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Book Reviews

Cocoa Production and Marketing in India, V.N. Asopa and S. Narayanan, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 1990. Pp. xii+124. Rs. 95.00.

The book has come during a period of intense debate on the issues in Kerala's agricultural development. It is widely accepted at least in the academic circle that the absence of technical change is one of the most important factors that has contributed to the dismal performance of Kerala's agriculture since the late seventies. The present study on cocoa, Kerala being the major producer, points out that the lack of management input in production decisions is another cause for the slowing down of agricultural output. The study also emphasises the importance of an effective marketing policy for the sustained development of agriculture. The authors have succeeded convincingly in bringing out the role of the above factors for the supply of cocoa production in India.

The subject matter of the study is divided into six chapters. Chapter 1 introduces the issues of concern and gives the methodology used for the study. Chapter 6 summarises the major findings and provides an action plan for increasing cocoa production in India.

Chapter 2 first discusses inter-state and inter-district variability in area under and production of cocoa in India during the period 1970-71 to 1985-86. It also examines thoroughly the two major constraints, area and yield, on increasing the production. Soil and climatic conditions, the main constraints on area expansion, limit the availability of land for cocoa cultivation in India to certain regions in the southern states of Kerala, Karnataka and Tamil Nadu. The main yield constraints are the size of farm, cultivation practices, age and density of cocoa plants and type of farming. It also contains a survey of research in plant diseases, economics of cocoa production and identifies the area for future research for increasing production.

The third chapter deals with the technology of cocoa processing. There are two stages for cocoa processing. The first stage is to ferment and dry the wet beans from harvested fruits. This needs to be done immediately after the harvest and, therefore, the processing has to be done at the farm level in the producing countries. The second stage, processing for cocoa based final product, can be done either in the consuming country or in the producing country. The earnings from cocoa, after the first stage of processing, depend on our export share in the world market. This depends to a large extent on the competitive nature of our production. But the earnings from the export of cocoa based final product depend on the tariff and other protective measures of the consuming countries. The choice of the appropriate technology, therefore, depends on the differentials of the export earnings of the raw cocoa and the cocoa based products.

Chapter 4 deals with the marketing of cocoa. It also brings out how the import policy and the monopoly position of buyers have caused wide fluctuation in the price of cocoa in the past. It is well-known that farm price of a perishable product is always very low during harvesting season. The validity of this hypothesis has not been examined properly. The authors have also not given any serious thought as to how to improve the marketing of the produce. This is a serious limitation of the study since we have a very rich experience of successful marketing arrangements especially in agricultural commodities in India.

Chapter 5 deals with the analysis of the world cocoa market. Since India's share in the world market is relatively very small, its competitive position is not important at the moment.

But an analysis of the competitive nature of world market is very essential for the future export performance. The relationship between price and world production is examined only casually. For example, the relationship between the stock, production and price is not clear from the analysis. The comparative advantages of the major producers in capturing the export shares are also not given adequate treatment.

Even though the export market for cocoa is very competitive, the study shows that there is a growing domestic market which is less competitive. The soil, climatic conditions, cropping pattern and huge investment in irrigation place Kerala at an advantageous position to contribute substantially for satisfying the domestic market. A recent study on the economics of cultivation in Kerala shows that rubber is the most profitable crop followed by coconut and paddy. Therefore, profit motivated farmers would allocate area from paddy to coconut and from coconut to rubber. In the long run, this would imply that the area from both paddy and coconut would be allocated to rubber. If this happens, the huge investment in irrigation becomes a dead investment. If cocoa is encouraged as an intercrop with coconut, the production of both crops can be increased considerably by utilising the existing irrigation facilities. This strategy prevents acreage shift to rubber and makes the investment in irrigation more productive.

Despite the above limitations, the book provides valuable information on cocoa production and increases our understanding of the commodity market in India. The book is recommended for policy makers who are concerned with agricultural development in general and cocoa production in particular.

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Barriers Broken: Production Relations and Agrarian Change in Tamil Nadu, Venkatesh B. Athreya, Goran Djurfeldt and Staffan Lindberg, Sage Publications India Pvt. Ltd., New Delhi-48. 1990. Pp. 336. Rs. 250.00.

The methodology of studying social change as resulting from the interaction between productive forces and production relations has been put to good use by many scholars in India. Agrarian change, in particular, has been probed in terms of this interaction especially since changes in agriculture became quite visible after many decades of virtual stagnation. The 'Mode of Production Debate' of the seventies and the early eighties marked one phase of such enquiries. But a scholar has recently pointed out that "most of the contributors to the debate did not study the concrete reality of Indian agriculture, but engaged themselves in a discussion of how to interpret the texts of Marx and Lenin so as to identify the necessary and sufficient conditions of capitalism in agriculture" (Pandian, 1990, p. 11). Recognition of the sterility of the mode of production debate without relating it to concrete conditions is beginning to yield a new and welcome kind of literature. The study of Athreya *et al.* is one among them.

The study deserves attention both because of the specific issues it deals with and because of the broader aspects it enters into. It reflects the thoroughness of empirical enquiry and the awareness of theoretical nuances, and the rare courage to admit doubts and uncertainties.

The concrete in this case is the Tiruchirappalli district in Tamil Nadu; Kulithalei and

Manaparei Panchayat Unions within the district; Rajendram, Poyyamani, North Nangavaram, Naganur, Kalladai and K. Periapatti villages within them; and 367 selected households from these six villages. The attempt was to become as specific as possible both about productive forces and about production relations to see what kind of impact the specificity of the former is likely to have on the latter. For this purpose productive forces - in the book identified as ecology - have been divided into two broad categories, the wet and dry ecotypes. That economic activities take distinctly different patterns in wet and dry areas is a theme used by many earlier studies relating to Tamil Nadu (see Washbrook, 1976; Kurien and James, 1979; Gough, 1981). The main thrust of the study has been to examine the variety of relations of production in these two ecotypes, especially the interrelation between different forms of surplus appropriation and to explore how the pattern and tempo of agrarian change is related to these aspects.

The ecological diversity has a perceptible bearing on economic structure and activity. The ownership structure is extremely polarised in the wet area while there is much less inequality in the dry area. The rate of landlessness is high and tenancy is frequent in the former whereas owner cultivation is almost universal and landlessness low in the latter. The pattern of change in land relations is also different in the two, with the wet area showing considerable deconcentration of ownership during the past generation. Another important finding is that the green revolution has not brought about an increasing polarisation in land ownership contrary to certain predictions in this regard. Labour relations too are influenced by the ecotypes. Although both areas show the full range from *pannaiyal* (permanent or debt-bonded labourer) to *atta coolie* (casual labourer) and the emerging form of *kothu* (contract gang labour), *pannaiyals* and *kothu* are more frequently seen in the wet areas. The study, therefore, brings out that the specificity of productive forces gives rise to specificities in production relations, which serves as a warning against the common tendency to link 'productive forces' in the abstract to 'production relations' also in the abstract. It also underlines the importance of the specificities of the ecosystem in understanding agricultural activities and agrarian change.

The major analytical contribution of the book is Chapter 6 on the identification of agrarian classes. Class analysis in agriculture would have been simple if one had to deal with only agricultural labourers, on the one hand and landlords, on the other, the former not owning land and hiring out their labour and the latter owning land, not using their own labour and hence depending solely on hired labour. But from Lenin's classic treatment of the agrarian question it has been recognised that in understanding class relations in agriculture the intermediate category of peasants working on their own land and using their own labour would have to be reckoned with and that within the peasantry itself different categories would have to be noted both in terms of the size of their holdings and in terms of their hiring-in and hiring-out of labour (Lenin, 1966). Since then there has also been a tendency to use the 'area criterion' and the 'labour utilisation' criterion separately for the identification of agrarian classes. The former, also known as 'size classification', now dominates official statistics while the latter is the preferred variant among academics. The analysis in Chapter 6 points out that size identified in terms of physical units (hectares, for instance) loses its usefulness as an *economic* measure partly because of the specificities of the ecosystem which affect cropping pattern and partly because that in turn will affect the level of commercialisation of agricultural activity. The specificity of labour power makes the labour utilisation

criterion also inadequate for the identification of classes: hired labour, for instance, cannot be thought of as a substitute for family labour because the functions that can be performed by the two categories are quite distinct. Further, there is the distinctive organisational structure of the peasant farm because "peasants stand with one leg in the market economy and the other outside, in a 'non-commoditized' economy" (p. 184). The viability of the peasant farm depends crucially on this amphibian characteristics that it has.

On the basis of these considerations, the authors suggest a 'surplus criterion' of class. The method consists first of empirically identifying the level of subsistence separately for the wet and dry areas which is done by denoting a subsistence basket and also by converting the demographic data of households into consumption units. The surplus of each (type of) farm household is then defined as the income from marketing of farm produce net of the grain deficit and the cash costs of production and the cash needed for non-grain consumption, thus recognising the fundamental fact that the farm household is a production unit and a consumption unit merged into one. The level of surplus is then used to identify different categories of peasant farms (households): (i) those with an income not even sufficient to cover the grain requirements; (ii) those whose basic grain requirement is met, but where the income from marketing does not suffice to meet the cash costs either of production or of non-grain consumption; (iii) those whose incomes are sufficient for all the above requirements; and (iv) those who appropriate surplus. The method is also used to classify the last group into two, those whose surplus appropriation is based on the ownership of land (the rent element of surplus) and those whose surplus is derived from capital (the profit element of surplus). It is shown also that the rent element of surplus is more prominent in the wet region and the profit element in the dry region. I find the analysis extremely fascinating with tremendous potential.

Another important contribution of the study is the treatment of economies of scale, or the size-productivity relationship. By examining the phenomenon both in value terms and in physical terms, the latter by examining productivity of individual crops in physical measures, it is shown that the size-productivity relationship would appear to be neutral in a technical sense, but the aggregation into value terms distorts this. In value terms the size-productivity relationship may, therefore, involve differential class advantages.

I shall not attempt to go into all the insights that can be gained from the study about the changing class structure in the two agrarian regimes. But two more comments are in order. The first is that the authors recognise the impact of market conditions and processes on the agrarian class structure and its transformation which they then use to focus on the role of the State on these aspects. I shall have more to say on this soon. The second is to indicate one major empirical shortcoming in the analysis. It will be noted that the surplus analysis is based on income from the marketing of farm produce and the expenses associated with farm production, on the one hand and consumption of non-farm goods, on the other. But non-agricultural sources constitute quite a significant proportion of total incomes of different kinds of households, including peasant households as can be seen from Table 5.3. If so, the subsistence and surplus of the peasants will depend also on the extent of non-agricultural incomes that they derive. Non-agricultural incomes, however, are left out of the analysis of Chapter 6, notwithstanding the fact that they constitute 34 per cent of total household incomes in the dry area (including 39 per cent of the incomes of poor peasants) and 19 per cent in the wet area. One of the major weaknesses of the study is that non-agricultural activities are

only tangentially referred to. Surely, one of the barriers broken in our rural areas is the strict distinction between agricultural and non-agricultural activities. Some engaged primarily in agriculture have to turn to non-agricultural activities out of sheer necessity; for others they provide new opportunities to appropriate surplus.

I return now to the place assigned to the State in the study. At the very outset the authors say that along with ecology (proxy for forces of production) and relations of production, the State enters as a third key word in the study. The State is also invoked from time to time, and the role of State interventions is brought out in many specific instances such as pricing and subsidies, infrastructural development and credit. But the treatment of the State in the study is far from satisfactory especially after the announcement at the outset that the explicit recognition of the State "signals an extension of the conceptual universe beyond the dichotomy between relations and forces" (p. 14). The empirical role played by the State can be seen - it fixes prices; it accounts for x per cent of credit supplied, etc. But then what exactly is that animal? Can a work that claims to be 'squarely within the marxist tradition' treat the State as empirically given? There are also instances where the State is seen in a different light. Let me refer to two such cases: ".... the whole process [of credit expansion] is a result of State intervention, a political intervention in the economy that aims to increase the level of commercialization in the agrarian economy" (p. 270). "The process of development that we have documented is not driven by economic forces alone; on the contrary, State intervention has been strategic in promoting the process" (p. 313). These sentences tend to identify the State with politics intervening from outside in the economy. Treating the economy and the polity as two distinct 'sub-systems' of society is fashionable in certain circles, but is it permissible within the marxist tradition? In any case, if the State has some interest to increase the level of commercialisation, can it be totally out of the economy? And is it then beyond class interests merely playing an external role in formation of agrarian class structure? If the State shows definite class bias or if the State is the instrument of political intervention, can it be situated outside relations and forces to become a distinct third factor in analysing and understanding social change? These questions are certainly more difficult to handle than the ones that the authors have very competently dealt with, but even for a proper interpretation of the central themes of the study these are not peripheral issues.

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REFERENCES

- Gough, Kathleen (1981). *Rural Society in Southeast India*, Cambridge University Press, Cambridge.
- Kurien, C.T. and Josef James (1979). *Economic Change in Tamil Nadu, 1960-1970*, Allied Publishers Pvt. Ltd., New Delhi.
- Lenin, V.I. (1966). "Preliminary Draft Theses on the Agrarian Question", *Collected Works*, Vol. 31, Progress Publishers, Moscow.
- Pandian, M.S.S. (1990). *The Political Economy of Agrarian Change: Nanchilnadu, 1880-1939*, Sage Publications India Pvt. Ltd., New Delhi.
- Washbrook, D.A. (1976). *The Emergence of Provincial Politics: The Madras Presidency, 1870-1920*, Cambridge University Press, Cambridge.

Supply Responses in Backward Agriculture: An Econometric Study of Chotanagpur Region, L.N. Bhagat, Concept Publishing Company, New Delhi-59. 1989. Pp. xxi+254. Rs. 170.00.

Prices are considered important in influencing economic behaviour of farmers in general. But the peasant farmers of a backward region practising traditional subsistence agriculture may not respond to price stimuli perceptibly because of their lower dependence on exchange economy, market imperfections, poor infrastructural facilities, production of primarily subsistence crops, relatively less developed institutional facilities, climatic uncertainties, etc. The relaxation of these constraints would create suitable conditions and would motivate farmers to respond to changes in prices. But the question remains: as to what extent the farmers of a backward region respond to price stimuli? This issue has been a subject of investigation by many researchers. In the book under review, the author has made a good effort to examine supply responses of farmers of a backward region of Chotanagpur in Bihar State.

The book is based on the doctoral dissertation of the author. The main objectives of the study are to investigate the nature and extent of supply responses of important cereals (individually as well as in aggregate) in a tribal concentrated Chotanagpur region and to examine inter-district and intra- and inter-period variations over the period and their causes. Apart from testing the hypothesis whether farmers are responsive to market stimuli, the author has also tried to look into the question whether adequate incentives and support are provided to the farmers for responding to such stimuli. Districtwise and cropwise supply responses and acreage substitution between pairs of competing crops have been examined.

The book is organised in eight chapters. It is mainly based on secondary data at the district level and covers the period from 1956-57 to 1976-77, which has been divided into two sub-periods, pre-green revolution period (1956-57 to 1965-66) and post-green revolution period (1967-68 to 1976-77). Inter-temporal comparison between these two sub-periods has been made with a view to understanding the impact of green revolution on supply responses, notwithstanding the fact that there was no green revolution in the region during the period covered in the study. The study is quite outdated in terms of the period covered. It is surprising that the author did not consider it appropriate to cover more recent years, particularly when the book was published in 1989.

The acreage responses of all the important cereals grown in Chotanagpur region have been estimated. The area allocation decision of a specific crop in current year is postulated to be dependent on previous year's area, previous year's price, previous year's yield rate and previous year's gross returns and current year's pre-sowing rainfall, fertiliser prices and total irrigated area during the *rabi* season in different alternative equations. Irrigation and fertiliser variables have been included in the equations for wheat crop only. Single equation (log-linear form) model with Ordinary Least Squares estimates has been used for estimating the parameters in the response models. A good deal of awareness has been shown by the author about the problems involved in the estimation of models and suitability of the estimation procedure. Statistical tests for checking the validity of estimated equations have been used. One is, however, not very sure whether the data used in the study were properly scrutinised. This would have been necessary as the coefficients of price, irrigation and lagged dependent variables differ widely among the districts of the region and sometimes provide

quite illogical picture.

The analysis of acreage responses of individual crops indicates that price itself is not an important factor in explaining variation in area under crops in Chotanagpur region. All the price coefficients, excepting a few, are insignificant. In the case of wheat, yield rate is observed to be having a significant impact on area increase in both the sub-periods. Although the price itself is not a significant factor, the coefficient of gross returns (yield rate multiplied by price) turns out to be significant in most of the equations of wheat. The lagged dependent variable, pre-sowing rainfall and irrigation factors are observed to be more important than price factor. The coefficients of lagged dependent variables for Chotanagpur region as a whole are positively significant and do not differ significantly from one for all the crops and in both the periods except for wheat in HYV period. This, apart from indicating the importance of the lagged dependent variable, implies that there has not been any significant change in the area under cultivation in the region over the period of time. Surprisingly, in some cases, the coefficient of lagged dependent variable turned out to be negative and significantly so in the case of Ranchi district for winter rice, which is difficult to justify. Irrigation has been found to play a very dominant role in farmer's decision for planting wheat. Overall homogeneity was observed between the regression equations of the two sub-periods, which is understandable in view of the fact that there was hardly any impact of green revolution in the region during the period covered in the study. An examination of inter-district variations indicate that the districts having relatively better infrastructural facilities show substantially higher responses to price/gross returns, implying that increased infrastructural facilities in the districts induce farmers to become more responsive to economic stimuli.

In Palamau, Ranchi and Singhbhum districts, the magnitude of coefficients of variation for wheat is higher than gram during HYV period, while the case is just the reverse for pre-HYV period. This has not been properly explained by the author. Similarly, the reasons for other divergent results have not been always explained. In many equations, the value of R^2 is very low.

In general, the author has drawn relatively more firm conclusions than his results have warranted. The book may be read for its detailed analysis of supply response in a most backward region of the country.

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Managing Canal Irrigation: Practical Analysis from South Asia, Robert Chambers, Cambridge University Press, Cambridge, 1988. Pp. xi+279. Paperback: £ 6.95.

The book under review comprises a careful and detailed study of the management of canal irrigation systems in India. It deserves careful perusal as it succeeds in a great measure in conveying to the reader what is wrong with these systems, bringing together as it does the perceptive observations of a keen student of the Indian scene and a critical analysis of the large and voluminous literature on the manifold aspects of managing canal water effectively.

The author contends that a large part of what is wrong with canal system emerges from biases or what he calls 'blind spots' in the thinking of those concerned with its management and upkeep. Different professionals concern themselves with water in certain contexts and also in certain ranges of the irrigation system; the problems of that part of the system seem more important to them. Linkages between the domains and dimensions of the system as a whole are neglected. The system consists of the physical structures for storing and distributing water, the main canals, the distributaries and the water courses taking water upto the *chack* or field level. In other words, its domains encompass the physical, that of the infrastructure of weirs, dams, and reservoirs, sluices, canals and control structures; the bio-economic, that of growing crops, with a larger supply of inputs; the human, *i.e.*, the people controlling the two domains; and finally water which is neglected just because it is so obvious.

The main focus of the book in pointing out the blind spots that plague canal water irrigation is on people and water. These are the two domains that seem to get neglected. Engineers and economists are concerned with physical structures and production impacts respectively. In some sense, these constitute the first and the last parts of the system. The whole gamut of interactions between people and water that lie between these two are sometimes ignored.

Chapters 6 to 9 which in a sense constitute the core of the book point towards the gaps in management of water that emerge from the above-mentioned tendencies. Firstly, the main system management suffers. Even the basic question of how much water is available in the main system after losses to sedimentation is sometimes difficult to answer. Transmission losses and capture of water are likewise areas on which very little or no information exists.

Secondly, the potentials and problems of canal irrigation at night are not researched into. The author estimates that on an average, 47 per cent of time available during the twenty-four hours of the day is after sunset and may in actual practice be availed of by farmers, sometimes illegally. Better management of canal water must take account of this as also of the potential for better management of this aspect.

Another area of disinterest and mis-information relates to the role of the farmers. Quoting a number of micro-level studies, the author concludes: "De facto control by farmers of the lower parts of the main system is the rule rather than the exception". Farmers are not passive recipients of water at the end of the system. They organise themselves to find out what the supply position with regard to water at the source is. Further, systematic conflicts over access to water that are not brought to the notice of the irrigation department officials, the so-called arbiters of water, exist.

Lack of motivation for ensuring an efficient organisation of canal system also comes in for detailed analysis. The existence of a pervasive network of 'payments' to ensure timely and adequate provision of water is commented on. Elaborating on the perverse distribution and production impacts of such a network, the author suggests some solutions to this dilemma. Provision of rights and information for farmers, creation of separate cadres for operation and maintenance, incentives for managers and enhanced professionalism are some solutions suggested.

While the analysis of the ills of the system of management is exhaustive and perceptive, the solutions suggested seem to be too simplistic to be effective. The point at issue is that water is a scarce resource, being controlled by a top heavy bureaucratic organisation which

thrives on rental incomes created by this scarcity and the accompanying lack of complete information. To bring about any change in the situation, this situation has to be changed. Water has to be made available in a more decentralised fashion. As long as it is technologically desirable to have water being stored and distributed through large canal networks that are centrally controlled, this shall be difficult to implement. One possibility is that of transferring control over distribution of water to farmers at an appropriate point in the system. This can be done after ensuring that the cultivators themselves are sufficiently well organised to handle this. In a *de facto* sense they may even be thus organised, but in the context of the transfer of control over a scarce resource and the accompanying loss of power that it signifies for a powerful section of the bureaucracy, problems are bound to arise.

Alternatively, new technologies of water resource management that do not involve storage and transfer of water on such a large scale can be adopted. These are technologies envisaging creation of smaller reservoirs and irrigation systems. They have been found to be economically viable for large parts of the semi-arid tracts of the country. Appropriate local level institutions which take due account of the links between people and water that the author refers to can be constituted in the context of such methods of water resource management.

In the final analysis, both strategies, *i.e.*, effecting change in large scale systems for storage and transfer of water and planning for smaller scale systems shall have to be opted for. Perhaps, such a wider view of water resource management was beyond the scope of the present book. One expected, somehow, that the direction of the change required would also be indicated.

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Farmer First: Farmer Innovation and Agricultural Research, Edited by Robert Chambers, Arnold Pacey and Lori Ann Thrupp, Intermediate Technology Publications, London, 1990. Pp. xx+219. Paperback: £ 2.50. Hardback: £ 12.95.

This book is a collection of papers contributed by several natural and social scientists with their rich experiences in the third world countries. More than that, it is ably edited and written as a text book. The green revolution favoured the irrigated and resource potential environments but failed to support the predominantly resource-poor farmers with complex, diverse and hazard-prone conditions. The problem of low impact is not due to any characteristic behaviour of poor farmers but mostly rests with the technology addressed to them. The farmers' indigenous knowledge is the product of centuries of trial and error, natural selection and keen observaion. This knowledge, as this publication rightly recognises, forms the basis in planning research strategy and experimental procedure. For reasons of both productivity and equity, poor farmers need priority among other farmer categories. Thus this book is a significant contribution.

Divided into four parts, Part 1 shows how poor farmers continuously experiment, adapt and innovate. Agricultural research is stressed as a partnership venture between farmers, researchers and extensionists. Recognising the need for farmers' involvement in research process, Part 2 describes practical approaches and experiences to enable farmers to play

their effective role in analysis and in identifying farmers' priorities. There is a just cause for strengthening farmers' experiments by empowering them to develop technology to their needs as and when their bio-physical as well as socio-economic environs change. Useful methods are shown in bringing scientists and farmers together. To put farmers' agenda first, it is reminded that researchers treat farmers as their colleagues. Part 3 deals with several forms of participatory research with special focus on 'on-farm' trials. Illustrations are many to show how farmers' group meetings and workshops can be used in technology development process. The final part focuses on the implications for institutions and for action of putting farmers and their families first. The new paradigm of 'farmer-first' is complementary to the conventional paradigm of transfer of technology but with a difference.

This profusely illustrated and well documented book reflects the deep study and mature scholarship of several specialists. It has been written for all who are concerned with agricultural research, extension and development, regardless of discipline, profession or organisation. It would also be useful to physical, biological and social scientists working in International Agricultural Research Centres, in National Agricultural Research Systems, in Agricultural Universities and faculties, and in non-governmental organisations. It is a text for teachers and trainees. Specific cases, evidences and examples will stimulate and encourage readers. Finally, the book is most valuable for the many references it makes to other works and sources for further information.

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After the Green Revolution: Sustainable Agriculture for Development, Gordon R. Conway and Edward B. Barbier, Earthscan Publications Ltd., London, 1990. Pp. 205. £ 8.95.

This book by two eminent ecologists comes not a day sooner. After the initial euphoria over the so-called Green Revolution, the major criticism was over its inequitable impact both across classes and space. The next worry was not far behind. It was over the basic question of whether indeed the green revolution was all that green, *i.e.*, environment friendly and sustainable.

The authors show how several serious problems arose in this regard in the post-green revolution period. Wide scale monocropping led to greater instability of output, higher vulnerability to pests and diseases, greater sensitivity to changes in the relative prices of crops with respect to fertiliser and diminishing returns to high-yielding varieties (HYVs). What were essentially renewable resources tended to become exhaustible. This is particularly so both with land and water. Soil erosion not only led to off-site problems of silting up of reservoirs, irrigation systems and harbours, but also to a decline in crop yields directly. Others have pointed to depletion of genetic material and crop variety in the wake of green revolution and greater dependence of poor countries on the rich for genetic material (see, *e.g.*, Mooney, 1983).

Even human health is at stake. The authors observe: "A study of human mortality in the Philippine rice-growing regions of Luzon, where pesticide use has grown dramatically in recent years, found a highly significant correlation between increasing death rates of rural men and women, and increasing pesticide use" (p. 33). Damage to human health, fisheries

and bio-diversity through misuse of pesticides probably far exceeds the value of crops saved by them. Those who still feel that pesticides are nevertheless useful ought to know the facts: while pests accounted for a loss of 32 per cent of crop output in U.S.A. in 1945, they accounted for a higher proportion of 37 per cent in 1984 though pesticide use had increased many times (Seitz, 1988, p.134).

Though adverse effects of nitrogen fertiliser are less well-known, the authors point out that a strong correlation was found between cancer, nitrate and bacterial levels in water and the incidence of the parasite disease schistosomiasis (p. 33). There is also a fear that nitrogen fertiliser could be one of the factors in the depletion of ozone layer (p. 34). Fertilisers have caused contamination of groundwater and entrophication of surface water (p. 99).

It is to end this violence on nature and man generated by 'chemical agriculture' and, what is more, to reduce costs including labour involved in such agriculture, that Fukuoka advocated and practised natural farming avoiding chemical fertiliser and even ploughing (Fukuoka, 1984). Under his method, soils improve with each season and high yields are obtained at much lower cost. (For a case study of an Indian farmer adapting this method for local conditions, see Nadkarni, 1988.) The book under review does not discuss nor even makes a reference to Fukuoka and his approach, except for a casual mention of organic farming and using indigenous traditional knowledge (p. 10). Probably, this is because the authors do not want to confine themselves to just one particular method of farming. Their main concern is with placing agricultural development on a sustainable footing and examining policies and strategies in this light. Technocrats and extension bosses in the agricultural sciences may not take non-technocrat, non-academic persons like Fukuoka seriously and direct their research and extension efforts on the path shown by him. Hopefully, they may, and should, take at least eminent agricultural ecologists like Conway and Barbier seriously.

The authors approvingly quote three World Bank criteria for 'successful' agricultural development: the very first is that it be sustainable, by insuring conservation; second, it must promote economic efficiency; and third, its benefits must be distributed equitably (p. 23). The so-called green revolution had disregarded all the three, maximising yield being the paramount objective, though it may have had its own justification at the time. Though high productivity, stability, equity and economic efficiency could themselves be regarded as attributes or characteristics of sustainable development, there could nevertheless be trade-offs in the short run between sustainability and other objectives. The authors emphasise that it is necessary to recognise these trade-offs, so that farmers are provided with incentives (negative included) to orient development towards conservation and sustainability. On the contrary, subsidies very often promote unsustainable development, particularly in the case of subsidies on fertiliser and irrigation (p. 99).

This is where economics of sustainable development becomes important, which should take into account indirect costs as well as long-term consequences. In this economics, the conventional short-run notion of economic efficiency itself may need modification. Since soil quality may not be maintained year after year at the levels of input and output required to obtain maximum short-run profits, yields may decline or real costs per unit of output will increase. A long-run optimum may then need lower levels of input and output (pp. 44-49). This is where alternative technologies, including Fukuoka's natural farming, come in which contribute towards achieving high levels of productivity at lower input costs. Such technologies have to be evolved from a study of local conditions and traditional knowledge too.

The authors caution against a universal application of any given package and mismatching of technologies. For example, terracing - while appropriate for volcanic soils - can be disastrous on limestone soils. Such a caution is particularly needed in the use of agro-chemicals. Similarly, raising annual food crops may not necessarily be environmentally more sound than export crops in all regions or situations. Extension of cultivation of annual food crops into fragile drylands and hilly slopes has exacerbated problems of soil erosion and exhaustion. In such cases tree or bush cover would have been better.

The authors also question the usual tendency to take for granted that small holdings promote sustainable development. Small scale 'pioneer' shifting cultivators in Indonesia proved to be most destructive environmentally (p. 149). It depends on the nature of agricultural ecosystem and its socio-economic and ecological features. Depending on them, even large scale farming of tree crops (may be under community ownership and management) could be sustainable in some situations. The book contains a good discussion on how to study agro-ecosystems (Appendix, pp. 162-176).

Ultimately, sustainable path of agricultural development depends on farmers taking it up. The challenge is how to help them in meeting their needs and livelihood efficiently and sustainably. A whole chapter (Chapter 5) in the book is devoted to this question, which is both interesting and educative. They discuss two examples of success - Sukhomajri in India and Guinope in Honduras. They mention five key ingredients of success here: (1) importance of pursuing iterative learning approach; (2) conscious decision to put people's priorities first; (3) security of rights and gains for the poor; (4) self-help; and (5) 'good' project staff.

The concept of sustainability as viewed in this book is not confined to narrow ecology, but extends to wider economy and even politics. Broader national and international policies as well as political and economic environment are examined in terms of implications for sustainable development. The authors show how developing countries are drawn into the world economy and urged to increase their agricultural exports, but they do not derive commensurate benefits from this participation due to declining relative prices of their primary exports and their chronic indebtedness. They are vulnerable to international economic and political forces over which they have little control. The authors warn, however, that sustainable development needs international co-operation.

It is thus a book remarkable for its width of perspective and open-minded discussion of critical issues and should be widely read. Can we hope that there will be a cheaper Asian edition to facilitate this?

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REFERENCES

- Fukuoka, Masanobu (1984). *One Straw Revolution: An Introduction to Natural Farming*, Indian Edition (original edition 1978), Friends Rural Centre, Rasulia.
- Mooney, Pat Roy (1983). "The Law of the Seed - Another Development and Plant Genetic Resources", *Development Dialogue*, Nos. 1 and 2.
- Nadkarni, M.V. (1988). "The Crisis of Increasing Costs in Indian Agriculture: Is There a Way Out?", *Economic and Political Weekly*, Vol., 23, No. 39, September 24; also in M.V. Nadkarni, A.S. Seetharamu and Abdul Aziz (Eds.) (1990). *India: The Emerging Challenges*, Sage Publications, New Delhi.
- Seitz, John L. (1988). *The Politics of Development: An Introduction to Global Issues*, Popular Prakashan, Bombay.

The Farmer as Manager, Tony Giles and Malcolm Stansfield, Second Edition, C.A.B. International, Wallingford, Oxon, U.K., 1990. Pp. viii+208. £ 9.95.

This book is a revised edition of a work first published in 1980 by Allen & Unwin. Unlike a large number of other existing books on the subject, the present book is unique in having its origin in the 'countless conversations' that the authors have had with the farmers in the U.K. and other countries and not in lecture notes like many other books on the subject. One would readily agree with the authors that it is not "a text book covering the entire field of farm management, but rather a collection of thoughts" on various topics relating to management "thinking and procedures which occupy the time and attention of anyone who manages a farm".

The book is addressed primarily to the large commercial farmers or the managers of such farms in the U.K. The aim is to provide guidelines and directions to them so as to enable them to manage their farms better. Peter F. Drucker - 'the doyen of management gurus' - has been the philosopher and guide of the authors throughout the entire write-up. This is evident from several references to his books and articles throughout the text. He is indeed 'a firm favourite' with them. The management of the farm is approached through the general field of management rather than through the well established discipline of farm management very well-known for about a century now. The authors seem to have probably ignored to give adequate credit to the American pioneers who are mainly responsible for developing farm management as a distinct field of scientific study. It is rather somewhat surprising as to why the authors feel shy to recognise the independent existence of farm management as a field of study even towards the close of the 20th century. All in all, the scope of the book appears to be limited only to the U.K. whose contribution to the total agricultural production of the world is quite negligible.

The text is divided into four parts. The first part, containing the first two chapters, introduces the book itself and its subject matter, *i.e.*, management and farm management. Part II, comprising Chapters 3 to 6, discusses broadly the basic functions of the managers in the context of setting of objectives, planning, decision-making and control. "What has to be managed" is the subject matter of the next four chapters under Part III. Here, management of production, buying and selling, finance and staff are discussed. Finally, Part IV concentrates on the managers, where Chapters 11 to 13 discuss the importance and role of managers as individuals and the methods of raising their competence through education, training, acquisition of information and identifying "the right strategy rather than razzle-dazzle tactics" so as to help them become effective executives. The last chapter of the book summarises the entire subject matter, presents the conclusions and gives some after-thoughts.

Though the book is mainly non-technical, yet it is quite interesting. It covers varied subjects relating to the management of farms and the managers, ranging from topics such as management by objectives (MBO) to role of spouses, computers and even environment in the context of management of a farm. It makes rather a light reading and may specially find favour with those managing large farms in the U.K. The qualitative nature of discussion of the general principles of farm management may also be useful to the students, researchers and teachers.

The book would have certainly become more valuable if the authors had extended its scope beyond the U.K. by including references and case studies relating to other countries of the world.

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Changing Aspects of Bonded Labour in India, J.L. Hamilpurker. Himalaya Publishing House, Bombay-4. 1989. Pp. xiv+230. Rs. 150.00.

Despite the abolition of the Zamindari system, introduction of land reforms, Bhoodan movement and the enactment of the Bonded Labour System (Abolition) Act 1976, *Bandhua Mazdoor* or the bonded labour system has not been rooted out from this country. The bonded labour also called as *Halies, Kamiyas, Gothis, Sagris, Pannaiyal, the Adiyas, Paniyas*, etc., in the different states of India have a long history of its existence and are found across the country. The book under review deals with the various aspects of the bonded labour system in a comprehensive manner.

The study is based on a primary survey of three villages (two from Gulbarga district and one from Bidar district of Karnataka) representing different land tenure systems of Karnataka State. The book contains seven chapters.

The author has focused on all the important facets of bonded labour and has effectively analysed the origin, growth and perpetuation of debt bondage. This book is a condensed version of the doctoral thesis of the author on "The Study of Bonded Labour in the Context of Agrarian Social Structure within the Districts of Hyderabad Karnataka".

The operational definition of bonded labour adopted by the author would have become more clear and effective had he taken into consideration the Supreme Court's judgement dated December 16, 1983 in the Writ Petition No. 2135/1982. The author is right in saying that poor economic condition (poverty) of bonded labourers is the single factor responsible for their bondage and no other cause - caste, creed or colour - can be blamed for the bonded labour system. However, we say that illiteracy among bonded labourers and their belonging to the lower castes affect their bargaining power adversely, which, in turn, have its implication on the extent of their exploitation and duration of bondage.

The author's observation that "The bonded labourers are now free in all theoretical aspects and they can change their masters, they can demand higher salary, they can reject certain undignified jobs and impolite attitude and languages of the masters" may be true in the area under study but the situation is not so bright in the backward, interior and tribal areas of the country. The author has rightly pointed out that the government has not been sincere and honest in the implementation of the Act. A number of cases of bonded labourers are noticed in the villages and the system has not been eradicated. The method of identification of bonded labourers is defective and the measures of their rehabilitation are not strictly implemented by the concerned authorities.

The author's suggestions pertaining to the identification, release and rehabilitation of bonded labourers are valuable. His contention that "while dealing with the problems of rehabilitation the concerned authorities have to see that the poor labourers of the villages

should not borrow from private sources against the securities of their physical labour" is remarkable. For that the government through Regional Rural Banks or Block Development Officers should provide loans even for consumption purposes. Further, the minimum quantity of land allotted to the landless bonded labourers should be fertile and more in proportion to the size of land, otherwise there is every possibility of relapsing the freed labourers into bondage.

The title of the book gives an impression that it covers the bonded labourers in all fields like mining, construction on all-India basis, whereas the subject matter of the study is confined only to the agricultural bonded labourers and that also in the three villages of Karnataka State.

However, the book contains valuable information pertaining to the socio-economic background of bonded labourers and their masters, debt problem and changing relationship between the master and bonded labourers. The author has presented workable suggestions for eradicating this barbarian system. It is a commendable contribution both from the academic as well as social reform point of view. The book is of topical interest and will be very useful to the policy makers, social reformers and administrators. It is a valuable addition to the literature on the subject.

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Narayan Prasad Sharma

Long-Term Financing of Agriculture: Land Development Banks in a Multi-Agency System, T.K. Karthykeyan, Himalaya Publishing House, Bombay-4. 1990. Pp. xvi+192. Rs. 140.00.

The rural credit system, as it exists today, consists of multi-agency and multi-structure. The multi-agency approach appears to have gained support from the experience that the co-operatives themselves are unable to meet the credit needs of the growing rural economic activities. Furthermore, the rural economy with vast geographical area and predominance of farming is characterised by high degree of diversity. Admittedly, any single institutional agency is incapable of catering to the entire needs of rural economy, considering the vast area to be covered and the large magnitude of the task. Perhaps, in view of this, the multi-agency system of rural finance has been found to be suitable and has been in operation since the seventies.

One of the policy objectives of the multi-agency system is to develop supplementary line of credit in the rural areas without in any way impairing the already developed credit structure, so that the possibility of duplication or proliferation of financial institutions in the rural areas may be minimised. In order to mitigate some such problems, the Kamath Working Group suggested, *inter alia*, geographical demarcation rather than financial jurisdiction for each of the credit agencies. The introduction of Service Area Approach is meant to improve the quality of lending and viability of rural institutions. In particular, the case studies of the type under review and many impact studies conducted by co-operative organisations have arrived at startling conclusions. For instance, decelerating importance of co-operative banks as indicated by a decline in their total business is attributed to astronomical growth of commercial bank branches. It is also observed that the existence of a large proportion of loss-making commercial banks' branches is due to proliferation of financial institutions

including co-operative banks in the rural financial market.

The observations and inferences made on the basis of perceived relationship between decelerating role of cooperatives and expanding role of commercial banks in rural financial market are yet to be substantiated with adequate evidence generated from the case studies, surveys and investigations at micro level in different parts of the country. In this sense, the issue needs thorough investigation.

The book under review which is the author's Ph.D. dissertation also addresses some of the issues emerging from the working of multi-agency system. In particular, an attempt is made here to evaluate the relative performance efficiency of Land Development Banks (LDBs) and commercial banks in respect of rural lending with a view to investigating whether the decelerating role of LDBs in term lending to agriculture is caused by entry of commercial banks in the financial market which may be regarded as legitimately belonging to LDBs.

Both primary and secondary data are used for the purpose of analysis contained in the book. The macro analysis is based on the data taken from various publications of Reserve Bank of India, National Bank for Agriculture and Rural Development (NABARD) and the National Co-operative Agriculture and Rural Development Banks' Federation Ltd. The primary data generated from canvassing pre-tested questionnaires form the basis of micro study containing evaluation of relative performance efficiency of LDBs and commercial bank branches. The interesting analysis of both primary and secondary data reveals that the author has attained considerable degree of expertise in handling the data.

The reorientation of LDBs' lending policy by according priority to loans for minor irrigation and land development purposes and the setting up of Agricultural Refinance and Development Corporation (1963) have contributed substantially for the development of LDBs. Hence, the sixties have been rightly regarded as the golden age of the long-term co-operative credit structure. Though this holds good at the all-India level, some states like Tamil Nadu experienced a conspicuous deceleration in the lending operations of PLDBs. That a slow down in the term loan disbursements of PLDBs has been perceptible is supported by the following facts. The absolute disbursements of PLDBs in Tamil Nadu slowed down. The term lendings by commercial banks for agricultural purposes during the second half of seventies and early eighties rose sharply.

The general impression gathered from the apparent interrelationship between a decline in the term lending by PLDBs and increase in the term lending by commercial banks since the mid-seventies, is that the spread of commercial bank offices in the rural areas has affected adversely the functioning of the co-operative banks. In contrast, the study under review contains factual evidence which is quite contrary to the general impression. According to the study, the decelerating performance of the PLDBs in Tamil Nadu is largely caused by the mounting overdues leading to a drastic fall in the recycling of funds. The percentage of overdues to demand for all-India rose sharply to 49.5 per cent in 1979-80 from a low level of 19.2 per cent in 1971-72. This percentage was as high as 80 in Tamil Nadu in 1979-80 and came down subsequently to 51 in 1986-87. Still worse was the recovery performance in the case of the sample borrowers of PLDBs. As much as 76 per cent of the borrowers under the sample survey turned out to be overdues cases.

The investigation into various factors responsible for the mounting overdues in the area selected for intensive study reveals a number of managerial and technical weaknesses contributing to the mounting overdues. The increasing tendency of officialisation of management of LDBs, lack of competent technical staff, laxity in the post-credit follow-up,

inadequate loan amount, non-provision for additional requirement of credit for contingencies and cost escalation, non-adherence to groundwater discipline in the case of minor irrigation, low rate of return on borrowed capital, lack of additional income growth commensurate with the amount of investment and so on, are mainly responsible for growing overdues and slow down in the recycling of funds.

In regard to the impact of expansion of commercial banks' branches on the functioning of PLDBs in the areas selected for the study, no supporting evidence was found to indicate that the spread of commercial bank branches in the rural areas resulted in contraction of lending activities of the PLDB. Therefore, the author concludes that the commercial banks play an additive role.

As observed earlier, one of the policy objectives in respect of the multi-agency system in the rural financial market is to promote and develop supplementary line of credit without impairing the existing financial institutions. The findings of the study under review provide evidence that the policy objective is fulfilled in the area selected for the study. But this is merely a micro evidence and might be insufficient to make generalisation for macro perspective. Many such micro studies in different parts of the country might be necessary to evaluate the macro policy.

The micro analysis contained in the book is based on the field investigation. In this regard, one feels that there should have been some discussion on 'Before and After Approach' or 'With-or-Without Project Norm'. The approach constitutes the basis for judging the impact of institutional credit extended to farm activities. Admittedly, this approach is a crude method of assessing the overall impact of term lending by institutional agencies. For, it makes simplistic assumptions, such as homogeneity in respect of managerial skill of a borrower, fertility of land, market conditions and so on. The results obtained from the field investigation need to be adjusted against differences arising from heterogeneity of factors of production and changes in prices. The field investigation provides ample opportunities for in-depth study of many aspects of credit management and recovery performance. Quite a few such opportunities are exploited while others are missed. For instance, the study of wilful defaulters does not appear to be comprehensive. The detailed examination of demonstration effect of wilful defaulters would have added to the usefulness of the study.

On the whole, the book is well written and a lot of thinking has gone into the collection, compilation and systematic analysis of both data and other information. As a sequel to this, one can notice consistency in the treatment of the subject.

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Land Systems and Land Reforms, K.C. Misra, Himalaya Publishing House, Bombay-4. 1990. Pp. xx+604. Rs. 375.00.

The book is based on the author's Ph.D. Thesis. The author has analysed the land systems and land reforms in Orissa from the stand-points of efficiency and social justice. The book deals exhaustively with (i) the concept of socio-economic justice, (ii) property right in land, (iii) land tenure system in Orissa, (iv) evolution of socio-economic and legal rights of the

Orissan cultivators during the British rule, (v) land settlement and socio-economic justice in Orissa with special reference to structure of rent, (vi) land system and socio-economic justice in Western Orissa during the British rule; (vii) land system and socio-economic justice in Southern Orissa, (viii) economic theory of rent in retrospect and its applicability to Orissa land systems and (ix) implementation of various land reform measures in Orissa in the fifties and the sixties and their impact on rural inequality. The book is rich in both theoretical and applied research contents.

The author has put forward a strong case for lowering the ceilings on land holdings in Orissa with a view to providing adequate employment and income opportunities to the vast majority of rural masses. While many of us are convinced about the positive impact of land reform on rural poverty in the short run, necessary infrastructural and environmental conditions may have to be created for sustaining the positive impact of land reform on long-term basis. Besides, removal of rural poverty in Orissa would require rapid diversification and industrialisation of the rural economy, using land reform and other institutional reforms as effective change agents. Of course, the author partly realises the importance of such change agents. According to him, "the attempt made by the Government to accord socio-economic justice to the Orissan peasantry was somewhat slow and tardy. This has made the agrarian reform in an egalitarian line a mere window dressing as is evident from the fact that some amendments were made only after the rich land owning class took full advantage of the legal loopholes in the earlier land laws. Institutional change in the agrarian system needs to be sharp, radical and dramatic as it happened in the 1950's China and last quarter of the nineteenth century Meiji Japan, if it is to be made purposive and meaningful. Contrarily a slow and gradual change in a tradition-ridden institutional set up is not likely to serve the objective for which it is intended. Instead it gets defeated and this is exactly the state of affairs in the agrarian reform of Orissa."

On the whole, the book seems to have been well written. It provides a clear insight into the theory and poor implementation of land reform in Orissa.

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Organisational Issues in Indian Agriculture, K.N. Raj, Oxford University Press, Delhi, 1990. Pp.227. Rs.225.00.

The papers in this collection, written mostly in the fifties and sixties, deal with some of the most important and widely debated issues concerning agriculture and rural economy, namely, factors contributing to rapid agricultural growth; livestock; rural employment, and aspects of agrarian structure.

Of the two papers on agricultural growth, one deals with the high growth reportedly achieved by Mexico and Taiwan since World War II and the other with the Chinese experience. The high growth of Taiwan is shown to contain a significant element of recouping from a steep fall in output during the forties; while in Mexico it was largely due to an extraordinarily rapid growth in a couple of regions. Raj rightly cautions against the tendency, then prevalent, to exaggerate the contribution of HYV technology to growth and neglect the crucial importance of irrigation to realise the full potential of the new varieties and fertilisers.

Raj highlights the fact that overall agricultural growth in China was comparable to that of India, but not as sustained: a period of relatively rapid growth in the fifties (largely reflecting better use of available infrastructure in the south) was followed by a period of near stagnation, if not decline. This triggered a major agrarian reorganisation to mobilise (via communes) rural labour for expanding and improving irrigation and other infrastructure in the north which provided the basis, along with other institutional reforms, for a revival of growth in the seventies. In the Indian context also the difficulties of mobilising resources for a faster spread of irrigation is seen as a major constraint on the rate of growth.

The papers on India's livestock economy are truly path breaking. The thesis that the essential features of Indian livestock economy (namely, sex, species and age composition as well as productivity) are rooted in objective factors, such as the level and pattern of demand for animal labour, milk and meat, and feed availability is brought out forcefully. The paper has many rich insights to offer. Solid evidence is adduced to rebut the widely held belief that the main features of India's livestock economy (including its alleged 'inefficiency') are shaped by Hindu religious prejudice. While conceding that there may be surplus cattle in terms of numbers, its extent is in doubt and in any case the distributional consequences of policies to remove the excess cannot be ignored.

On rural employment, the critique of the Nurkse thesis on mobilisation of idle manpower for stepping up capital formation, written in 1957, provides a clear elucidation of the issues involved. Mobilisation of idle labour for large scale capital investment requires major institutional changes in terms of land reform (to appropriate the surpluses by way of rent and interest accruing to landlords) or communes as in China. The potential for these changes is far more modest than Nurkse assumes. Raj sounds somewhat more sanguine about the scope for increasing capital formation through credit creation. The existence of unused technical knowledge and the very low level of productivity (especially in agriculture) permit output to be increased "with relatively little investment and short time lags". But all said and done, the task of providing adequate employment to a growing population cannot be solved without a significant step up in the rate of capital formation which at that time was abysmally low.

Raj returns to the same theme in his 1988 paper comparing what he calls the strategy of 'direct labour mobilisation' adopted by China and mobilisation through market processes (via terms of trade, taxation, financial intermediation and use of coercion to mobilise surpluses from agriculture). In either case, a progressive rise in productivity of labour in agriculture is seen to be crucial for generating sustained surpluses to support development in the rest of the economy. The rate at which productivity can be increased and the investments needed for this purpose are a function of the way factor markets work, the agro-climatic conditions and of course the pace of technical progress. Land reform is seen to have played a crucial role in stimulating fuller, faster exploitation of the potentials of land augmenting and labour intensive technology in China.

The paper on mechanisation reflects concern with the implications of the rapid tractorisation for rural employment in South Asia. While stressing the difficulty of classifying techniques neatly into land augmenting and labour saving types, a distinction is made between two types of mechanisation: Energisation of pumpsets is unquestionably land augmenting, though a doubt is raised based on sketchy data for two or three villages - whether they are always labour using. Tractors, however, are clearly labour displacing. Rapid tractorisation in the context of unemployment in South Asia is attributed to several factors including the high cost of animal draft power, the superiority of tractors for timely tillage of land in dry regions, inability of large holdings 'to cope with demands of cultivation',

government policy of under-pricing tractors and the inputs and (in Sri Lanka) the faster growth of demand for beef induced by subsidised rice. Correction of such policy distortions is desirable but a redistribution of land is seen to be essential to arrest tractorisation.

While much of the collection is concerned with analysis and interpretation of specific facets of agriculture in particular countries, it also includes papers of more general theoretical and methodological interest. The paper entitled "Ownership and Distribution of Land in India" is essentially a theoretical exploration of the factors governing the direction and extent of leasing of land in agrarian economies and their effect on the distribution of land. Other things being given, unequal distribution of land ownership relative to the labour power available in land owning families provides a strong incentive for tenancy. Raj discusses a number of reasons why this process may be impeded: indivisibilities in capital equipment needed for cultivation, risks of default by tenants (especially among small tenants close to subsistence) and the monopoly power of large landowners in situations where ownership is highly concentrated. The form of tenancy (fixed rent versus share rent) and the size of tenant holdings are also seen as a function of degrees of risk of default. The attempt to see how far regional variations in extent and forms of tenancy can be explained in terms of the above theses is inconclusive. One wishes that the discussion had focused on the reasons for the variations in extent of tenancy versus cultivation with hired labour across regions and also the reasons for the relatively low overall incidence of tenancy in India compared to China and East Asia generally. Only a passing reference to this is made in the 1988 essay comparing India and China.

The paper on credit and interest rates examines various hypotheses for high interest rates in the agricultural sector: *e.g.*, the high preference for land as an asset, high risks of default and the differentiation between the market for production and consumption credit. None of these is found to be satisfactory. Raj argues that a proper understanding requires consideration of the peculiarities of the structure and working of markets in countries like India in the context of low level of commercialisation and the existence of inter-linked markets.

The themes of these essays are obviously important for any study of agriculture and agrarian change. They represent pioneering contributions which are both insightful and stimulating. The essays show how theoretical concerns and empirical study can be blended: the value of studies in a comparative perspective; the importance of a sense of historical perspective and a sensitivity to the role of institutions in an effort to understand the process of agrarian transformation. All this makes a careful reading of this collection eminently instructive and worthwhile. It is a 'must' reading for students of India's agriculture.

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The Violence of the Green Revolution: Ecological Degradation and Political Conflict in Punjab, Vandana Shiva, Research Foundation for Science and Ecology, Natraj Publishers, Dehra Dun, 1989. Pp. viii+160. Rs. 150.00.

There are very few authors who write on issues of great socio-economic significance with passion and conviction. The author of this book is certainly one such writer. The deep concern for ecological degradation followed by other consequences such as economic stagnation, falling profitability of farming, increasing rural-urban chasm, etc., is easily discernible throughout the book under review. It is indeed pleasing to note that the author

marshalls all essential facts and arguments to prove that the recent experience of Green Revolution in the Punjab has not been free of ecological costs, economic unrest and political disturbances, all of high magnitude.

The author unfolds the story of the pre-Green Revolution years, especially the role of international agencies, on the one hand and the 'too-eager disposition' of India's policy makers to import technology with all attendant consequences, on the other. She narrates how the green revolution led to a shift from earlier rotations of cereal, oilseeds and pulses to a paddy-wheat rotation, involving highly intensive and expensive application of irrigation and chemical fertilisers. In her view, the paddy-wheat rotation has created an ecological backlash with serious problems of waterlogging in canal irrigated areas and groundwater mining in tubewell irrigated areas. The high pace of chemicalisation has led to large scale micro-nutrient deficiency in soils, particularly iron in paddy and manganese in wheat. She strongly laments the destruction of genetic diversities that were hallmarks of farming in the Punjab through centuries.

Many other consequences of the rapid spread of the irrigation-fertiliser intensive technology have been set out in different chapters. For example, the dramatic change in the grain-straw ratio has been pointed out; declining soil fertility under the impact of the so-called specialised agriculture (paddy-wheat rotation) has been highlighted; the more frequent occurrence of plant diseases has been underlined; the maniac obsession of making more money and in the process staging a series of agitations for maintaining pre-conceived levels of profits have been narrated in the vein of political economy of the present state of economic unrest and the rising pace of killings in the Punjab and so on. The author believes that in total terms, the green revolution in the Punjab has been an economic curse rather than a blessing; it has let loose the process of depeasantisation; the farmers are groaning under the pain of rising indebtedness; the high cost and low profitability in agriculture are escalating the rural-urban economic divide between the Jat and Sikh farmers largely living in the rural areas and the trading baniya community largely operating in the urban Punjab; the increasing centralisation of agricultural policy making with the Union Government has raised the strong bogy of centre-state contradictions, giving a political edge to the mounting tide of economic unrest among the Punjab peasantry, and so on.

One cannot help saying that the author has done a nice job in reminding the technology-enthusiasts that excessive dependence on a few elements of a 'foreign' or 'foreign-inspired' technology is fraught with a series of economic and political consequences. In recent years, many ecology conscious analysts have drawn attention to the formidable social cost in reckless application of borrowed technology; very largely, these technologies promote the commercial interests of multinational corporations and push the domestic economy under irredeemable strain. The author stands apart from other contributors in that she does not leave any aspect unanalysed. She is bold enough to warn against the likely ecological and political risks of the so-called "Second Green Revolution" that the Pepsi enthusiasts believe is around the corner. The fears are not totally unfounded. For her painstaking analysis, meticulous details and passion for arousing social consciousness, the author deserves a warm applause of her readers, including the academic community and policy makers.

The study has its share of weaknesses too. Firstly, at places, the author goes too far. Her position is certainly indefensible for many factual developments which she narrates to give

an edge to her arguments. For example, on page 124, her statement about the disappearance of a large number of small holdings due to economic non-viability is a misinterpretation of the factual position; in fact during this period, the small farms simply proliferated. Similarly, on the same page, to take another example, her statement about the changing incidence of poverty does not fit into the long-term temporal profile of the rural Punjab. Yet another example is Table 6.1 which borrows pieces of incomparable information from different sources. Again, for example, to talk of Punjab farmers' indebtedness with reference to per hectare institutional borrowing of Rs. 103 against Rs. 35 at the national level is an innocuous way of proving the point.

In brief, the author certainly gives the impression that she is hell-bent to substantiate her arguments with hard empirical facts which she interprets sometimes wrongly, sometimes out of context and sometimes without analytical compulsions.

Like other ecologists and ecology conscious analysts, the author also cries wolf. One cannot, however, live into history when it suits and keep away from it when it does not. The painful memories of food crisis in the early sixties are still fresh in our mind. What a national shame it would have been to let the food situation worsen had the green revolution technology not intervened, or to put the point in the vein of the author's own argument, had not been allowed to intervene. Our begging bowl under PL-480 would have shattered our national pride if things had been allowed to go the way they had been going in the pre-1966 years. On the other hand, the fierce opposition to food shipments to India, inside as well as outside the US policy circles, was too good to escape from our memory. In this context, the following passage from the well-known book: "Famine 1975!" (authored by Paddock Brothers) shows the grim external environment that India was facing during the pre-green revolution years and how India was placed on the top of the list of countries to be outrightly sacrificed.

"America will have to apply the classical medical 'triage' method. Like doctors on the battle-field trying to make the best out of minimum resources, she will have to decide which countries to save - and which to sacrifice.... Today India absorbs like a blotter 25 per cent of the entire American wheat crop. No matter how one may adjust present statistics and allow for future increases in the American wheat crop... it will be beyond the resources of the United States to keep famine out of India during the 1970's. The reason? Of all the national leaderships the Indian comes close to being the most childish and inefficient and perversely determined to cut the country's economic throat. The moral: If other more deserving countries are to be 'saved', India must be 'sacrificed'" (p. 218).

One need not take umbrage at such harsh words. Even such a discrete critic like T.W. Schultz characterised United States' food aid to India as 'mal-investment'.

Lastly, the author's presentation portrays an extremely dark and painful effect of 'borrowed technologies'. One cannot share all her pessimism just as one cannot agree with all her interpretations. In fact, the challenge to the vast native army of agricultural scientists has been completely glossed over. Let this be said with full emphasis that in the recorded history of mankind, technology has been its most trusted saviour. We have had doom's day predictions, dating back to Malthus' days and as recent as the Club of Rome Model, but human race has progressed, perhaps more spectacularly during the present century than ever before. It is the man who has to tide over the environmental hostilities rather than let them aggravate

his resource position. As a warning for a more judicious use of resources, the author's work will be read both with interest and concern. That one may not agree with her for many issues, procedures and interpretations is, however, a different matter.

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Canal Irrigation Management: Problem of Time and Use Relationship, Lakshmi Shukla and Ram Kumar Gurjar, Agricole Publishing Academy, New Delhi, 1989. Pp. xv+119. Rs. 125.00.

A major challenge for irrigation system in the country is the management of water to ensure adequate, timely and dependable supply for the entire cultivable command area. It is often stated that the performance of major irrigation system is poor where the objectives and goals are not realised. The monograph under review, the outcome of the field investigations undertaken by the authors, is a timely publication. Though there are many research works on canal irrigation, the problem of time and use relationship has never been attempted so far. This is the first detailed study on this aspect.

It has six chapters, excluding the Introduction. The Introduction contains general information about the subject and the scope of the study, review of literature, research gap and the objectives and the utility of the study. In the first chapter, the geographical, economic and social backgrounds of the area, which are the essential elements in the development of irrigation have been examined. A detailed description of the water distribution system in the Indira Gandhi Canal area has been given in the second chapter. In the third chapter an account of the availability of irrigation water and its impact on the pattern of irrigated agriculture has been given. The fourth chapter deals with the problem of irrigation related to the time factor. It makes an intensive study of the irrigation problems of the farmers at different times of the crop calendar. It also includes an account of the advantages and disadvantages of day and night watering of crops. Chapter 5 attempts to describe the mutual relationship among the irrigators and also the relationship between the irrigators and the government officials in charge of water distribution. The last chapter contains a summary of the study and suggestions for proper water management in the area which may serve as a basis for planning the future development of the area.

The major issues dealt in this study are: When the farmers particularly face the problem of watering their crops and how best this problem can be solved by making water available in time? In the canal irrigated areas, inadequate and untimely supply of water is the cause of frequent quarrels among irrigators, but quarrels on this account are not very frequent in the area under study. On the contrary, the relations between the irrigators and the government officials in charge of water distribution are not at all good. Farmers in general blame the irrigation bureaucracy for its inability to ensure adequate water supply. The book in particular discusses in short the human interactions in this regard.

It also examines how farmers who are advantageously located at the head reaches of canals exploit the situation to their advantages, while the tail-enders are the victims. It would have been better to identify the determinants of water distribution in more detail.

While analysing the cropping pattern in Chapter 1, more details about the cropping pattern and its changes in terms of net cropped area should have been examined.

The socio-economic and environmental dimensions together with technical designs should have been discussed elaborately. It may be appropriate to characterise the irrigation projects not only as a hydraulic system run according to engineering principles, but also as socio-economic systems where all participants - farmers, managers, irrigation bureaucrats - play their roles.

A critical analysis of the working of voluntary organisations is also necessary. The authors should also have discussed the relationship of the field channels or other infrastructural facilities with the totality of irrigation system in a specific way in some more detail.

There are a few printing mistakes which should be corrected in the next edition of the monograph. For example, in the second paragraph on page 16, in Table 1.3 in column 3, addition '55' should be read as '50'; in line 23 on page 21, 'of' should be omitted; on page 36, para 2, percentage distribution is wrong. The monograph gives an impression of hurriedly collected data.

Despite the aforesaid shortcomings, this monograph will be welcomed by researchers and policy makers alike.

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Managing India's Food Economy: Problems and Alternatives, D.S. Tyagi, Sage Publications India Pvt. Ltd., New Delhi-48, 1990. Pp. 240. Rs. 165.00.

To manage the food economy in a more rational and cost effective manner during the 1990s, the existing Public Distribution System (PDS) needs to be totally restructured and curtailed. In the rural areas, coarse cereals should also be brought in the distribution network while in the urban areas pre-cooked *chapaties* may be tried. In both cases, however, target population be restricted only to those who have been covered under various anti-poverty programmes. Further, private trade ought to be involved more for the distribution of grain; farmers be induced to hold stocks by offering them differential prices within the same marketing year, the lean season prices taking care of interest and storage costs. The distinction between support and procurement price be revived. The buffer stocking for security should be increasingly in the form of foreign exchange (starting with 40 per cent of the desired stocks) and therefore places greater reliance on foreign markets. To keep domestic prices in check, government operations should be more in wholesale markets than at the retail level through fair price shops. And finally, regulated futures trading be introduced in foodgrains. This broadly is the direction spelt out in Tyagi's book for the food economy to move within four to five years. The author stresses its need, particularly in a self-sufficiency environment, to steer the economy away from emerging problems of huge food subsidies, choking of markets in surplus producing areas and high cost operations of Food Corporation of India (FCI).

The author makes his case by empirically analysing different segments of food economy ranging from production statistics to procurement, distribution, stocks and imports. After

briefing the reader about the existing policy framework and its institutional arrangements for managing India's food economy, he lists two major achievements of food policy: (1) that it has increased physical access to food in terms of raising the net per capita availability of foodgrains from below 400 grams per day in 1951 to above 450 grams during the 1980s; (2) that the economic access to food has also increased as the prices of foodgrains, particularly wheat and rice, rose at a slower pace than the increase in per capita incomes and consequently it required only 6.4 per cent of per capita income to buy one quintal of wheat in 1984 compared to 12.9 per cent during the 1970s (p. 52). These achievements are well reflected in the successful avoidance of famines despite sharp drops in foodgrains production such as in 1979-80 and 1987-88. The prime factor that led to this success story on food front lies in the optimal mix of technology and price policies followed in the later half of 1960s and 1970s. Imports of HYV seeds of wheat were combined with higher procurement prices that resulted in green revolution. Revolution in rice, however, started only in the mid-seventies when IR-8 was introduced on a commercial scale and the price policy was tilted in favour of rice (p. 62). Policies pertaining to buffer stocking and public distribution system also played their role, particularly in avoiding any widespread famines.

The author also points out the major failures of existing food policy for not safeguarding the interests of either the most vulnerable consumers or producers. This happens because the PDS has gravitated more to urban areas and remains largely untargeted, defying equity considerations. On producer's front, cultivators of coarse cereals in unirrigated tracts got a raw deal from price policy as their market prices often dipped below support levels. But it is the emerging problems of a different variety that seem to be the central concern of Tyagi's suggestions on food policy. During the eighties markets in surplus areas of Punjab, Haryana and Uttar Pradesh were getting choked due to heavy arrivals immediately after harvest. In the Punjab, *e.g.*, as much as 93 per cent of annual arrival of wheat comes in the first quarter. Such a situation obviously strains the procurement and movement machinery, which finally gets reflected in higher costs. While one would expect that with increasing size of operations, FCI should experience economies of scale, in reality it is the reverse that appears to have happened. Economic cost of FCI in procuring and distributing grains, *e.g.*, has increased from 134 per cent of procurement price of wheat in 1975-76 to 154 per cent in 1985-86. With the wholesale issue price remaining somewhat sluggish, it has led to increasing subsidy on food, both on per unit and aggregate basis. While per unit subsidy on wheat or rice has gone beyond Rs. 80 per quintal, the subsidy on food has crossed Rs. 2,000 crores. The author questions the very legitimacy of this, particularly when the PDS is untargeted and domestic production is increasing satisfactorily, and warns: "unless the food subsidy bill is cut down, it would tend to explode and as a consequence the development process itself may come to a halt" (p. 134). Tyagi estimates that by 1995-96 the food subsidy bill may range anywhere between Rs. 4,000 crores to Rs. 6,000 crores at 1987-88 prices, if the present system of procurement and distribution is carried on to 1990s. This is because procurement may even exceed 45 million tonnes in a bumper year and distribution may cross about 34 million tonnes. This is the likely scenario based on the projections of cereal production, which as per the author's estimates would touch 194.2 million tonnes by 1995-96 and 206 million tonnes by 1997-98. On the other hand, apparent consumption requirement of the population in gross production terms is estimated to grow from 158 million tonnes in 1988-89 to 192 million tonnes by 1995-96 (pp. 164-65).

To a cautious policy maker, Tyagi's book would raise at least two sets of questions: (a) how operational and practical are his suggestions on food policy and (b) how accurate are his estimates of different variables of food economy, which are at the back of his policy suggestions? Let us consider some examples only in the first set. Take, for instance, his suggestion of reviving the distinction of support and procurement prices in the case of wheat and rice so that government intervention in procurement can be curtailed. The author does not spell out how big should be the difference between the two prices. Would he like it to be say 25 per cent? It is important because anything less than that perhaps would not have the desired effect. If so, would he like to place support prices 25 per cent below the existing procurement prices? In that case, will it be acceptable to farmers and politically feasible especially in surplus areas who are clamouring for even higher prices than the existing procurement prices? Will the open market compensate them on the price front? The other possibility is that the existing procurement price is treated as the support price and would be procurement price is announced to be 25 per cent higher. In this case, the government may get the same stocks, which it has been getting, especially in the case of wheat, defeating the very purpose. In the case of rice, government can easily reduce its procurement simply by reducing or waiving off the levy ratio. Price plays a rather marginal role.

Take his suggestion of distributing pre-cooked *chapaties* in urban areas to only the target population. Are these *chapaties* acceptable to Indian tastes? Even if one ignores the luxury of taste in the case of this subsidised food, the question remains about the distribution network that would be required to perform this job. Does the author envisage their distribution through fair price shops against some special ration cards for the target population? If so, how much will be the distribution cost in case this transaction is to be carried out daily? On the other hand, if the author thinks of distributing these subsidised *chapaties* like other bread that is being sold on every second shop, how is he going to restrict it to the target population only? Similarly, the author does not spell out the type of organisational network he has in mind while suggesting a linkage of subsidised food distribution in the rural areas to only those people who are covered under anti-poverty programmes.

The author contends that government should operate at the wholesale level and not at the retail level. Further, it should minimise its distribution costs by giving it to private trade. If one were to examine the structure of FCI's distribution cost, which undoubtedly is quite high, one would find that it is so primarily on account of freight component. This, in turn, is the result of its supplies to far flung areas, which are generally poor and backward and would not be served by private trade at that cost. If government operations remain limited to only a few wholesale centres, it is these far-off areas that may suffer the most. If, however, distribution cost (freight) is high because say rice is to be transported from Punjab to West Bengal or Kerala, then will it not be desirable to provide extra incentives to paddy producers in the eastern and southern states either through input subsidies or through higher procurement price, which is equal to procurement price in the Punjab plus transportation cost from Punjab to West Bengal or Kerala?

There are many such points on which a reader wishes the author would have dwelt more, particularly those relating to the impact of PDS on nutritional levels of the poor and backward classes, and how the system has run quite successfully in Kerala, Gujarat and Tamil Nadu and why that can not be replicated in other states. But despite these queries one may raise,

there is no denying the fact that the author has initiated a debate and clearly asked for restructuring and limiting the degree of government intervention in the cereals sector to make it more rational and economically cost-effective.

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Village Republics: Economic Conditions for Collective Action in South India, Robert Wade, Orient Longman Ltd., Bombay, 1989. Pp. xii+240. Rs. 200.00.

Of the three substantive areas initially dominated Sociology and Social Anthropology in India, village was one, the other two being family and caste. But in the last three decades, village studies have been relegated to the background, which threw up two problems. First, we do not have an understanding of the ongoing process of social transformation in village India. Second, the neglected dimensions of village in the earlier studies remain unattended. The earlier descriptive studies of single villages dealt with everything: economy, polity, social structure and culture. But gradually, the need to focus attention on one or another dimension of village life was recognised. The book under review is a pioneering attempt to analyse the conditions for collective action in village India.

The conditions of collective action that the author considers in the book are specific and limited. This is both the asset and the liability of the book. I propose to concentrate on the latter only for want of space.

The author limits his attention to economic conditions and collective actions to achieve economic goals. He analyses conditions for resource mobilisation, supply of public goods and services and 'popular' involvement in public action (p. 134). Further, the study is concerned only with the management of common property resources such as grazing land and irrigation water, both of which are relevant only for those who own cattle and/or land. The selective focus on the above two aspects bifurcates the village population into two, the propertied and the propertyless and consequently the collective actions of the latter had to be omitted completely. In fact, the author admits that the village council which manages the common property resources are manned by those who have 'solid economic security' (p. 112) and the Council is an assembly of the landed (p. 133). If so, to qualify the collective action (of the propertied) as 'popular' and 'public' is not appropriate.

Second, the conditions analysed are too narrowly defined. The properties of the situation which substantially influence the conditions of collective action are ignored. A couple of examples will clarify the point. The availability, the level and the application of technology are crucial determinants of the need for and/or the absence of collective action with regard to irrigation. Similarly, the nature of the village settlement - nucleated or dispersed - is bound to influence the nature and extent of grazing land and hence the relevance or irrelevance of collective action for its management. These conditions are particularly relevant because the author is also concerned with ecology.

Third, collective actions, by definition, are voluntary. But in the village studied they are not (p. 108). If so, is it correct to describe them as collective? In fact, it is argued that the village 'community' itself is non-existent in that there is no communally owned arable land, no notion of membership in village, no restriction on outsiders' owning land (p. 26). Then,

what is described as collective action is the effort on the part of the landed households in the villages to pursue their economic interest. Is it not more appropriate to label it as interest group action? This is not quibbling of phrases. To characterise the action of a handful of individuals, geared to the maintenance of their interests as collective, is precariously close to misrepresenting reality and bestowing legitimacy on their action.

Fourth, the author refers to three possible modes of common resources management: privatisation, state-managed and collective action. One is intrigued to note that privatisation is listed as one of the modes because it militates against the very notion of maintaining common resources as common. The real bifurcation between state-management and collective action is not sustainable in this context, particularly at the village level. At any rate the dichotomisation of state and people points to the prevalent and indeed growing but wrong belief that it is impossible to reconcile the logic of development and the demands of democracy. The most workable mode seems to be the one in which collective action and state action are combined. At any rate that is the declared aim of a democratic state, which is wedded to people's welfare.

Finally, the conclusion that the author arrives at after an incisive analysis leaves one baffling. Collective actions are motivated by shared deprivation and/or commonly perceived advantage. However, "... even when all or most cultivators in a village could benefit from joint action that action will by no means be automatically forthcoming" (p. 188). That is, necessary conditions for collective action are not sufficient for them to emerge. But "... it is possible for an interest group organisation to emerge voluntarily - that is, without selective benefits or costs - if the net collective benefit is high enough" (p. 207). And yet, "... there can be no presumption that the collective action route will generally work...." (p. 216). If so, is there any point in undertaking an elaborate study to identify the conditions for collective action?

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