

WHAT IS AN INSECT

Insects are the only animals giving man a real battle for supremacy. They have been on this earth for about 350 million years and have developed special adaptations to live under many environmental conditions. Insects become “pests” of man when their existence conflicts with his profits, convenience, or welfare.

Man has been on the earth for a much shorter period of time and is actually the “intruder”. He is the most upsetting factor in the balance of nature. Development of crop agriculture led to concentrations of host plants that literally spread the table for insects. Domestication and large-scale production of livestock also provided ideal conditions for the multiplication of parasitic insects. Storage of foodstuffs led to other pest problems. Increases in human population were followed by increases in human lice, mosquitoes, and insect-borne diseases.

Present-day insect problems, created or aggravated by the concentrations of host plants and animals, are diverse and complex, with no simple solutions.

Discoveries of new synthetic insecticides since World War II have sparked exciting advances and major breakthroughs in the control of insect enemies. Chemicals have subdued the pests which once caused national calamities – widespread crop destruction, wholesale death of domestic animals, and epidemics of insect-borne human diseases. Because modern insecticides are effective, reliable, and relatively cheap, we in America resort to them more and more for the solution of our many problems with insects.

Adverse side effects, however, have developed under practices of frequent or routine application of persistent pesticides, and in recent years alternatives to chemical solutions have been sought. A more judicious use of insecticides is being insisted upon, and methods are now developed to integrate the use of insecticides into an over-all program that will control pests yet cause little harm to the environment.

The immediate objective of control, however, is the protection of human welfare and commodities from the adverse effects of a given species of insect in a given location and at a given time. Yet we know that manipulations of environmental factors may have far-reaching effects on other species, in other locations, and at later times. Thus we cannot overemphasize the design of management programs must consider the total interrelationships of biotic and abiotic components of the community over an extended period of time. In other words, we must maintain an Ecosystem Sensitive Approach.