

## Who has the answer to the pesticide problem?



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SHOULD WE HALT our modern pest control methods and go back to letting nature take care of herself? Should the Great Plains have been left as fertile grasslands—an excellent habitat for buffalo, wolves, coyotes, and prairie dogs? Should we have continued to rely on small farms, gardens, and hunting to meet our needs?

The answer is obvious: we cannot return to the past. The judgments of people in the past reduced the buffalo, plowed and fenced the land for crops and livestock, and permanently changed the whole North American environment and population structure. The advance of civilization created dust bowls and plagues of insects, plant diseases, barren hillsides, automobiles (and smog), radio and television; it built cities, performed heart transplants, and placed men on the moon.

We cannot undo any of these things, and probably would not want to change many of them. But what shall we do about the future?

What to do about pesticides is one complicated question in a welter of complexities. Some want all pesticides banned; others think we should just ban certain materials. Many Americans believe agricultural chemicals are contaminating our whole planet and will eventually destroy many forms of life.

We must weigh the benefits and environmental risks associated with the use of these chemicals now—as well as the benefits and risks of alternate procedures—before we make a decision on pesticide uses. DDT and other pesticides *have* killed fish and wildlife. They have altered the ecological balance. Yet these same chemicals have saved millions of lives, and have prevented unimaginable suffering. That some chemical control programs have countless value in human lives is shown by the recent reappearance of more than a million cases of malaria in Ceylon when DDT spraying for mosquito control was stopped. In India, the annual death rate from malaria fell from 750,000 to 1,500 when mosquitoes were controlled with DDT.

Several bird species (brown pelican, peregrine falcon, bald eagle, and possibly others) are considered endangered. DDT—with perhaps some help from other

chemicals—appears to be a major cause of their decline. But, because of these chemicals, vital crops have been saved, production levels increased, and millions of people have better diets.

Herbicides have reclaimed vast rangelands from unusable brush, not only contributing to livestock production, but also improving the habitat for several species of wild animals. Despite their benefits, we are now considering banning several herbicides because of the possibility of injury to people and other life forms.

How do we make decisions in situations where using pesticide chemicals helps to save many lives, but the resulting population increases outstrip food supplies and bring hunger? Or, where the pesticides substituted for the chlorinated hydrocarbons disrupt the environment so that crop pests become worse than with no chemicals? These dilemmas require more thought than mere acceptance or rejection of a chemical.

More use of integrated and biological controls can help solve some problems; but not even these techniques can solve them all. For example, U. S. quality standards for many crops are so high that even a small percentage of insect or disease damage, or a few insect bodies, make them unsaleable. Both occur even under sound integrated or biological control programs.

All of these pose profound problems for those who make decisions on the use of chemicals. Can we lower our quality standards and allow the selling of blemished produce? Can we increase the number of insect parts we allow in our processed foods? Do we prefer lower yields and brushy rangelands to the use of herbicides? Who decides whether or not humans must risk a disease, even though we know how to control it with a pesticide chemical?

Few people in the United States would callously ignore warnings that even one animal species may be exterminated by their actions. But how do we equate the lives of wild animals with human lives?

I do not believe these problems are unsolvable; research can provide the answers. But let's get the answers before it is too late. We must thoroughly understand all facets of the problems before we pass judgment on who shall live and how.