

Book Reviews

Vernon W. Ruttan. *Agricultural Research Policy.* Minneapolis, Minnesota: University of Minnesota Press. 1982. xiv + 369 pp. Price: \$ 13.95 paper back.

This book makes an important contribution to the literature on the development and transfer of new technology for profitable farming the world over. Professor Ruttan has had a distinguished career in research and its administration in a number of institutions. He brings that experience to bear on his analysis of a variety of issues in agricultural research. While much of the material contained in the book has already appeared in his earlier writings, it is well organized here around three themes.

The first is the induced innovation model: that the type of technology developed and adopted in a country reflects a rational response to relative scarcity of resources. New agricultural technology helps in substituting the relatively scarce factors by those that are relatively abundant. The signals are created mainly in the market-place. It is not, however, clear how the induced-innovation model can help in making current decisions about allocating resources to agricultural research.

The second theme deals with the central role of the public sector in agricultural research. Private sector has not played a significant role in agricultural research, even in countries like the United States. The reasons are well known to any student of elementary micro-economic theory. What is even more significant is that the social return to investment in research has a high pay-off under diverse conditions of production and in different states of the development of the economy. A persuasive case has been developed for a significant increase in public funding for agricultural research in underdeveloped countries. But Professor Ruttan rightly warns the impatient in those countries that agricultural research systems develop slowly and painstakingly. It is in this context that the role played by international research institutes is highlighted.

The last theme relates to the role of social scientists and other researchers in managing agricultural research, particularly with respect to planning and evaluation of research programmes, and in disseminating new technology. The demand for social science (economics) research is derived from the need to improve private return from using new technology. It is for this reason that the responsibility of social scientists in research institutions should be carefully integrated with that of other researchers. This should be of special interest to managers of agricultural research

in countries like Pakistan, where agricultural economists have not been involved with the on-going research of agronomists, plant breeders, pestologists, and the rest.

Professor Ruttan says early in the book that his opinions are not guided by any particular philosophy or ideology. Yet it is interesting that he is wedded to the induced-innovation model without paying much attention to the close interdependence between institutions and private profitability of new technology. Also, he overestimates the impact of marginal (price) changes in the market-place on land tenure etc. The political economy of agricultural research, particularly in many underdeveloped countries today, often reflects signals of markets that are highly concentrated, if not entirely monopolistic. The existing market structures are in turn a reflection of the institutions around land in agriculture. It is important, therefore, to integrate into agricultural research issues that are directly related to the effects of agricultural technology on income and employment positions of different groups of farmers in the society.

Research administrators in underdeveloped countries would be well advised to study Professor Ruttan's book, with particular attention to chapters on financing and management of international and national agricultural research facilities.

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