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BOOK REVIEWS

Evaluation of Damodar Canals (1959-60)—A Study of the Benefits of Irrigation in the Damodar Region, S.K. Basu and S. B. Mukherjee, Asia Publishing House, Bombay, 1963. Pp. viii + 152. Rs. 24.00.

During the Second Five-Year Plan period, the Research Programmes Committee of the Planning Commission sponsored a number of studies to estimate and evaluate the relative benefits and cost of some major irrigation projects in the country. This volume on the Damodar canals is the result of one of these.

The multi-purpose Damodar Valley Project was designed, among other things, to bring irrigation facilities to over 14 lakh acres of cultivated land in more than 4,500 villages spread over four districts of West Bengal. Water began flowing in the canals in 1957-58 and by end of 1958, when the study began, water had been made available to lands in about 2,000 villages. The study is based on a sample survey of agricultural conditions in these villages.

Prior to the construction of the new canals, a 25 year old canal system existed in the commanded area. The D.V.C. improved these canals and incorporated them into the new system. The irrigated farms in these old canal areas, the newly irrigated farms, and the farms in the vicinity of the irrigated villages provide the three different bases for estimation of irrigation benefits.

The report is divided into eleven chapters. The first two chapters relate to the general approach of the study and a description of the salient features of the D. V. C. and its command area. The third chapter presents details of the sampling design for the farm survey. The five subsequent chapters relate to the presentation and analysis of the data relating to the farms in the three different sets of villages, the structure of the farm households, the capital structure of the farms, analysis of inputs (this relates only to *Aman* paddy, occupying three-fourths of the total cropped area), the pattern of crops grown and per acre yields of crops. A whole chapter is devoted to an examination of the extent of utilisation of irrigation facilities mostly within a year or so of the availability of water, and the reasons for non-use. The benefit-cost estimates, presented in the tenth chapter, are based on the direct benefits relating only to increased crop production. A chapter is, however, devoted to discussing the secondary effects of irrigation on the economy, in the form of increased manufacturing and trading activity, etc. The last chapter summarises the findings and makes some concluding remarks.

The volume is comparatively brief, only about 150 pages, including two brief appendices. Brevity, however, is not always a merit, if it is at the cost of relevant basic data and information. In a study of this type, where the main objective is to estimate aggregate benefits and costs to the economy as a whole, a lot of detailed data is collected, not all of which is fully used for the purpose in hand. These data, however, would be of interest to scholars in making any detailed study of the region concerned for similar or other purposes. While there are references in the book to a second volume as well as appendices containing detailed structural data, these are in fact not there. Similarly, reference is made

to tables 'correlating yield per acre and amount of manure used per acre' (p. 54) but the tables are not there.

More important are omissions relating to characteristics of the old and new canals and the patterns of cropping. The entire cost-benefit calculation is based on the implicit assumption that the pattern of agriculture in the newly irrigated areas will ultimately be like the present pattern in the old irrigated areas. This however, raises a number of questions. What was the nature of irrigation in the old canal system before the D.V.C. took it over and improved it? Was water supply only seasonal or perennial? If the old canal system had only seasonal (say, in *Kharif* season) irrigation facilities, and the new D. V. C. system aims at perennial irrigation, then it is improper to consider the crop pattern in the 'old irrigated' areas as setting the norm for cropping under new perennial conditions. Indeed, the extent of double cropping in the old irrigated areas is not far in excess of that in the unirrigated areas, both being quite low, 10 per cent or less. It appears likely that perennial irrigation was made available even in old irrigated areas only after 1956-57.

The whole discussion of cropping pattern makes no reference to the possibility of any other crops being grown in the region as a result of perennial irrigation, except those that are already being grown. The patterns in the irrigated and unirrigated areas are practically the same. The Project Reports usually make such forecasts and their use would have been necessary, at least for the purpose of examining alternate possibilities. The implied forecast of cropping patterns and intensity of irrigation, if fair, would lead to the conclusion that the Damodar canals are essentially in the nature of protective irrigation works!

The doubts and difficulties arising out of inadequate detailing do not stop here. They affect the final calculation of the benefit-cost ratio as well. In the first place, the direct benefits are computed for only the 2,000 or so villages which had begun receiving irrigation water by 1958-59, and not for the 4,500 villages that will be ultimately commanded. This in itself would be a difficult exercise, in terms of the allocation of the total capital cost of the canal system including the head works, dams, etc. The difficulty becomes even greater when one finds that the total capital cost of the irrigation system is presented with only the following information about it: "So far as figures of capital outlay, annual interest charges, and annual working expenses of the D.V.C. canal system are concerned, we have taken figures from the mimeographed data book issued by the D.V.C. for the year 1960" (p. 137). It is not clear if the total capital outlay quoted relates to the costs of the canal system only, or also includes a part of the total costs on headworks, dams, etc., common to power and irrigation, and if these are only the actual costs incurred up to 1960, and if they relate only to the part of the area irrigated or to the whole project.

To add to the confusion, two separate benefit-cost estimates are made, one for the old irrigated areas and, another for the new irrigated areas. In regard to the old areas it is not clear if the capital costs relate to the original costs in the 1930's, or to only the additional costs of improvement incurred by the D.V.C. In regard to the new irrigation, the entry "Capital Cost upto 1958-59" leaves one guessing. Interest and depreciation are charged at 10 per cent of the capital cost,

and the working expenses of the irrigation system are put at some arbitrary figure, all this without any explanations whatsoever. In the absence of necessary explanations one is left guessing about the cost side of the estimates.

As for the benefits the Report takes the existing crop patterns in the three regions, and assuming the pattern and yield rates in the unirrigated areas as the base, computes the increased value of production in the new and old irrigated areas. The average yield rates for various crops in all the three areas show that the yields of many crops (like *Aman* paddy) under unirrigated conditions were higher in the two irrigated regions than in the unirrigated villages. One wonders why then the yields in the unirrigated areas were chosen as bases for estimating benefits of irrigation.

What is more, the benefits are netted by deducting something called 'Associated costs' in the table on p. 137. There is only a one line reference to these costs in p. 136 : "We have taken into account the materials used up in the process of production." What materials, one is left guessing ! In the chapter on inputs the entire discussion is in terms of the various costs of the *Aman* paddy only. Even here, discussions in pp. 64—65 gave the impression that differences in the level of fertilizer input in the different regions were not considered responsible for the variations in yield rates, the entire difference being due to irrigation ! No details of livestock maintenance costs are given.

All these uncertainties about the nature of irrigation, the future crop pattern, the procedure followed in estimating costs and benefits and the reasons for it, tend to reduce whatever significance one may otherwise like to attach to the benefit-cost ratios.

The structural analysis, attempted in some detail, often leads to rather doubtful conclusions, particularly when they are based on very small differences in the estimates for the three regions. A more careful discussion of the problems as well as the measures used (not to mention some pre-publication editing,) would have enhanced the usefulness of the study.

NILAKANTHA RATH

The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure, Ester Boserup, George Allen & Unwin Ltd., London, 1965. Pp. 124. 22s. 6d.

This study is perhaps better described by its sub-title than by the main title. Its main objective is to show that "the actual historical course of agriculture, including the development of patterns and techniques of cultivation as well as the social structures of agrarian communities," is understood better by viewing population growth as "a major determinant" of technological change and development in agriculture (pp. 11, 12, 56). The author emphasises the contrast between her view and the Malthusian approach that because of the relative inelasticity of the supply of food, autonomous changes in agricultural productivity determine popu-

lation growth. However, since 1798, when Malthus wrote his *An Essay on the Principle of Population*, his opponents have frequently expressed a view similar to Mrs. Boserup's and the latter's basic contention is hardly new.

The analytical argument of this book is nevertheless interesting. The frequency of cropping is taken as the key variable indicating the increasing intensity of cultivation in response to population growth. The time-horizon in view is a truly long period, a historical perspective possibly covering centuries, although cross-sectional comparisons of conditions prevailing in different parts of the world are employed to indicate the possible or probable course of historical evolution. The following five types of cultivation are distinguished as showing progressively more intensive land use : (i) Forest-fallow cultivation ; (ii) Bush-fallow cultivation ; (iii) Short-fallow cultivation ; (iv) Annual Cropping and (v) Multi-cropping. "A gradual change" from extensive to intensive land use, marked by the five stages in the form of the above-mentioned cultivation patterns, is suggested to be the "typical" sequence of agricultural development, associated with rising human numbers. Differences in cultivation systems are believed to be not "adaptations to different natural conditions" but a result of "differences in population density" (p. 117). The adoption of the hoe or the plough for cultivation and of methods of fertilization or irrigation is seen as a response to the need for and feasibility of using these tools or methods in the course of movement towards a higher frequency of cultivation. In effect, it is argued that in view of the likely decline in the output per man-hour consequent upon a shortening of the fallow period and other changes, the pressure to raise crop yields in order to produce additional food for the growing population is a necessary, though not sufficient, condition for the adoption of technical changes which also require longer working hours.

The above argument is buttressed by reference to the Latin American experience of immigrants provided with large holdings which suggests that a decline in the density of population may cause technical regression or a relapse into more extensive systems of cultivation (pp. 62-63). According to the author, a sparse population and primitive techniques form a vicious circle and "population increase is a condition for economic development in its first stages" (p. 74). The advantages of increasing population density consist of (a) the higher efficiency of labour resulting from the adoption of habits of harder and more regular work ; (b) the improved scope for a more intricate division of labour ; and (c) the improvements in agricultural productivity made possible by increased urbanization (concentration of population in selected centres), and the provision of better tools, better administration, education, etc. (pp. 75, 118). The author is aware, of course, that these advantages are conditional upon necessary agricultural investments being undertaken and concedes that "this condition may not be fulfilled in densely peopled communities if rates of population growth are high" (p. 118).

This laconic concession may, perhaps, sound very important and Professor Nicholas Kaldor refers to it in his foreword. But recent research has tended to suggest that even sparsely populated countries might achieve faster economic development if their rates of population were lower than what they are at present and what they are likely to be with declining mortality and virtually unchanged

fertility.¹ One of the important factors responsible for these divergent viewpoints is the fact the author of the present study views the impact of population growth in a historical perspective where *laissez-faire* was the rule. A conscious planning for agricultural or economic development and the widespread concern for the social goals symbolised by the concept of 'welfare state' were both, by and large, utopian objectives. In the opinion of this reviewer, the widespread adoption, in recent years, by most societies of deliberate economic planning for development tends to mitigate the role of population pressure as an incentive for agricultural development. In the new circumstances, differences in the age composition of the population and in the number of new entrants to the labour force that result from differentials in the trends in vital rates of a community significantly affect its capacity to mobilize investible resources and to accelerate the tempo of development. Further, if one assumes economic rationality on the part of the people (and the author herself questions the hypothesis postulating non-response to economic incentives in pp. 65-69), a suitable combination of policy measures by the State, properly reflecting the needs of the community and the available opportunities, can and should, promote the development and adoption of the superior techniques of production. An exact outline of a "combination of policy measures" that would attain this is, however, outside the scope of this review.

In one of her empirical discussions as to why rapid population growth in India has not accelerated agricultural development, the author points to the unfavourable terms of trade of agriculture *vis-a-vis* the non-agricultural sector and the light land taxation in the country. According to her, these policies, strikingly contrary to those practised by Japan at a similar stage of development, explain why the rapid growth of the Indian population becomes "a serious deterrent to development of the non-agricultural sectors" (p. 111). She also quotes two Indian Farm Management Surveys for 1956-57 to point to the unremunerativeness of intensive cultivation (p. 69n.) The degree of validity of this observation of non-profitability of intensive cultivation is, in all probability, a moot point; but the author's criticism of the current policies in India is widely shared and is, in part, officially recognised.

Besides the points discussed above, the book contains several interesting insights into the role of population and frequency of cultivation in influencing the institutional framework of agriculture, *i.e.*, land tenures or the pattern of agricultural employment. For example, it is rightly pointed out that much of what is called "underemployment" by persons making quantitative estimates of its incidence is seasonal unemployment associated with a cultivation system of short fallow and/or voluntary unemployment. It prevails also in communities with no population pressure on land and is, actually, more widespread, though not clearly recognised, under the forest-fallow or bush-fallow types of cultivation. Much of this seasonal unemployment tends to disappear with irrigation and multi-cropping. Before ending, the reviewer wishes to note that in a paper submitted for the Second World Population Conference at Belgrade, the present author has herself argued that "many of the changes which are occurring when population growth is accompanied by intensification of land use have a feed-back effect on either mortality rates or birth rates. Thus, there is a two-way connection between

1. See a discussion relating to Mexico in: Ansley J. Coale and Edgar M. Hoover: *Population Growth and Economic Development in Low-Income Countries*, Princeton University Press, Princeton, 1958; and Ansley J. Coale: "Population Growth and Economic Development" in: (Ed.) Philip M. Hauser: *Population Dilemma*, Prentice-Hall, Englewood Cliffs, 1963.

demographic trends and agricultural development." This certainly is a more balanced and valid point of view than that emphasised in this book.

On the whole, the present study promises to prove more interesting for students of economic history than for persons studying "conditions of agricultural growth." However, as has been shown above, even the latter will find in it a stimulating point of view on many items that are generally discussed in the context of agricultural planning in under-developed countries.

PRAVIN M. VISARIA

Records of Profitable Farming, G. H. Camamile and T. W. D. Theophilus, Hutchinson and Co., London, 1964. Pp. 173. 21s.

This book is written with a basic purpose to develop new methods of record keeping and farm accounting so vital to help increase the level of profit in a rapidly changing farm industry. The authors claim that the past methods of accounting and record keeping too often fall short of the minimum standard needed for present day farm business purposes. As such, in the first part of the book a new approach to record keeping is developed supplemented by facts specially collected for the purpose of management decisions. The second part of the book deals with the elaborate discussion on economic measurement of resource availability and of efficiency on resource use and the various analytical and planning tools in current use of farm business analysis.

The common practice so far in farm management research has been to measure the economic efficiency of resource allocation through the analysis of the accounts for the whole farm. The obvious criticism raised against the whole farm analysis is that it does not indicate the extent to which the different enterprises use the resources and contribute towards the profitability of the farm. In order to overcome this defect and to improve the quality of efficiency measurements, this book suggests the method of gross margin calculated from each enterprise under operation combined with account analysis. In this approach the farm business is regarded as a group of individual productive enterprises centred on the farm unit which provides common devices for all enterprises and the necessary combination of processes. The types of analysis suggested seem to be complementary and they often have to be applied separately because of the state of most farm records. This kind of analysis, no doubt, provides a very precise understanding of the nature of relationship between the level of inputs and outputs for each enterprise and helps the farmers in relating physical results from individual enterprises to their profitability. The management decision is, thus, taken in right perspective.

In terms of the planning techniques, the authors have attempted to show the processes and mechanisms of budget preparation—both partial and complete. During recent years, farm management research workers have studied in greater detail of these planning techniques than what they are reflected in the book. The illustration on complete budget takes into account only the decision pertaining to short run resource requirements. The problem of generating the technical coefficients for long run plan seems to have been completely ignored. Evidently, one of the basic assumptions set forth in applying the tools of analysis—either budgeting or linear programming—is of the limiting resources. The authors

do realise the implications of the plan if this assumption goes wrong but they fail to indicate the alternative methods of overcoming this problem. The contribution of the authors on tools of analysis is rather marginal.

The third part of the book draws careful attention on control of resources for raising farm profit. Once the defect in resource allocation and enterprise combination is identified through efficiency measurement and planning technique is introduced to eliminate the weakness and to improve the resource allocation, the next obvious requirement is for control of the plan in practice. And this control, as suggested in the book, can be provided by means of regular comparison of actual results with a previously determined plan. The control is used by assessing the performance of individual enterprises in terms of their gross margins and these are in turn incorporated in the final accounts. For this purpose, the authors have designed elaborate farm records which could provide proper means of regular comparison, in financial and physical terms, of actual results with the plan. The examples illustrated in the book are very useful.

In the last part of the book the authors give in detail mechanical procedures of recording physical and financial data. Elaborate suggestion has been made by the authors to improve the methods of recording financial as well as physical data and to meet the need for more accurate information. But despite all their elaborate suggestions, the situations for which illustration are given are very limited and doubt is expressed if the recording forms evolved will meet the requirements for varying budgetary situations. Their contribution would have been still more had they developed the 'standard' recording system keeping in view a few typical management situations. Furthermore, the sequence in which the three major farm recordings—financial records, depreciation and physical records—have been put is neither systematic nor does it envisage any logical link between them.

The book would prove very useful to farm management research workers. This will help them in improving the quality of farm records in view of the technical coefficients required for purposeful farm planning.

S. C. JHA

Co-operative Law in India—A Disquisition, Indian Co-operative Union, New Delhi, 1964. Pp. 124.

In this book, the Indian Co-operative Union has presented in one volume three of its monographs published earlier in 1959 and 1960.

Part I of the book contains a review of the Report of the Committee on Co-operative Law which had been appointed by the Government of India in 1956. After questioning the very rationale of the composition of the membership of the Committee and the methodology followed by the Committee, the Indian Co-operative Union has offered its searching criticism of the recommendations of the Law Committee. Its exposition is extremely lucid. It has concluded its observations thus: "The Committee which was set up to simplify Co-operative Law and modify it to enable co-operative societies 'to play an increasingly important role' in the development of the country has ended up by setting up the

Registrar's rule.....Under the existing laws the Registrar was at best called a 'benevolent dictator' or a 'trustee' but the revision suggested by the Law Committee turns him into an absolute autocrat." (p. 20).

The Union has recommended complete rejection of the Law Committee Report by the Co-operative Movement as well as the Government.

Part II of the volume deals with Co-operative Law—Plea for a Perspective. After underlining the ideological aspirations of free India, the study has pointed out how the co-operative form of organisation answers well the requirements of the new social order. While presenting an assessment of the co-operative movement, it has observed: "Whatever co-operative paraphernalia we possess at present is not, by and large, the organic creation of a popular movement." (p.34). The study has rightly pointed out how co-operative legislation in India was founded on the outmoded English Friendly Societies Act of 1793 and how the later modifications made the legislation more rigid and authoritarian cutting at the democratic basis of the co-operative movement. Discussing the role of the State *vis-a-vis* the co-operative movement it has rightly observed that "the presence of the State in the field of co-operation should be viewed as a temporary and transitional measure." (p. 59). This, the Union believes, represents the general approach of the Government of India, the Planning Commission, the National Development Council and the co-operative movement in India. In the opinion of the Union, the only note of dissent to this approach has been struck by the All-India Rural Credit Survey (p. 60). This remark, however, the reviewer believes is uncalled for. It may be noted that the All-India Rural Credit Survey Committee has stated more than once that State participation recommended by it is only meant for imparting the initial strength to the movement and it should be administered "in such a manner that this paves the way for the co-operative forces to gather strength and gradually replace the finances and services made available initially by the State." (Vol. II, The General Report, p. 332).

In the last part of the volume, the Union has presented new features of the co-operative legislation proposed by it. The basic theme of the various recommendations as rightly claimed by the Union is to make the movement member-controlled, self-regulating and democratic. While appreciating this laudable objective, the reviewer, however, wonders whether co-operative legislation however modified, can by itself lead to the achievement of the objective. Co-operative legislation can at best provide the climate conducive to the growth of the movement. But in the ultimate analysis, the growth of co-operative democracy depends upon the quality of membership, the vitality of leadership and the viability of the co-operative institutions themselves.

The Indian Co-operative Union deserves to be congratulated for bringing out such a thought-provoking publication. The study merits the attention of all the students, administrators and legislators interested in the subject of co-operation.

K. N. NAIK

Policy for United States Agricultural Export Surplus Disposal, Elmer L. Menzie, Lawrence W. Witt, Carl K. Eicher and Jimmie S. Hillman, University of Arizona, College of Agriculture, Agricultural Experiment Station, Technical Bulletin 150, Tucson, Arizona, 1962. Pp. 111.

This bulletin summarises the background to and the provisions and effects of the farm surplus disposal programme of the U.S.A. For quite some years now, particularly since the end of the World War II, the U.S. has been faced with the problem of growing agricultural surpluses, arising out of fast changing domestic supply conditions and a price support programme. While efforts have been made to control and reduce aggregate production, the surpluses have shown no signs of decline. Outlet for them has been sought in foreign markets, and the present day surplus disposal programme is a direct outcome of this effort.

The approach of this study is formulated in the Preface in the following words : "The abundant productivity of American agriculture needs outlets abroad and, properly focussed, can make substantial contributions to our foreign policy."

The problem of surplus disposal is based against the background of the role of exports in American agriculture. A chapter reviewing the trends in agricultural exports shows that in the post-war period, the relative level of exports has been kept up, thanks to export subsidy and concessional sale programmes (like P. L. 480), which account for nearly two-thirds of total U.S. agricultural exports. This proportion is much more important in case of grains, cotton and tobacco.

The desire to maintain the 'normal' share of U.S. in world agricultural exports has been associated with the necessity of finding outlets for growing domestic surpluses. While the study casts doubts on the relevance of any concept of 'normal' in this matter in the context of the changing world economic conditions, it is quite clear that developing world markets for the American agricultural products have been one of the objectives of the export surplus disposal programme. In a chapter describing the main features of the various surplus disposal programmes, the authors draw attention to the very title of Public Law 480—"Trade Development and Assistance Act," which emphasises the original orientation of the programme. Indeed, it was "hoped that farm prices would increase as sales and disposals came into closer balance with production and that this would permit the government to retire from intervention in agriculture." This proved illusory and P. L. 480, though still considered a short term programme, has continued. The emphasis has changed to surplus disposal as a part of economic aid for development, which would require and sustain increased American agricultural exports.

The rest of the book is devoted to a discussion of the effects of this surplus disposal programme on the giver, the receiver, and the competing nations.

The chapter on effects on receiving countries summarises some findings in regard to a few receiving countries like Israel, Columbia, India and Tunisia. (Detailed studies about some of these and other countries have been published since this bulletin was put out.) The experiences of various countries have been different, though the effect on local agriculture would appear to have been to dis-

courage local production of the imported commodity, as the experience of Columbia would suggest. This may or may not be harmful, but that is another question! The limited role of food aid in financing development, contrary to the original F. A. O. estimates has been stressed. The mistake of considering food aid as a measure to improve dietary conditions in poor countries has been pointed out. No mention is made of the fallacious notion of P. L. 480 aid being 'twice blest'—once in the form of food, and again in the form of counterpart funds. And finally, it is pointed out that food aid cannot be a substitute for dollar aid.

The chapter on effects on competing countries gives details of the devolution of policy in this regard. The prices of the concerned commodities have relatively declined and the competing countries have lost markets to the U.S.A. While many competing countries are also developed, it would have been necessary to draw a distinction between the competing wheat exporting countries which are mainly developed and the rice exporting countries that are mainly under-developed.

The chapter on effects of P. L. 480 programme on the U.S.A. itself is interesting as an account of the various ramifications of this programme in the U.S. economy, and in its estimation of the net cost and value of the programme to the U.S.A. The net benefit of the programme in financial terms is put much near zero (varying between 5 per cent net loss to 11 per cent net gain). It is pointed out that continuation of P. L. 480 is a perpetuation of the maladjustment of resource allocation in the U.S.A.

And, finally, in terms of its usefulness for foreign policy, the authors do not feel the results have been uniformly favourable. "In some cases they have helped to prevent an adverse (to U.S.) shift in a government's foreign policy..... In some cases nations have felt that they are doing the U.S. a favour by helping to consume a 'burdensome surplus'."

All in all, it is an informative little book for all who want to know something about the American way of looking at the P. L. 480 programme.

NILAKANTHA RATH

Economic Crises in World Agriculture, T. W. Schultz, University of Michigan Press, Ann Arbor, U.S.A., 1964. Pp. viii + 114. \$3.50.

Prof. Schultz asked this question nearly two decades ago : Why incomes in agriculture are more unstable ? He got the answer : Instability is largely imported from the other sector, and hence the remedy lies with it. He next asked : Why some regions are poorer than others ? His answer was : Imperfections in factor markets. A few years ago he turned his investigation to the problems of traditional agriculture. In their regard he enquired : Why agricultural production is stationary in some countries while at the same time it makes rapid strides in other countries ? The book under review carries further the same investigation. Prof. Schultz raises questions mostly as a humanist (and all economists are humanists) but he answers them as a scientist. In regard to agriculture most of the economists carry the humanist in them far too beyond in the

analysis of the problems. This is a vital difference and hence Prof. Schultz gets answers to most of his questions very much different from those obtained by other economists.

In regard to traditional agriculture, the answers to low production so far provided were: (1) small size of holding, (2) lack of interest of farmers in change, and in material prosperity, (3) vast unemployment, (4) lack of saving habit and (5) cultural restraints of traditional societies. These answers found place in most of the text-books on agriculture for full fifty years. The list was sometimes extended to include (1) prevalence of tenancy and rack-renting, (2) inefficient use of available resources (cow-dung burning—the usual illustration), (3) exploitation through market mechanism in regard to marketing of products and obtaining of finance (illustrations were moneylenders or moneylenders-cum-traders), (4) religious beliefs (illustrated always in case of India through vast and famished population of cattle.)

Apart from the traditional answers given to explain the traditional character of agriculture in once-called backward countries, some of the recent answers included (1) lack of demand for products, and (2) lack of comparative advantage in agriculture in these under-developed countries (the latter one, a more sophisticated answer of the two). Some of them described various vicious circles of poverty—(low income-low saving-low income, etc.) and prophesied gloom.

With passage of time the problem of traditional agriculture seemed to become more complicated and answers more elusive. To take illustration of India, almost all expert advice was given trial (fair even in failure)—land reforms, country-wide extension, later changed into intensive areas selected for development, broadening of institutional base for credit supply, investments in irrigation and other material resources and lastly farm management experiments. One may find fault with them and say they are either limited in scope or are not enthusiastically taken up. That would rarely solve the riddle. If the promise had a chance to be fulfilled, least that can be expected would be lack of enthusiasm.

Experience in growth of agriculture on international plane has been diverse to the point of being baffling. Russia, Japan, Taiwan, Israel, India, Argentina are spots representing varying hues of this experience. None of the traditional answers would seem to apply commonly to all the countries in illustration.

Prof. Schultz approaches the problem therefore from a different angle. All other angles, according to him, lead to blind alleys. According to him, in traditional agriculture there is nothing wrong with allocative efficiency, nor are farmers non-responsive to economic incentives. They save and invest and respond to price signals. In fact their response is as well as that of farmers in advanced economies. The answer lies mainly in lack of incentives to produce more in traditional agriculture. He traces this lack of incentives to three causes: lack of (i) education, (ii) research and (iii) extension. What is more important is his emphasis on the complementarity among these three 'inputs' with a larger brunt falling on education.

The book under review is not a treatise and hence, understandably, the evidence produced in support of hypothesis is limited. The earlier publication of Prof. Schultz dealing with the same theme and titled aptly as 'Transforming Traditional Agriculture' gives the analysis more fully.

Both books together, one gets glimpse of lot of wisdom and deeper study that might have gone into the evolution of the new, bold, challenging and even inspiring hypothesis. But one still gets an impression—both books together—that it has not gone very far beyond the stage of hypothesis. This hypothesis would need a close scrutiny, wider testing and trial over a period of time.

Prof. Schultz in this present book does point to the experience of Japan as an evidence and so also that of some of the developed countries like U.S.A. But compared to the negative evidence contained in experience of countries with traditional agriculture, the positive evidence regarding the role of education and other inputs is less weighty.

Chimera of growth changes its colour too often. The reformists even now point to land reforms in post-war Japan as the spark-plug of recent growth in agriculture in that country. The technologists claim the source of recent growth in agriculture in some of the developed economies to advances in micro-biology. Some of the economists would still like to point out to high and stable prices in countries where price support programme operates as a major factor contributing to increased production. Even in regard to education one may still point to early experiences in introducing education in rural areas of the traditional agriculture, the experience none too happy, none too encouraging. Is this due to the fact that education as an input has its demand derived from the demand for the final product?

Economic growth is a multi-faced phenomenon. Whereas most economists granted this, very few framed their models accordingly. If we acknowledge that in the new hypothesis of Prof. Schultz a major gap in the understanding of the growth process has been filled up we shall appreciate the importance of his mighty contribution better. Allocation of importance to various elements in growth, their changing roles through various phases of growth, and their inter-relations are still a more challenging task largely unfulfilled but being gradually conquered. In this ultimate victory, in the field of 'growth of agriculture', contribution of Prof. Schultz would be pioneering. Like his past works, this publication together with earlier one 'Transforming Traditional Agriculture' will inspire several research studies for sufficiently long time to come.

C. H. SHAH

Agricultural Co-operatives in India—A Field Report, Daniel Thorner, Asia Publishing House, Bombay, 1964. Pp. viii + 119. Rs. 12.00.

Dr. Thorner writes with a well stacked reference cabinet by his side. He believes in live contacts with the people and the problems, and his reportage acquires a sort of authenticity by frequent quotations in the popular vernacular idiom.

Part II of the book—Field Notes—contains the detailed notes of his visits to 117 co-operatives of various types all over the country. These societies were visited in early 1957-59 ; and as such the account cannot be considered as fully representing the situation at present, though there is no reason to believe that the situation has changed radically for the better or the worse since then.

Part I of the Book—Co-operatives in the National Setting—is however written much later and, therefore, can be taken as reflecting the author's assessment of the current situation in regard to agricultural co-operation and allied problems. It also gives a clue to the understanding all the slant, one cannot fail to notice in his account of the field trips.

In his Foreword written in May, 1962, Dr. Thorner states, "A decision had been taken at the highest level to go no further with the integrated credit scheme which had been started at the recommendation of the Reserve Bank. As against the larger-sized societies favoured by the Bank, the new policy emphasized single village, multi-purpose service co-operatives. These were proposed as a means of transition to co-operative joint farming." Dr. Thorner has probably the November, 1958 Resolution of the National Development Council in mind while making the above statement. Though at one time there was a rather strong opposition to the manner in which the large-sized societies were being sponsored, it is entirely erroneous to suggest that the policy either of the integrated credit or larger-size societies has been given up. But there is not the slightest hint in the National Development Council Resolution about the abandonment of the integrated credit scheme. On the contrary, it emphasises the importance of the development of co-operative marketing societies, linking of credit with marketing and promotion of co-operative processing. As for the single village service co-operatives, all that the National Development Council Resolution states is that "the co-operatives should be organised on the basis of village community as the primary unit." But, it added, "where villages are too small, it will be convenient to form them into larger groups with a population of about 1000." In any case, the National Development Council Resolution of 9th November, 1958 was not the last word on the question of co-operative policy. As a matter of fact, the Government of India appointed in November, 1958 a Working Group for considering the administrative and organisational arrangements required for implementing the Resolution of the National Development Council. The Working Group recommended two patterns, the second of which provided for a credit union covering a compact group of villages within a radius of 3 miles from the headquarters and with a population of about 4 to 5 thousand for the purpose of dispensing credit. This policy was officially adopted and communicated to the State Governments by the Government of India in their Policy Letter of May, 1959. In September, 1959, the Government appointed a Committee on Co-operative Credit under the Chairmanship of Shri V. L. Mehta. The Report of the Committee was published in May, 1960. Its recommendation on the size of the primary unit was as follows :

"The co-operative aspect is as important as that of viability, the co-operative society cannot afford to enlarge itself into an impersonal institution. The membership should not be too large and the area too extensive. No village included in a society should be at a distance of more than 3 or 4 miles from the headquar-

ters." The majority of the Committee were "of the view that the population covered should not exceed 3 thousand (*i.e.*, 600 families or 500 cultivating families)." The recommendations of the Mehta Committee were accepted by the National Development Council at its meeting on 13th September, 1960. The Policy Letter issued by the Government of India in October, 1960 while emphasising that the co-operative should be organised on the basis of village community, also fully endorsed the importance of viability. On the question of the size of the primary unit, it was stated that the maximum limit of population covered should be restricted to 3 thousand with a proviso that no village included in it would be at a distance of more than 3 or 4 miles from the headquarters villages. It is, therefore, not quite clear from where Dr. Thorner writing in May, 1962 got the impression that decision had just been taken at the highest level to "go no further" with the integrated credit scheme recommended by the Reserve Bank.

Dr. Thorner gives a list of functions which the service co-operatives are supposed to perform. The list of functions includes such assorted activities like promotion of animal husbandry and village industries, contour bunding, soil conservation and consolidation of holdings. Dr. Thorner rightly criticises the inclusion of such varied and complex activities in the task entrusted to the service co-operatives. To the best of one's knowledge, however, hardly any service co-operative undertakes any of these functions, nor is there any serious attempt on the part of the Government to make them do so. Dr. Thorner questions the advisability of enrolling 100 per cent of village families in the service co-operatives. He cogently argues that "simply bringing the weaker families into the co-operatives does not automatically improve their basic economic position. To gather all these insolvent people up into the co-operatives is doubtless a dramatic gesture. But it means that they carry all their unsolved problems with them into the co-operative. To enrol such families wholesale into the co-operatives before putting their affairs on a better footing is to invite the danger that they will drag the societies down with them."

This leads the author to his favourite theme of the *structure of village power*. It is his firm conviction stated in this book and in his other writings that "the village oligarchs have made a mockery of the land reform legislation, devising 1001 ways of blocking or getting around the law. Their relations and friends in the State legislatures have eased their tasks by putting numerous loopholes in the laws or adding crippling amendments." This reviewer would consider these observations not merely as unbalanced and uncharitable, but as positive distortions. No one claims that the land reform legislation is without any flaws or that it has been implemented with the earnestness and efficiency needed for the purpose. But to suggest that the loopholes in the laws were inserted deliberately with a prior view to defeat the purpose of land reform is to make an accusation of political chicanery against the sponsors of the land reform legislation which would be hard to sustain. The author himself has stated in a paragraph preceding the above observations that "The great zamindars of the north and once-haughty *mirasdars* of the south have lost much of their grandeur. A good deal of land has changed hands. Universal suffrage has come. Compulsory labour (*begar*) has mostly gone." This is not the place to give a detailed assessment of the land reforms in India. But there can be little doubt that the agrarian structure by and large is today much less inequitable than what it was before the introduction of land reforms,

particularly in the erstwhile zamindari areas from which intermediary tenures have been abolished. The author cites a detailed study made for the Planning Commission on the Bombay Tenancy Act of 1948 and observes that "its implementation from 1948 to 1953" was "a dismal failure." I do not know whether the authors of the report would have liked to express their judgment in the same language. However, the important point is that the study was made before the major amendment in the Bombay Act, which stipulated that on 1st April, 1957, all tenants would be deemed to have purchased the leased land from their land-owners, was enacted. It should be admitted that even the amended Act has not been a spectacular success. Yet according to the latest information available, as many as 5 lakhs of tenants acquired ownership right in western Maharashtra State. The point is that on such complex problems like land reforms such snap judgments as 'dismal failure' and 'mockery' need to be avoided and if the author does not feel that way, the discriminating reader should not take them at their face value.

The same may be said about the author's final judgment on the Co-operatives in the National Setting. According to him, "Co-operatives are only one of several means by which the more powerful families exercise influence and authority over the mass of smaller holders and labourers." This surely is a highly uncritical appraisal. The disbursal of loans by the co-operative societies has increased from Rs. 24.21 crores in 1951-52 to Rs. 257.37 crores in 1962-63. Surely all this money was not appropriated by the powerful families. A large portion of this has been availed of by farmers whose only alternative was to borrow from the moneylenders at exorbitant rates of interest. Similarly, the co-operative marketing societies, with all their defects and limitations, have marketed Rs. 108.8 crores worth of agricultural produce. In some districts of Gujarat as much as 75 per cent of raw cotton was marketed through the co-operative societies. Surely, all these cotton cultivators were not powerful families. In the field of co-operative processing also, the co-operatives have made a notable advance. It is not suggested that the co-operative movement suffers from no shortcomings and blemishes; and the reader is grateful to Dr. Thorner for drawing pointed attention to these. But to condemn it outright as one of the several means of exploitations by powerful families, and say practically nothing about its good points and achievements is to deliberately give distorted picture of the role of co-operatives in India. The Field Notes by Dr. Thorner give some revealing information but as for the overall appraisal of the co-operative movement in India, Dr. Thorner's study does not represent the true picture.

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