THE ECONOMICS OF CONSERVATION

A Wealth of Wild Species: Storehouse for Human Welfare. **Norman Meyers. Pp. 274. ISBN 0-86531-132-3 (Western Press, Inc.: 1983). $27.00**

This book is not specifically written for a business audience, but it is useful to those in the biotechnology industries. It offers a list of raw materials (i.e., wild plants and animals) and discusses the need for preservation due to their potential for corporate development. The book is divided into four sections—agriculture, medicine, industry, and genetic engineering—and in each the author points out the possible economic applications for a wide range of plant and animal phyla.

The book presents a good overview for scientists seeking knowledge in related fields; its bibliography is extensive and provides ample access to the scientific literature. Managers and others without extensive technical training will find this book useful. The following examples are indicative of its broad scope and general utility.

Our major crop plants, including wheat, corn, and rye, are heavily inbred. They are likely to rapidly decline in productivity if genetic variability is not restored by occasional outbreeding with wild strains.

The author estimates that between 40 and 60 percent of the productivity increase in modern food crops can be attributed to genetic improvement. Wild species tend to carry genes for a variety of economically valuable traits: resistance to insects and disease, stress tolerance to such factors as salinity, pH, and cold, and sometimes increased production of protein. Rice farming, in which the world output doubled between 1971 and 1976, provides a good example. Fully half of this 15 metric ton gain, the equivalent of a $1.5 billion, can be attributed solely to genetic improvement.

Plants for Pharmaceuticals

All organisms are capable of manufacturing biochemical substances, some of which have medical applications. The book points out a particularly good source of many of these compounds, tropical plants which provide the basis for tranquilizers, anti-cancer drugs, anesthetics, laxatives, and heart drugs. The potent drugs vincristine and vinblastine have been isolated from a single tropical flower, the rosy periwinkle. When used in conjunction with other materials, these compounds increase the chance of remission in such cancers as Hodgkins' disease and acute lymphocytic leukemia.

The book is filled with useful information, but it neglects to explore the innovative techniques necessary to make these raw materials commercially viable. One major drawback of the book is the lack of synthesis of the material which it presents; it needs a discussion and conclusion section. Unfortunately, in an effort to exhort the reader to manage the environment that produces these valuable raw materials, the author tends to evangelize. This alienates what could otherwise be a sympathetic readership.

Betty Lane Faber, Ph.D., is an entomologist specializing in tropical insect behavior at The American Museum of Natural History, New York, NY.