

REVIEWS

Silent Spring

By RACHEL CARSON. The Riverside Press, Cambridge, Massachusetts. 1962. 368 p., illus. \$5.95.

If you are a good citizen, farmer, biologist, gardener, fisherman, legislator, bird watcher, forester, doctor or a chemical producer, then you should read this book by one of the world's foremost scientific writers. It receives the reviewer's highest recommendation.

Silent Spring discusses the deleterious effects of chemicals used in the control of insects and weeds. Following the discovery of DDT, a host of control chemicals have come into the world: dieldrin, aldrin, endrin, the alkyl phosphates. More are being created. With the preliminary findings on the utility of certain chemicals in killing certain organisms, the miracle of modern industry and advertising systems have produced tons of these compounds which are being spread across the land by farmers, gardeners, as well as government agencies of all levels. It is only now that the disturbing side effects of these chemicals are coming to be known and that studies are being begun on the effects of the poisons on organisms other than those they were intended to kill. Many of the chemicals are highly toxic to man, many cause cancer or sterility. A single example of toxicity from the book will suffice: "In Florida two children found an empty bag and used it to repair a swing. Shortly thereafter both of them died and three of their playmates became ill. The bag had once contained an insecticide called parathion, one of the organic phosphates; tests established death by parathion poisoning." (Keep pesticides out of reach of children!).

Nor is it only the direct effects of these poisons which are to be feared. Spraying of spruce budworms in Canada has killed salmon and the invertebrates they feed upon. Spraying for Dutch elm disease has decimated the bird populations in many cities. They kill many other insects which are not only necessary to the balance of nature but also in the fertilizing of useful plants and trees. In many cases, control through chemicals is a crutch and not a cure. Re-spraying is required. Immunity to sprays has developed in several species.

Is this book a panicky negative attack by a nature lover? No! It is a carefully and elegantly written report by a noted biologist—the author of the book *The Sea Around Us*. Not only are the follies of chemical control pointed out, but alternate means of control are suggested. *Positive* as well as negative criticism is presented. Biological controls may be permanent, selective, inexpensive and leave no poisonous residues. This requires basic research into the lives of animals and plants. The female gypsy moth lures the male with perfume. Synthetic perfume can be used to trap or confuse males. Another new method is releasing infertile male insects with the consequence normal males are displaced and the female lays eggs which do not hatch. With this method houseflies were nearly wiped out from an island in only five weeks. The screw-worm fly has been *eliminated* from the southeastern states.

It is evident that chemical insecticides and herbicides must be subject to legislative control (just as much as in the field of medical chemicals, as has been

shown during the recent thalidomide cases). Proper labelling of containers as to toxicity, antidotes, and full precautions in use is required. Minimal levels of spraying on farm products for new chemicals need to be determined. Spraying of large areas of land should require permission from the departments whose resources will be effected—water, wildlife, fishery, forest and public health. To save one resource while endangering others is not justifiable. Certain chemicals might require withdrawal from the market. Further research is required on the effects of pesticides, by industry and/or governments. Now is the time for considered action to be taken.

While it may be expected that there will be resistance from the unenlightened portion of the chemical industry to ideas in this book, it is expected that the more advanced portion will modify their practices and take advantage of possibilities in biological controls. The same may be said of the organizations that utilize pesticides.

It is just as important to test pesticides for their long and short term effects on health as it is to properly test medicinal drugs. For the pesticides are sprayed on the food we eat, in the air we breathe and the water we drink.

Basic biological research, as well as increasing the fund of human knowledge, provides a well of information which can be drawn upon for practical application, such as biological control of pests.

Rachel Carson is to be commended for the excellent style in which this book is written and for the care she has taken in documentation. She is to be commended for her good citizenship in writing it. It is to be hoped that she will be rewarded by a spring which is no longer silent but resounds with the carolling of birds.

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The Saturday Morning Gardener

By DONALD WYMAN. MacMillan, New York
1962. 236 p.

This is not a book for the specialist who treasures his collections of irises, lilacs, roses and many of the other standard garden plants. The emphasis in this book is on easy maintenance. The author, Donald Wyman, is Horticulturist at the Arnold Arboretum, Boston, Massachusetts. He is a noted author of books on trees, shrubs and ground covers and of many articles on ornamental plant materials. In this book he has successfully approached the subject of gardening from a new and helpful point of view.

This is an up-to-date book containing not only the newest cultivars but also many newly introduced species of both herbaceous and woody plant materials. The author discusses not only trees, shrubs and ground covers but also perennials, bulbs, vegetables and fruits. Lawns are referred to, but not in detail. It is encouraging to see that many of the better native herbaceous and woody plants are recommended. Dr. Wyman has also gone into considerable detail on the latest labour saving materials for mulches, and chemical aids for the gardener. The author recommends against any plants which require time-consuming spraying, pruning, or other types of care. His observations, however, are often made because of troubles with plants in his area. These same problems do not always afflict the plants in other regions.

Many of the plants, as the author states, are new or rare in cultivation but these varieties of better quality must be recommended in books of this type if the gardening public is to be made aware of them. It is often only through repeated demands by the public that nurserymen will be persuaded to grow many of these newer or better, but often difficult-to-propagate varieties.

This book will be a definite aid to the Canadian gardener who does not want



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