of pollination services to growers of seed alfalfa, melons, and other crops. At times beekeepers have suffered serious losses as a result of crop dusting activities and are concerned that the poisoning of bees shall not continue to affect their legitimate operations. Insecticides should be selected and applied in such a manner that bees and other beneficial insects are not seriously affected.

Beekeepers should make every reasonable effort to locate their operations in areas least likely to be exposed to the drifting of insecticides. Beekeepers should also make known the location of their colonies to owners of nearby crops in order that due care may be used whenever insecticidal applications may be required.

## Insecticides Tested

Research work now in progress by the Arizona Agricultural Experiment Station and the United States Department of Agriculture involves the testing of insecticides and application methods under field conditions and the study of various biological factors, including natural enemies, that affect the abundance of injurious insects. Continued research work should contribute safer materials and methods of insect control and aid in lessening application problems which have recently existed.