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## BOOK REVIEWS

*Water, Cereals and Economic Growth in South & East Asia in the Fifties & Sixties*,  
Boudhayan Chattopadhyay, People's Publishing House Pvt. Ltd., New  
Delhi-55, 1977. Pp. ix+389. Rs. 40.00.

This book surveys the role of water and cereals with particular reference to rice in the context of economic growth in South and East Asia during the fifties and sixties with a view to examining the premises of the agricultural strategy proposed for the region under the UN Second Development Decade with the available performance indicators. It explores the requirements for the internalisation of growth by the economies of the region and argues that water and the peasant, which are both indigenous, constitute two of the most efficient bootstraps for these economies to pull themselves out of the low level of equilibrium trap and/or an overly political dependence on foreign resources.

The book is divided into nine chapters. Chapter One provides a general overview of the economies of the ECAFE region which suggests that "national planning policies operating through the instrumentalities of the incremental capital-output ratio of public expenditure, the sectoral shares of agriculture, overhead, etc., have had little to do with the differences in growth performance of these economies" (p. 18). It is inferred that per capita foreign assistance (when it reached a critical level) has had a more proximate impact particularly in reversing the tendency toward deceleration of growth rates in the East Asian countries and Pakistan by the first half of the sixties. However, any student of economic growth would know that growth performance is primarily determined by a complex of social, cultural, economic and political factors and it seems too naive and simplistic to match some crude and partial determinants with growth rates of output and conclude that per capita foreign assistance has had a more proximate impact.

Chapter Two is devoted to a discussion of the costs of the breakthrough in agriculture. The technological assumptions underlying the package strategy which initiated the breakthrough, led to an incremental capital-output ratio of at least 3.0 for agriculture whereas the planned or actual coefficients in the region have so far been nearer 1 or less. Therefore, it is argued that unless there is a drastic reallocation in favour of agriculture, which will in itself be at the cost of the industrial sector, the new package strategy will increase the dependence on foreign aid and further externalise the engine of growth instead of internalising it. Much of this criticism, however, appears to be misplaced if not totally ill-founded. The package strategy has demonstrated the vast potential for foodgrain production in this region and it may be pointed out that the exploitation of this potential has enabled them to attain self-sufficiency in food and thus avoid food imports and dependence on other countries. To adapt the technology to the peculiar factor endowment of these countries, *i.e.*, to make it less capital intensive is the job of the research scientists of these countries themselves.

Chapter Three deals with the supply of water, the limiting input which

is identified as a key variable in the proposed parametric shift in the agricultural production function. It is, however, observed that "the sophisticated water management and ecological control required for the 'big leap' of the HYV package can be attained, if at all, by concentrating all available resources in a very limited portion of the rice area which must necessarily starve other areas of resources" (p. 77). But it should not be forgotten that when a country's economic stability and political independence is jeopardised due to chronic food deficits it seems quite rational to develop sophisticated irrigation infrastructure in the better-endowed areas first in a bid to overcome food crisis and then develop the relatively less-endowed areas.

Chapter Four provides historical evidence of the agricultural breakthrough in the pre-war Japan, Taiwan and Korea which indicates that irrigation and water management prepare the transition to the last stage of the Ishikawa-Takase model which approximates to the package strategy model. "The capital costs of raising the quality of water management to the standards required for optimum use of the HYV package in rice would require public investments in agriculture far exceeding the existing levels of savings in agriculture, unless it is assumed that only the very well-to-do landowning strata are expected to undertake these investments on their own and provide the 'breakthrough' to the economy" (p. 97). In this regard the author seems to forget that the Government can play a crucial role in fostering the adoption of minor irrigation technology by all size categories of farmers through liberal credit facilities provided through the land development and commercial banks as in India.

Chapter Five brings out the implications of farm size and tenurial relations for growth and equity in agriculture.

Chapters Six and Seven focus on the experience of the package strategy in India and certain other South-East Asian countries in the sixties. It is contended that the Ishikawa-Takase model for the development of rice production would have general validity for the countries in this region. However, there is an urgent need for a thorough reassessment of the entire irrigation and water control strategy underlying this model from the three-fold criterion of stabilising harvest fluctuations, economising water use and identifying the optimal combination of size of irrigation structure, construction period and factor proportions. The study also highlights the need for a thorough re-examination of costs and returns of a given allocation of investment resources to the package strategy from the standpoint of the economy as a whole in terms of the criteria of equity and efficiency. It doubts not only the feasibility but even the desirability of aiming at very high growth rates in respect of superior cereals and suggests that the wisdom of a heightened emphasis on dry farming practices and less water consuming inferior cereals and pulses needs to be seriously considered. But all depends on how fast we meet with success in evolving high-yielding varieties of different crops suitable to the agro-climatic complexes of the dry areas.

Chapter Eight indicates that although the Japanese-Taiwanese model of agricultural development would appear to be technologically as well as

institutionally *the* model for the rice economies of the region, yet the conditions under which technological development went ahead in these economies within the capitalist framework are unlikely to be replicated anywhere in South and East Asia. However, the Japanese-Taiwanese experience provided the US strategists led by Ladejinsky a model of land reforms and agricultural development as a response to the challenge of the Chinese revolution. Ladejinsky's strategy effectively poses the possibility of containment of a programme of land distribution within the framework of capitalist free enterprise economy. This programme is similar to the land reforms suggested by various committees in India. The basic limitation of the US liberal model and the Indian populist model, according to Chattopadhyay, "is their respective hostility and indifference to the question of using any land distribution programme as the *means* towards successively higher forms of *co-operative*, and ultimately collective property". The author, thus, feels that the Vietnamese experience holds certain object lessons for all concerned as a model which goes beyond the ideological premises of the American liberal model as well as the Indian populist model. The model is also justified because of its accent on intensive use of indigenous resources and conspicuous absence of any element of compulsion.

However, the author ignores the long history of co-operative endeavours in the areas of credit, marketing, farming, etc., in the country of his own origin, *viz.*, India. The author fails to show the factors responsible for the success of high level co-operatives in Vietnam while similar experiment in India degenerated into an eyewash for availing governmental facilities and for escaping legislation relating to ceilings on land holdings.

Chapter Nine highlights that inter-regional differentials in growth rates have increased over the period and infers that these widening gaps are a consequence of the resource allocation policies for the creation of irrigation facilities among States. The author adds that in so far as irrigation is the critical leading input for the HYV technology, particularly in rice, the allocation policies would also govern the spread of the HYV area over the States. It is argued that these policies can be justified only if the bulk of the additional output generated can be mobilised and funnelled through the public distribution system, and the additional income surpluses siphoned through appropriate fiscal system—both of which have so far gone by default in India (p.241).

The study envisages the agrarian economy as a multivariate system consisting of three components—structural, output and input—which are found to hang together indicating that the structural set is capable of sustaining and absorbing technological changes and growth momentum. For further acceleration of this self-reinforcing system, institutional intervention could be of a two-fold nature: (i) reduction of land concentration, and (ii) reduction of incidence of landless labour.

The relationship of gross income and cost per hectare to the size of holdings has also been examined and it is concluded that small farms were better than the large ones in 1967-68. This picture was, however, reversed in 1971-72, when both gross income and cost per hectare were higher in respect

of large holdings (p.319). It may, however, be pointed out that some of the latest studies indicate that with the adoption of the new farm technology by the relatively small size classes of farmers, the size-productivity relationship has again tilted in favour of small farmers.<sup>1</sup> This indicates that even in the model areas of the green revolution, reduction in land concentration will promote both growth and equity. However, it must be added that this growth with social justice can well be ensured without any resort to non-capitalist Vietnamese model of development recommended by Chattopadhyay. Further, it is worthwhile to mention that with the percolation of benefits of the new technology to the lower size categories, a trend towards more egalitarian distribution of incomes sets in.<sup>2</sup> This trend can undoubtedly be hastened through deliberate policies aimed at helping the poorer farmers by providing cheap and adequate supplies of credit and agroservices through the institutional agencies.

On the whole, this book is an important contribution to the scarce literature on agricultural development in South-East Asia. It provides a comprehensive comparative account of the development experience of a few selected countries of the region with a view to identifying the crucial shift variables. This penetrative study will undoubtedly provide enough food for thought to the scholars and policy-makers in these countries irrespective of its ideological underpinnings.

A. J. SINGH

*Overdues in Farm Co-operative Credit: A Study of Rajasthan*, C. L. Dadhich, Popular Prakashan Pvt. Ltd., Bombay-34, 1977. Pp. xiii + 258. Rs. 55.00.

Overdues is a serious problem faced by co-operative credit institutions restricting the smooth flow of credit for the development of agriculture. There is urgent need to find the causes of accumulation of overdues in co-operative credit institutions so that remedial measures to check further growth in overdues can be taken. The book under review makes an earnest attempt to assess the structure of overdues, the socio-economic factors influencing it and enquires into the causes of overdues and makes suggestions to minimize them with reference to the Rajasthan.

The book is divided into eight chapters. A cursory look at the book reveals that the whole study revolves around three parts, *viz.*, (i) historical growth of the co-operative movement and the socio-economic factors influencing the repayment of co-operative dues (Chapters I and II), (ii) the causes of overdues at the borrowers', institutional and miscellaneous levels (Chapters III, IV and V) and (iii) the corrective and preventive measures to reduce the problem of overdues (Chapters VI and VII).

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1. P. L. Sankhayan and D. S. Sidhu: *An Analysis of Income and Expenditure Pattern of Punjab Farmers (Report for the Year 1976-77)*, Department of Economics and Sociology, Punjab Agricultural University, Ludhiana, 1978.

2. V. T. Raju and I. J. Singh, "Agricultural Innovation and Transformation in Indian Agriculture", paper presented at the International Conference on Rural Development Technology: An Integrated Approach, held at Asian Institute of Technology, Bangkok, Thailand, June 21-24, 1977.

In Chapter I the author shows the pace of co-operative movement indicating the incidence of increasing overdues and its impact on the flow of credit. In Chapter II the socio-economic characteristics of the borrowers are examined by using the Chi-square test. While deciding the socio-economic factors influencing the repayment of co-operative dues, the author develops certain hypotheses and arrives at the following conclusions: (i) There is no association between land, amount (borrowed), literacy and repayment but there is a strong association between repayment and caste, crop, fertilizer, occupation and irrigation. (ii) Default in repayment is less where irrigation facilities are available. The main reason for this is the use of chemical fertilizers and growing of cash crops. (iii) Borrowers belonging to middle castes largely depend on cultivation and have irrigated land. Thus, the deciding factors in the repayment are irrigation and caste of the borrowers.

It would have been extremely useful had the author used some quantitative tool in order to know the factors influencing repayment of co-operative dues and their association with the repayment rather than simply using Chi-square test. It would have been also possible with the same tool to know the relative contribution of each variable in the repayment of co-operative dues and thereby selecting the most important variables rather than selecting arbitrarily.

In Chapter III the causes of overdues at the borrowers' level have been analysed. Firstly, the author discusses three methods of calculating repaying capacity, *viz.*, marketable surplus method, liquidity method and liquidity and marketable surplus method which he uses to define the wilful defaulter and also mentions that the last one is an improvement over the others. The main causes of wilful default are re-lending, uncertainty of finance, harassing the management and an element of fear about the future financial position of the society. The wilful defaulters generally belonged to the larger size of holdings, higher caste, have better level of education, large borrowings and are members or ex-members of the management committee or their close associates. The study reveals that 23.5 per cent of the overdues are on account of wilful default, 8 to 14 per cent are due to inadequate stabilisation arrangements in case of failure of crops and the rest of the overdues is attributed to incompetent management. As many as 74 per cent of the borrowers have diverted their loans. The direction of diversion is towards consumption purposes, repayment of old debts, re-lending, purchase of bullock, and other business and professional purposes. The characteristics of the borrowers diverting funds such as the level of education, size of holding, period of membership, occupation, caste, members of management committees and the amount of borrowing have also been analysed. The main reasons for diversion of credit are pressing household needs, repayment of old debts, re-lending, purchase of bullocks, low level of education, lack of proper training in co-operative principles, lack of proper supervision and leadership and irrational lending policy.

The criterion used for defining wilful defaulter is not only misleading but also conceals the information. By wilful defaulter the author means

a borrower who has some positive repaying capacity but he does not repay. It is not sufficient only to have the positive repaying capacity, rather it must be sufficient to repay the entire/half of the amount borrowed and if he does not repay it, he must be called a wilful defaulter, while those who have some repaying capacity but less than the half/full amount which he defaults must be defined as non-wilful defaulter. In ascertaining the different factors responsible for wilful default, again the author could have used some quantitative tool rather than identifying on the basis of number of wilful defaulters and could have examined their relative contribution. Similarly, he could have also used the same tool to know the factors responsible for the diversion of credit. The author could have discriminated the socio-economic characteristics of wilful and non-wilful defaulters. Thereafter, it would have been possible to examine with the given set of characteristics whether a particular borrower would tend to become a wilful or non-wilful defaulter. Annexure 1 (pp.63-77) could have been given at the end of the book. All these considerations could have certainly improved the quality of the book.

Chapter IV deals with the causes of overdues at the institutional level. All these factors can be grouped into three broad categories, *viz.*, (i) unsound lending policies and procedures, (ii) ineffective supervision, and (iii) lack of the right type of leadership. It is indicated that co-operatives have been indulging in over-financing of small and medium farmers, and under-financing of large farmers which has direct bearing on the repayment. All these irrational financing is because of unrealistic scales of finance, incomplete and unreliable land records, ceiling fixed to maximum borrowing power, arbitrary deductions in credit limits, rigid and cumbersome system of security, lack of weightage to the character of the borrower, non-adoption of seasonality in recovery and defective loan procedures. The inconvenience caused to the borrowers in complying with the formalities have also been discussed with the help of average number of times visited by members for obtaining credit and the number of signatures or thumb impressions. Besides these, some other defects such as disbursement in kind, disbursement in instalment, insistence on cent per cent recovery and book adjustments have been critically examined. The efficiency of supervision has been tested on the basis of the following four criteria: (a) supply of adequate credit, (b) check over the diversion of credit, (c) linking of credit with marketing and (d) timely repayment of loans. The main causes of ineffective supervision lies in (i) frequent changes in the supervisory machinery, (ii) heavy work load, (iii) poorly equipped supervisors, (iv) poor quality of superior officers, (v) lack of qualified secretary, (vi) lack of personal contact with borrowing members, (vii) inactiveness on the part of management committees and (viii) lack of boarding and lodging facility to the supervisory staff. Lack of right type of leadership has also been analysed in the three selected districts of Kota, Pali and Jodhpur.

Several miscellaneous causes of overdues have been critically examined in Chapter V. It is proved that failure of crops is not an important reason for increasing overdues. This chapter also deals with the importance, pro-



gress, trend and scope of linking of co-operative credit with marketing. The reasons for poor linking of co-operative credit with marketing have been analysed under four categories, *viz.*, (i) at member's level, (ii) credit society's level, (iii) marketing society's level and (iv) miscellaneous reasons.

It would have been extremely useful had the author identified all these factors with the help of some quantitative tool ascertaining them in two stages, *viz.*, (a) identifying the factors responsible from the level of the primary agricultural credit societies to the central co-operative bank and (ii) from central co-operative bank to State co-operative bank. Then the relative importance of all these factors in increasing overdues could have also been ascertained.

In Chapter VI, various corrective measures for reducing overdues such as enhancing owned funds and deposits, linking of share holdings to borrowings, State contribution to share capital, deposit mobilization and enhancing the rate of interest in co-operative credit have been thoroughly discussed. Besides these, some preventive measures for improving the efficiency of supervision and rationalising loaning policies and procedures in co-operatives, developing the right type of co-operative leadership and measures for effective linking of co-operative credit with marketing have been critically examined in Chapter VII. In both these chapters the author has always emphasized what others have suggested rather than giving his own suggestions.

The price of the book is prohibitive. Besides, there is some time lag in the conduct of the study and its publication. However, the book will be quite useful to the co-operative organizations, policy-makers and researchers.

U. K. PANDEY

*Modernizing Indian Peasants (A Study of Six Villages in Eastern Uttar Pradesh)*,  
Surinder Jetley, Asian Educational Services, New Delhi-16, 1977.  
Pp. xviii + 182. Rs. 48.00.

It is rather difficult to review Jetley's book. There is much in the book that is praiseworthy. At the same time, in some critical areas, it lets the reader down rather unexpectedly, after having aroused expectations. To some extent, this might seem unavoidable, inasmuch as dissertations converted into books have some problems almost as a rule. What is perhaps ironic is that after reading the Foreword by Professor S. C. Dube and the author's Introduction, one nurses the hope that this work will be an exception; this hope is not entirely fulfilled after a complete reading.

Jetley's subject, the economic/social/attitudinal changes among Indian peasants in the last three decades, is by now a rather crowded one. Numerous dissertations have been produced on the general theme, both in India and abroad. The subject has attracted considerable attention from established scholars as well. The reader, therefore, begins to be sceptical when he sees the publisher's blurb that "this book should prove useful to every student of social change seeking to understand the contemporary social reality in rural India". One has seen the claim far too often, yet the "contemporary social reality in rural India" is far too complex to be covered by a doctoral

dissertation. The sub-title of the book which indicates that the study covers only six villages in eastern Uttar Pradesh reinforces this scepticism.

It is Jetley's major achievement that she has focussed her attention squarely on the larger reality and the processes of change and continuity therein in the initial part of the book. After a perceptive, though brief, review of major contributions to the literature on modernization, she concludes:

"The bulk of research on modernization comes from the western scholar. In their own cultures (*sic*), inducement to change by conscious direction is relatively unknown. The idealism of the elite in developing societies, reflected in nationalism and in the emphasis on valuable tradition is understandable to the outsider. They have seen a successful model of change and any deviation from it means wasteful and unnecessary experimentation. The social forces which have shaped the traditional societies are not taken into consideration. . . . A decade ago there was a strong prevalence of the view that tradition and modernity are polar opposites in the linear theory of social change with the former being viewed as static, normatively consistent or structurally homogeneous, and largely opposed to change" (p. 21).

But for the unfortunate omission of 'not' before understandable in the third sentence of the above excerpt, presumably a typographical error, this indictment of the social scientists' approach is a valid and valuable one. The processes of continuity and change have been seen from a universal reference point, both by mainstream and Marxist writers. The self-appointed 'value-free' role of the social scientists is therefore negated, perhaps by design, and certainly by default; a universal remedy to whatever is considered to be the malady is prescribed.

Out of such thinking emerge programmes such as Community Development (CD). The impact of CD on farmers has of late been much researched. It also happens to be the main subject of the inquiry conducted by Jetley. Unlike other studies on CD, however, she is interested in analysing the ultimate effectiveness of the programme in terms of the changes brought about in individual cultivators and their innovativeness.

She has chosen a pair of villages in each of the three selected blocks in Varanasi district. One of the pair was the most advanced village in the village level worker (VLW) circle, while the other was the most backward, according to the concerned VLW. The villages were exhaustively surveyed. One half of the households were questioned in detail about various aspects. The innovativeness was scored according to an elaborate scale, giving due weightage to factors such as exposure and adoption of new modes of production, ownership of implements, contact with change agents, and participation in the processes of change. The data were grouped into four sets of independent variables, namely, bio-social, economic, inter-systemic, and attitudinal. The dependent variable, of course, is the innovativeness. Correlation analysis was used to establish association among the relationships.

Neither this research design nor the findings of the individual survey

suggest any major breakthrough. For example, the author finds innovativeness of the respondent positively correlated with his age, educational status, material possessions, the extent of urban contact and so on. Similar surveys elsewhere have, not unexpectedly, yielded similar results.

Jetley's investigation of the villages in their entirety, however, provides stimulating insights. In addition to the current economic, social and demographic data, she has looked into the history of these settlements as well. She has not shied away from making use of impressions wherever these have extended the scope of her analysis. For example, she has tried to examine how caste solidarity has affected the dominance of certain groups in the villages under study. Such observations elsewhere have led to charges of pursuing 'journalistic' rather than 'academic' research. It is heartening to note that Jetley was not deterred by such apprehensions.

Two of her insights need to be pointed out. Firstly, she observes that "an active interest in land, not so much by self-cultivation as by being on the scene" (p. 130) is what determines both the dominance in community as well as being considered 'progressive'. Secondly, and stemming from this observation, there is a "relationship between adoption of modern agricultural innovations and type of landowning caste. It is not any landowning caste but a landowning caste which had direct cultivating tradition that will modernize agriculture" (p. 161). She finds ample evidence in support of both these propositions. For example, villages dominated by Brahmin landowners or Harijan landless labourers are both backward, while those dominated by middle peasant castes with traditions of cultivation, such as the Kurmis or the Bhumis are advanced. The former are marked by a diffused political and economic power structure whereas the latter are more homogeneous in these regards. Interestingly, factors normally advanced to explain the relative development of villages, such as proximity to urban centres and presence of infrastructure facilities do not seem to have much relevance here.

All of this is commendable work indeed. As Professor Dube observes in his Foreword, the author has put together a "painstaking and careful study . . . (which) brings out in clear relief individual as well as community response" (p. xv). In the process, she has come across factors which could well make original and significant contributions to the understanding of modernization processes in the Indian context. After so well pointing out the limitations of the predominantly western or western-inspired literature, she had aroused at least this reviewer's expectations regarding alternative formulations which will be consistent with Indian realities. Her collection of empirical evidence has, in this reviewer's opinion, brought her close enough at least to try out some tentative hypotheses in this direction. Unfortunately, and this is where the disappointment comes in, she is content to merely state her conclusions rather than weave them into at least a grand hypothesis framework. Prof. Dube calls such efforts as "tantalising formulations", but they need to be encouraged. Not only will such efforts advance our knowledge in general, but, more importantly, in the present context of caste-based tensions coinciding with economic tensions, they will be valu-

able aids in analysing what is euphemistically called a 'fluid situation'. Jetley recognizes these possibilities (p. 163). It is this reviewer's fervent hope that she will continue her efforts in building an alternative framework after this admirable beginning.

SHREEKANT SAMBRANI

*Perspectives on Tribal Development and Administration*, Proceedings of the Workshop held at NICD, Hyderabad, 18-20 April 1974, National Institute of Community Development, Hyderabad, 1975. Pp. xii+260. Rs. 45.00.

As mentioned in the sub-title, this publication embodies the proceedings of a national workshop held by NICD in April 1974 to provide proper perspectives on tribal development and administration to be useful for the Fifth Five-Year Plan. It also includes 19 papers prepared by different scholars and administrators connected with tribal studies and tribal development programmes over a period of time. Two of these papers are in the nature of leading articles for the workshop written by B. K. Roy Burman and Brahma Dev Sharma.

Roy Burman has raised in his paper certain basic issues for the consideration of the workshop. For example, he wants it to examine carefully which model of integration the country wants to follow. Though a lot of debating has gone on during the last three decades over this issue, it seems we are still groping in the dark. Whatever one may say, it seems the predominant culture of the country is bent upon eating away all other sub-cultures. Once again, it is the classical example of the survival of the fittest.

Roy Burma has suggested a set of indicators to measure the degree of integration between the two cultures. He has also touched upon another important problem, of descheduling the tribal communities. This is a very sensitive subject, and as far as possible people avoid discussing it because of its political implications. The theory of protection and reservation has already started becoming counter-productive and has built up strong vested interests. If the problem has to be kept manageable, certain firm decisions are required to be taken at the highest level about extending protection and reservation. Roy Burman has suggested certain criteria both for scheduling as well as descheduling of tribes. But it seems, ultimately, the economic criteria will only have to be retained for extending protection and reservation irrespective of social, cultural and religious distinctions. Other disabilities will have to be removed through organizational efforts. He has also examined critically the Fifth Plan approach for tribal development, and raised certain questions about the whole approach.

In his paper Sharma has raised the problem of properly identifying the beneficiaries under different tribal development programmes because, as he has shown schematically, many a time the advantage of these programmes are taken away by local non-tribals and this helps in increasing the inequalities between the two groups. Under the new strategy of development, area development approach has been accepted with a view to building up and strengthening the resources of the area. Under this approach "economic

indicators of the region may show an upward trend, but so also the index of group inequality". "The development of new infrastructure without accompanying effective protective measures may result in intensification of exploitation process".

There are four papers dealing with administrative problems in the tribal areas by R. K. Mishra, A. N. Acharya, S. S. Shrivastava and J. S. Mathur. They deal with the problem of getting the right type of people to work in the tribal areas. Most of the government officials who are deputed in these areas take their postings as a matter of punishment and try to move out at the earliest opportunity. They naturally have no interest in tribal welfare. Most of them also belong to a class which has been exploiting the tribals since time immemorial. There is therefore no confidence built up between them and the local tribal population. Whatever orientation one may give to these people or economic incentives one may provide to them for their service in the tribal areas, it is not going to make much difference. Unless a special cadre is raised for service in the tribal areas, the problem seems insoluble. Involvement of voluntary agencies in tribal welfare programmes to a much greater extent is also felt desirable. Setting up a tribal development agency or a corporation in place of the present multi-departmental administration is also strongly recommended. There is also a strong feeling that the Government is not serious upon implementing some of the most common recommendations made by several study teams, committees and commissions. This feeling generates a lot of frustration.

There are two papers on alienation of tribal land by P. R. G. Mathur and A. K. Mukhopadhyay. Particularly, Mathur has given a searching analysis of how the tribals lose their lands in spite of all legislations even in States like Kerala. Mukhopadhyay deals with the problems which the tribals have to face on account of communal ownership of land in getting credit and other facilities for agricultural development. It seems really astonishing why communal ownership should create problems in getting credit and other facilities. As a matter of fact, it should make the flow easier and safer. But that is how the individualistic and capitalistic society functions. It is wholly untrue to say that the tribal society alone is traditional. Our entire society is traditional, and we are not prepared to consider any new situation even though it is likely to give us better results.

There are two papers dealing with the difficulties encountered in agricultural development in the tribal areas by N. K. Jaiswal and N. V. Kolte, and R. N. Tripathy. Lack of irrigation facilities, the practices of shifting cultivation, poor soil, lack of suitable varieties which can be adopted in the tribal areas, lack of agricultural credit to buy necessary inputs are some of the most important difficulties listed by them. The basic difficulty is lack of understanding of tribal conditions on the part of extension agencies.

There are two papers on education policy by K. V. Narayana Rao and Abdul L. Thaha. Their emphasis is on making education in the tribal areas more relevant to the needs of the tribal society, less formal, more vocational. They also caution against post-matric scholarships being monopolised by a

few tribes for lack of a proper policy frame.

The paper on *Panchayati Raj* by S. P. Jain suggests the need for a proper blending of the "traditional elements and values of new national ethos and finding out the 'right mix' of the traditional tribal panchayat system and the statutory panchayat system". This looks like an ideal difficult to be achieved. The paper by D. R. Pratap and S. Bose suggests a scheme of service centres planning for the tribal areas of Visakhapatnam district in Andhra Pradesh. P. R. G. Mathur deals in his paper with the cultural life of Muslim Khasis in Meghalaya while N. Patnaik deals with the cultural life of Saora tribes, a tribe living on the border areas of Orissa and Andhra Pradesh. Kumar Suresh Singh wants entrepreneurship to be developed amongst tribals so that they can take to occupations other than agriculture. B. M. Pugh in his paper points out the physical location of tribals in the country which is mostly in the border areas between States or between countries, and warns against taking them for granted. Being in strategic areas they deserve special attention. He also wants them to be very effectively linked up with the rest of the country in every possible manner by road, rail, air. N. V. Bapat in his paper emphasizes the role of voluntary agencies in tribal development. But he gives a funny example, to make his point, of an *ashram* which is a world attraction for having a child grown in the company of jackals. Finally, there is a detailed paper from the Ministry of Home Affairs, Government of India, describing how tribal development projects should be prepared.

On the whole, the papers collected in this publication give a fair picture of the tribal problem. It makes a useful contribution to the existing literature on tribal problems.

Let us make a rapid review of the main recommendations of the workshop. These are: (1) Minimum needs of tribals should be satisfied with the utmost urgency. (2) Developmental strategies should be so planned as not to permanently impair the four basic components of cultural pattern, *viz.*, physical and other environmental resources, population, social organization and technology. (3) One of the goals of social mobilization would be the integration of the tribal societies with the national polity. (4) Welfare approach should be replaced by development and multi-level participation approach. (5) The constitutional agency of the Commissioner for Scheduled Castes and Scheduled Tribes should be strengthened. (6) Only personnel of the right type should be employed in the tribal areas. (7) Systematic studies should be undertaken to determine to what extent the policy of reservation in services and legislatures has been helpful in creating an effective and forward looking leadership in tribal societies. (8) *Panchayati Raj* institutions should be integrated suitably with the traditional panchayat system in the tribal areas. (9) The integrated area development approach, to be adopted as the new strategy of development in the tribal areas, should aim at integration from three points of view, namely, integration in terms of space, integration of functions and socio-cultural integration. (10) Emphasis in preparing regional plans should be on area development rather than on the development of individual communities inhabiting the area. (11) Plan preparation should

be undertaken with whatever data are available and simultaneously an all-out effort should be made to collect the necessary data. (12) A unified agency should be evolved for administrative purposes and the line of command should be clearly defined. (13) The main thrust of productive programmes in the tribal areas should be oriented towards agriculture and other allied sectors while working towards a more diversified occupational pattern in the long-term perspective. (14) Customary rights of the tribals in land should be so organized and codified in the Statute Book that development programmes can be successfully attempted. For this purpose, survey and settlement operations and preparation of records of rights should be undertaken as early as possible. (15) In addition, effective protection against eviction and land alienation, priority to the tribals to settle on distributed land and provision of facilities for legal advice and action against injustice should be given. (16) The working of the Forest Department should fall in line with the general policy of working through co-operatives so as to avoid middlemen. (17) Institutional credit should be made available for agricultural, industrial and other purposes including social purposes. (18) Lift irrigation schemes should be extensively undertaken wherever facilities exist. (19) Isolation of the tribals should be reduced by introducing and improving roads and other means of communication in the tribal areas. (20) Tribal research and training institutes in the States should play a more active role, and a national body should be set up to guide and co-ordinate their research and training activities.

These are very good recommendations, but the question still remains: Who is going to implement them? As some of the authors of various papers have bluntly put it, the Government has not appeared to be serious about implementing them in the past, and there is no evidence to show that in future it would behave in a different manner. On paper it would definitely make a show of implementing at least some of them, but in reality it would continue to act in the same manner. For example, we know that all the State Governments have passed legislation against alienation of tribal lands but everybody knows that large scale transfers of land from the tribals to the non-tribals continue unabated. Though the tribal sub-plans are being prepared to ensure that additional resources are invested in the tribal areas, it is known that the State Governments are using them merely to draw more funds from the Central Government, and the schemes are undertaken in the name of tribal sub-plan though they have hardly anything to do with tribal welfare. It is said that an unified agency in the name of a project administrator is established in the tribal areas under the tribal sub-plan, but the poor official does not have any technical staff directly under him. All the departmental staff members continue to work as before under the instructions of their departmental heads. What the project administrator does is playing the role of a co-ordinator. How far that role becomes effective in getting things done remains to be seen. Doubts are already being expressed about its efficacy.

Though the topics that have been discussed in the publication are not new, they require to be continuously highlighted in view of their importance

in the national context. The NICD needs to be congratulated for performing that task by bringing out this publication.

VIMAL SHAH

*Integration of District Dairy Co-operatives in Gujarat*, Manubhai M. Shah, Sardar Patel University, Vallabh Vidyanagar, 1977. Pp. xv+276. Rs. 15.00.

*Replication of Anand Pattern Milk Producers' Co-operatives*, National Dairy Development Board, Anand, 1977. Pp. 24.

*Demonstration Dairy Farms in Operation Flood Milksheds*, D. S. Thakur and P. Suresh, National Dairy Development Board, Anand, Gujarat, 1977. Pp. 144.

The above three books taken together give a complete picture of the development of the 'White Revolution' in Gujarat and the efforts being made in the multiplication of this development pattern in the other parts of the country.

The publication by Manubhai M. Shah is divided into four sections covering 21 chapters. Section I gives a review of the milk marketing conditions in the private sector in Gujarat until the fifties. Sections II and III examine the co-operativization and integration until the sixties and the seventies respectively and Section IV which consists of only one chapter concludes the whole discussion and makes suggestions for the future action in this field. While discussing the co-operativization of milk marketing in Gujarat in the two sections, Shah has made every effort to pinpoint the processes of integration in the marketing of milk and their importance, which is the main objective of this book. This has been done by drawing various charts which clearly explain the process of integration to the readers.

The first five chapters in Section I draw much of the data collected by the author for his thesis presented to the London University in 1959, besides a number of published and unpublished reports on milk production and marketing in the forties and the fifties. These chapters deal with the per capita production and consumption of milk in the rural and urban areas, the quality of milk, middlemen's margins and the problems in the assembly and transport of milk. The analysis of the problems shows how conditions in the production and marketing of milk had deteriorated over time. As a matter of fact, with the expansion of urbanisation which provided an enticing market for the milk, it should have served as an incentive to increased milk production, improvements in the breeding and feeding practices and improving the quality of milk. This did not, however, happen. On the contrary, the consumers went on paying a higher price for the milk, but the producers received low prices. It is only the intermediaries who benefited from the increased demand for milk due to the process of urbanisation in Gujarat and the development of the cities like Bombay and Ahmedabad. The development of dairying in the cities also led to the slaughtering of good quality buffaloes and calves. It was uneconomic to raise the dry buffaloes and calves in the cities but quite economic to import the milking buffaloes and sell them



after the lactation. The remedy to the problems lay in an efficient marketing and distribution system for the milk produced in the rural areas, which was pioneered in this field by the Kaira District Milk Union at Anand.

Section II in the book begins with a case study of the above Union. Sections II and III give the case studies for nine important Milk Unions in Gujarat. Five of these Milk Unions which existed in the fifties are studied in Section II and their performance in the sixties has been given in Section III, together with the studies for the other four Milk Unions. As Section II begins with a study of the famous Anand Dairy of the Kaira District Milk Union, Section III ends with another famous dairy, *viz.*, the Dudh Sagar Dairy of the Mehsana District Milk Union. These case studies cover almost every aspect of the production, distribution and marketing of milk by these Milk Unions and stress the horizontal, vertical and lateral integration from the intra-village and inter-village levels to the State and the country levels, in the case of each Milk Union. The case study approach enables one to understand which steps have to be avoided and which steps are necessary for the proper functioning of a Milk Union. Though the extra details described in these case studies do help the readers to understand the functioning of these Milk Unions, it makes the study repetitive and tiresome. A study of few important Milk Unions, supplemented by only a few major points for the remaining Milk Unions in only one section irrespective of the periods involved, might have given enough details to the reader and brought out all aspects of the integration which is the main theme of this book.

It is interesting to realise how integration of the functioning of a Milk Union with its environment is important in the production, distribution and marketing of milk from an area and consequently in the development of the area itself. The efforts made by some Milk Unions to construct their own roads for the collection of milk, disposal of excess milk to private traders in the cities even at a lower price to forbid them to collect milk from the rural areas in the lean season, are some important examples of integration which have not been implemented even by the Milk Schemes run by the Government in a State like Maharashtra. The book is full of a number of lessons which may be useful to the Milk Unions and the Milk Schemes in other States.

Section IV contains some useful suggestions for further improvements in milk production and marketing in Gujarat.

The second publication under review presents a report of the progress made by the National Dairy Development Board (NDDB) in promoting milk production and marketing projects in other parts of the country on the basis of the pattern evolved at Anand by the Kaira District Milk Union. This small cyclostyled booklet explains the salient features of the Anand Pattern of Milk Co-operatives, the objectives of creating the NDDB, the Operation Flood Programme, the progress made so far by the NDDB in promoting the Anand pattern and the economic and social impact of creating Anands elsewhere.

Since its formation in 1965, the NDDB has taken up work on the replication of Anands in 28 milksheds in 12 States. The NDDB's actual work,

however, started in 1970 with the implementation of the Operation Flood Project involving an investment of Rs. 954 million over 12 years. The work is further supplemented by the World Bank Projects for dairy development which have been undertaken in Karnataka, Rajasthan and Madhya Pradesh. A review of the progress made through such projects promoted by the NDDDB in the country shows a substantial increase in the coverage of milksheds and villages in the 12 States, supply of technical inputs to the producers, the processing of milk in the cities and a consequent reduction in the imports of skim milk powder in the country.

The third publication under review is again a cyclostyled publication by the NDDDB giving a report on their crop plans for the Demonstration Dairy Farms, which is a further improvement over the Anand pattern. To encourage the farmers to maintain highly productive milch animals, it is necessary that they should produce adequate fodder on their farms. However, the production of fodder cannot be the sole objective of any farming system. The NDDDB has, therefore made attempts to evolve optimum crop plans for the demonstration dairy farms established by them in the Operation Flood milksheds. The publication explains the rationale behind this crop planning and the methods adopted therefor in the first 23 pages of this report and gives the cropwise areas under the existing plans and the optimum plans for the 120 individual demonstration farms in the remaining 120 pages, which form the Appendix

It was observed by the NDDDB that most of the farmers owning the selected demonstration farms were growing on a large scale some crops which were yielding relatively low returns when compared to the more paying crops. So also the fodder crops, which could give comparatively higher returns per acre via the production of milk, has not been grown to the extent required for the optimum fodder consumption of the animals on these farms. The NDDDB, therefore, tried to overcome these shortcomings in the existing production plans by suggesting the new farm plans. Techniques such as comparative budgeting, opportunity costing and also the linear programming technique were used to develop these plans. The optimum solutions were obtained by keeping in view the resource restrictions on each farm.

These plans were prepared in consultation with the farmers owning these demonstration farms. Their preference for the minimum area which they wanted to retain under different crops was taken into account in the preparation of each plan. As a result, the farm plans prepared for these demonstration farms have resulted in bringing additional areas under the crops to support the additional demand for fodder. A detailed examination of the Appendix Tables shows that this increase in the area of crops has been effected through an increase in the area of crops during the summer. As the publication merely gives the area under the existing plans and the optimum plans, it is not possible to know therefrom, how this increase in the area during the summer is to be brought out. Were the farmers reluctant to use the available water resources during the summer in the past? Or will these crop plans be effected only after these farmers increase their water resources

by deepening their wells? Such questions remain unanswered. The report should have explained in detail the arithmetic of at least a few typical plans instead of merely giving the 120 individual plans in tabular forms which has made the report bulky but which does not convince the reader of the methods adopted in farm planing.

S. W. MURANJAN

*Rural Development in Action: The Experience of a Voluntary Agency*, Uma Kant Srivastava and P. S. George, Somaiya Publications Pvt. Ltd., Bombay-14, 1977. Pp.viii+205. Rs. 45.00.

Uruli Kanchan in 1946 attracted Mahatma Gandhi to establish a nature cure *Ashram*. He took a vow at that time from his young disciple Manibhai Desai that the latter would organize the *Ashram* and serve the people of Uruli Kanchan till the end of his life, following Gandhiji's ideals of rural development. And Manibhai has lived to his ideals.

The Bharatiya Agro-Industries Foundation (BAIF) was registered in 1967 under the Public Trust Act, 1950. From one man organization, it has become today a corporate structure employing 116 persons—88 graduates, 22 post-graduates and 8 Ph.Ds. That Uruli Kanchan can attract such highly educated persons despite lack of common urban amenities is itself worth probing into. This task is made easier by the evaluation study done by Srivastava and George.

The Uruli Kanchan rural development project near Pune has four principal elements: (1) lift irrigation, (2) cattle development, (3) joint co-operative farming and (4) tractor hiring.

The study by Srivastava and George aimed at finding answers to three basic questions: (a) What exactly had been achieved at Uruli Kanchan? (b) How was it achieved? And (c) can it be repeated (repleted)?

The accent of the whole effort has been on improving agriculture; but as agriculture improved it led to diversification of agriculture to cattle breeding and to commercial, *i.e.*, marketed agriculture. The Uruli Kanchan project has brought the farmers (relatively medium and large) into the network of co-operative institutionalisation and has made them viable so much so that finance had never been a problem. The Government of Maharashtra donated land and buildings worth Rs. 8 lakhs; Rs. 23 lakhs were received from donor agencies abroad such as DANIDA, Denmark, Catholic Relief Society and OXFARM, U.K. The BAIF took loans from commercial banks on behalf of all the farmer members and distributed these to individual members. The foreign agencies' aid was utilized for importing critical inputs for cattle development programme and tractors, tools, etc.

For this evaluation study, the authors have interviewed 184 farmers selected on a stratified random sample basis through structured schedules. The sub-samples covered four major activities mentioned above. Supplementary data were also collected from the records of the society.

The BAIF activities today are not confined to Uruli Kanchan alone; it

has spread out widely in Maharashtra and Gujarat, including the region of Kutch.

The lift irrigation work was developed under the auspices of Haveli Taluka Lift Irrigation Federation. Bank of India agreed to meet the entire cost of Rs. 70 lakhs for the construction of lifts. Twenty-five schemes were already in operation in 1974. The Federation took the responsibility of planning, designing and execution of each scheme in the taluka.

To measure the impact of lift irrigation, the conditions of farmers under the operating schemes in 1974 were compared with those under construction in the year 1977. Before irrigation, farmers cultivated bajra and jowar, but after irrigation they raised high value crops of sugarcane, chillies, onions, garlics. The cropping intensity under bench mark ranged from 100 to 111; that under lifts in operation was higher from 129 to 152 for different lifts. Ninety-five per cent of the area under lifts was owned.

An important conclusion of the study relates to input use. While the farmers under the bench mark lifts used almost a negligible amount of biological inputs like fertilizers, farmyard manure, irrigation and insecticides, these inputs formed 40 per cent of the cost incurred by farmers under the operating lifts. Also, more family labour was used. The bullock labour capacity was more fully utilized too.

While the average per acre cost of production was Rs. 36.70 for farmers under the bench mark lifts, it was Rs. 242 for farmers under the operating lifts. Under the bench mark lifts, the per household income of the small farmers was Rs. 74.58 and that of large farmers Rs. 895.35. Under the operating lifts, the income was Rs. 3,077.38 for small and Rs. 6,501.76 for large farmers. The result was that whereas farmers under the bench mark lifts were below the poverty line, farmers under the operating lifts—even the small farmers—were above the poverty line (Rs. 40.6 per month at 1972-73 prices).

More than the lift irrigation co-operatives, it is the cattle improvement programme—the cross-bred—that appears innovative and also full of force and utility. It is here that foreign donor agencies actively assisted in importing liquid nitrogen containers and frozen semen, laboratory equipments, etc. The programme aimed at increasing milk production at the farm level by changing the production potential of the dairy cattle, improving feeding practices and management. By 1974, twenty-five cattle breeding centres were established. Each centre was planned to provide cattle breeding services to 15 villages, that is, 200 milch cattle. Thus a total of 250 villages benefited through active veterinary services. The sugar co-operatives in the village were the nodal points. The total out-of-pocket costs involved in maintaining an indigenous cow for an intercalving period of 420 days was estimated at Rs. 1,118; for cross-bred cow it was higher at Rs. 1,821.

The BAIF had 15 tractor units of which ten were donated in 1973 by the Catholic Relief Society. These were used for five types of operations, *viz.*, ploughing, levelling and sub-soiling, harrowing, seeding and cultivated ridging and miscellaneous and transportation. Haulage of sugarcane from

the fields to the factory was important in transportation, but the major use of imported tractor time was for cultivation, which accounted for 43 per cent and 52 per cent in the case of Catholic Relief Society and OXFARM donated tractors respectively; necessary repair facilities were also installed.

An important finding of tractor hiring unit (most farmers cannot afford to buy tractors) was that all sample farmers experienced an increase in the cropping intensity from 137 in 1972-73 to 160 in 1973-74, the largest increase taking place was for farmers with less than ten acres. Tractor hiring helped small farmers adopt multiple cropping. Tractors were in use in all the months throughout the year. Tractor use was the major factor which promoted land use in summer. The average per acre inputs used increased from Rs. 312 in 1972-73 to Rs. 428 in 1973-74. Labour use per acre increased in all except those with 5 to 10 acre-holdings. Even family labour was better utilized. Income per acre of sample farmers using tractors increased from Rs. 452 (1972-73) to Rs. 464 (1973-74) per acre. It is proposed to allocate tractors to each region in a 'work cluster' or a group of such clusters to save on unused travel time. This might result in better scheduling of time. In economic terms the tractor hiring unit was viable, the pay-back period varied from 4 to 5 years, the internal rate of return from 11 to 18 per cent and the benefit: cost ratio was more than unity.

All the success narrated above would not have been possible without proper management. Management was distributed in four groups, link-pins, *viz.*, (a) agricultural science division, (b) animal science division, (c) rural reconstruction division and (d) finance and administration. Functional groups were formed under each division, each having been assigned a well defined job. Physical and financial targets were linked up with 'performance budget' that helped evaluation and control.

These are then some of the lessons of Uruli Kanchan where the beneficiaries had an attitude of belonging and involvement in the entire process of development. An important conclusion of the study is that the success of plan meant for achieving rural development depends to a great extent on the proper identification of activities suitable for the area. Secondly, the activities included in the development plan should be complementary in nature to make a proper impact. Each activity acts as a demonstration unit for the next to follow.

The evaluation study gives a feel, partly qualitative and partly quantitative, of the activities of the BAIF at Uruli Kanchan. For a proper assessment, a more complex design relating to sample of plots, etc., is called for. But for the limited purpose of consultancy type of evaluation, the authors have done a good job. This reviewer has no hesitation in recommending the book to all those engaged in the field of rural development, planning and reforms.

S. M. SHAH

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