

## Pesticides

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### *Abstract*

*Common pesticides such as DDT, microbial pesticides, oils, soaps, sulfur, pyrethrin, and synthetic pesticides are described. Included under the heading of pesticides are herbicides, insecticides, and others. In spite of all the control efforts, pests annually destroy about 35% of all crops produced worldwide. Even after harvesting, insects, microorganisms, rodents, and birds inflict additional 10 to 20 percent loss, making the total destruction to about 40 or 50%. Researchers aim to reduce this loss by improving pest control. Pest control techniques that use physical methods and biological mechanisms are mentioned. All modern farming operations involve chemical pesticides. Environment concerns induced alternative forms of pest control, like crop rotation and control via organisms that damage or kill pests while leaving crops unharmed. Scientists genetically engineer crops to enhance resistance to troublesome pests. A discussion on their proper use and misuse follows. Misuse could be very dangerous to human beings and the environment.*

**Keywords:** *DDT, global distillation, insecticides, microbial pesticides, pesticides, pyrethrin, rodenticides, Silent Spring, soaps, sulfur, synthetic pesticides.*

### 1. Introduction

Pests are undesired living organisms that damage crops, humans or animals. Insects, mice, unwanted plants such as weed or microorganisms such as bacteria and viruses are some examples. Any substance or mixtures developed for preventing, destroying, repelling or mitigating any pest are pesticides.

Many people, including householders and industrialists, use thousands of pesticides. Although some pesticides are harmful to environment and users, they are beneficial in many ways. Pesticides enable people to take care of their lands and crops, and prevent vectors from spreading disease.

Reduction to acceptable levels of insect pests, plant pathogens, and weed populations is the objective of a wide range of environmental interventions. These are pest controls. Specific control techniques include chemical, physical, and biological mechanisms. Pests destroy about 35 percent of all crops worldwide annually in

spite of all the control efforts. Even after harvesting, insects, microorganisms, rodents, and birds inflict a further 10 to 20 percent loss, making the total destruction to about 40 or 50 percent. Researchers seek to reduce this loss by improving pest control. (Debach and Rosen 1998).

It is hoped that integrated pest management (IPM) using alternative tools together with pesticides, will reduce reliance on conventional pesticides. An assessment (US OTA 2005) examines biologically based tools that influence effective IPM. Technologies like enhanced biological pest control by natural predators and parasites; including commercial microbial formulations are mentioned.

### 2. Common Pesticides

DDT, Microbial Pesticides, Oils, Soaps, Sulfur, Pyrethrin, and Synthetic Pesticides, are examples of some common pesticides (Pimentel 1990; Pimentel and Lehman 1993).