
 Book Reviews

Dahlberg, K.A.: Beyond the Green Revolution. The Ecology and Politics of Global Agricultural Development
 New York-London: Plenum Press, 1979. 256 pp., 5 figs., 7 tables.
 Hard bound \$ 17.95

The last 200 years of human history have been characterized by the powerful and rapid growth of industry, backed more recently by the large momentum of modern technology and science. Industrial development, however, has been restricted to a number of countries, most of which if not all are located in the temperate regions of the world, in which science and technology found fertile ground in basic resources and in the fields of intellectual and organizational competence. In these countries, following the pathways of industrial development, agriculture too – due to the increasing lack of human power, absorbed by growing industry and derived services and the availability of funds and energy – was forced to develop new models and technologies, leading to increased mechanization and increased utilization of inputs (fertilizers, pesticides, water, quality seed of improved crop varieties). Obtaining higher yields, in fact, was the only way to compete economically with industry and to cope with the requirements for increased quantity and better quality of food. In these countries particularly towns and urban populations have grown rapidly, making agricultural industrialization a must.

In a large part of the world – the developing countries – such a transformation could not take place, for a number of reasons, and the present situation is a dilemma in which a part of humanity has a large share of resources, and the other part, the largest, is barely at subsistence level. The exploding population of the latter countries may be fed only with a gigantic effort to increase food production and, therefore, to improve agricultural output. But what are the models proposed to overcome this gap? The developed world, quite naturally, has been proposing as a model its own industrialized agriculture, ignoring the completely different social, economic, organizational, historical and natural background. The 'green revolution', based on the assumption that technology alone could be the solution to the problem, has been proposed in the last decades as the basis of the support of developed countries to the developing ones. K.A. Dahlberg's *Beyond the Green Revolution*, published by Plenum Press, New York and London, provides the reader interested in the problems of agriculture and world food production with a serious and extremely well documented analysis. Two main facts are emphasized by the Author: firstly that 'most intellectual maps dealing with agriculture fail to recognize it as the basic interface between the human societies and their environment'; and secondly, that 'when agriculture is analyzed from a global perspective that takes evolution seriously, one sees that the ecological risks as well as the energy and social costs of modern industrial agriculture make it largely inappropriate for developing countries'. The book, a little more than 200 pages, should be read and critically studied by anyone interested in the problems of third world development, since it provides a clear diagnosis of the extremely complex problems, proposes a methodological approach to the problem (called 'contextual analysis') and provides some general criteria for approaching the solution of the problem in an integrated manner. Obviously, not all will share the opinions and the interpretations of the facts by the Author, but many will be led to reconsider a series of assumptions now considered by many technicians, policy makers and intellectuals, in both developed and developing countries, as axiomatic truths. In as much as most

of the international and bilateral agricultural aid is still strongly – too strongly – influenced by the 'green revolution' philosophy, we welcome this effort, hoping that a better adapted approach – 'ecological' in the broad sense – will seriously be taken into consideration in the future. The book is extremely well documented – even if some references on pertinent papers published in languages besides English could have been added to the work, and is written in an extremely clear but elaborated language. A specific effort is evident all through the book to understand the way of thinking of people of both the developed and developing world connected or involved in agricultural development. This gives the publication a human touch that seldom transpires in other similar efforts. It should be read particularly by the younger generation and by those willing to contribute to the solution of probably the most pressing problem of the present time: improving the physical and intellectual welfare of humanity.

A. Bozzini, Rome

Gunther, F.A. (ed.): Residue Reviews. Residues of Pesticides and other Contaminants in the Total Environment. Vol. 70.
 Berlin-Heidelberg-New York: Springer 1979. IX/144 pp. 1 fig.
 5 tabs. Cloth bound US \$ 21.80

With the production and usage of pesticides increasing worldwide, interest has been focussing on the topics of the review 'Chemical, physical and biological methods for the disposal and detoxification of pesticides' by D.M. Munnecke. The methods available are reviewed in detail under chemical (hydrolysis, oxidation and reduction, fixation and chlorinolysis and chemical industrial methods), physical (incineration and ocean incineration, deep-well injection and ground burial), and biological methods (soil incorporation, landfills, activated sludge systems and enzymatic treatment). Recommendations for pesticide containers and spills are made and environmental regulations are summarized. With the widely used method of chemical hydrolysis, it must be taken into consideration that only the soluble part of the compound is hydrolysed with a constant half-life, but the rate of solubilization limits the hydrolysis kinetics. The review 'Outline guide for performance of field studies to establish safe reentry intervals for organophosphate pesticides' by E. Kahn is dedicated to reentry problems, as already discussed in Res. Rev. Vol. 62 (1976) and Vol. 67 (1977). The outline presents the general considerations involved in such studies, emphasizing that reentry intervals are occupational health standards. Specific attention is given to study design, ethical considerations, project organization, laboratory matters and statistical analysis. The material is based on the experience obtained in recent years in California. Finally, a brief consideration of reentry intervals for carbamates presenting very different problems is given.

An extensive study is presented by C.M. Rivera and D. Penner entitled 'Effect of herbicides on plant cell membrane lipids'. The role of lipids in membrane functions (permeability, metabolism), herbicide effects on membrane structure (ultrastructure, lipid biosynthesis, phase transitions), and the interaction of herbicides and temperature on membrane lipids are discussed in detail.

Vol. 70 is completed by cumulative indexes of subjects and authors of Vo. 61-70 and the cumulative list of Vol. 1-70.

W. Dedek, Leipzig