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Book Reviews

Adoption of Farm Mechanization in a Developing Economy, Bhim Sen Bhatia, Daya Publishing House, Delhi-6, 1990. Pp. vii+174. Rs. 170.00.

This book is based on the author's Ph.D. dissertation, "A Multivariate Study of Adoption of Selected Agricultural Engineering Technologies in the Punjab". The study is quite comprehensive and covers the following aspects of adoption of selected agricultural engineering technologies: (*a*) existing level of adoption, (*b*) socio-economic variables related to the extent of adoption as well as non-adoption, (*c*) response of manufacturers towards selected farm machinery innovations of the research and development system and (*d*) extension input of agricultural engineering extension personnel in promoting the use of new machinery. The study is based on a sound empirical base, namely, a sample survey of 375 farmers in four districts of Punjab representing four different *kharif* crop rotations. In addition, the author has interviewed 50 manufacturers having production potential for selected machines, 15 agricultural engineers engaged in agricultural extension and ten farmers who had witnessed the demonstration of selected newly developed farm machines. Altogether, 11 technologies have been covered in the study, namely, disc harrow, seed-drill, potato planter, sugarcane planter, inter-cultural handle hoes, sprayer, potato digger, reaper, combine-harvester, lining of irrigation channels and metallic storage bin.

The book has six chapters including the summary. The first four chapters are devoted to the objective and scope of the study, review of related literature and methodology (including several models applied for the analysis of technology adoption) and description of the methodology used in the study. The findings of the study are reported in Chapter 6 which runs into 75 pages. Part A of this chapter gives the socio-economic characteristics of the sample farmers while Part B is concerned with the ownership and use of different technologies and factors influencing adoption and non-adoption. The use of combine-harvester, lining of irrigation channels, sugarcane planter and tractor operated reaper is found to be very limited while the use of sprayers, disc harrow and seed-drill is widespread. Besides, most of the machines are under-utilised. The high initial cost comes out to be the most important reason for non-adoption.

The adoption levels of 'aggregate' technology as well as three selected technologies (disc harrow, seed-drill and sprayer) have been analysed in detail using stepwise regression analysis. In all, ten variables were used individually as well as in groups of four to six. The common variables used are: farm size, crop intensity, irrigation, total income and farmers' knowledge of technologies. The author has taken considerable pains to do rigorous statistical analysis and has also pointed out its limitations in explaining a complex socio-economic issue. However, one important limitation that needs to be pointed out is that implements drawn by different sources of power (human, animal and machines) have not been analysed separately. The study would have been more useful had adoption levels of bullock drawn and tractor drawn disc harrow and seed-drill been analysed separately.

As regards the manufacturers' response to latest farm equipments like potato grader and bullock drawn reaper, the majority of the farm machinery manufacturers were not even aware about these equipments. This is a surprising conclusion. Equally surprising is the author's finding that agricultural engineers are "not fully aware of the existence of newly developed farm machines". Further, "paucity of fund was stated to be the major constraint

for the purchase of new equipment and carrying out their popularisation programmes" by the department of extension. Towards the end the author has given many useful suggestions for the development and diffusion of farm technologies.

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The Collection, Analysis, and Use of Monitoring and Evaluation Data, Dennis J. Casley and Krishna Kumar, The Johns Hopkins University Press, Baltimore and London, 1988. Pp. ix+174. $ 22.50.

This volume is a joint effort of the World Bank, the Food and Agriculture Organization of the United Nations (FAO), and the International Fund for Agricultural Development (IFAD). It consists of ten chapters. Each chapter focuses on a specific area of data collection, analysis and use. It contains qualitative and quantitative methods of data collection, structured surveys, sampling problems, measurement of area, crop production and yield, exploratory analysis of data, statistical analysis, and presentation of data to the user.

The introductory chapter mainly summarises the topics discussed in its companion volume: Project Monitoring and Evaluation in Agriculture (The Johns Hopkins University Press, Baltimore, 1987). It contains four sections, *viz.*, (*i*) Purposes of Data Gathering, (*ii*) Qualitative and Quantitative Data, (*iii*) Constraints on Options for the Collection of Data and (*iv*) Data Analysis and Interpretation. The advantages and disadvantages of computerisation are summed up in the last section of the chapter.

One of the most important sources of information for monitoring and evaluating agricultural and rural development projects is qualitative interviews. Keeping this in view, the second chapter focuses on the various aspects of qualitative interview such as methods, guidelines, reliability and limitations. It is also indicated that qualitative interviews are extremely helpful when insight is needed on reasons for unexpected reactions by the respondents.

The need for conducting group interviews and its preferences over individual interviews in the context of project monitoring and evaluation are given in the third chapter. The major limitations of group interviews are spelt out at the end of the chapter.

The fourth chapter is devoted to explain the importance of participant observation and how effectively one may use participant observation in the context of a research project. The limitations of participant observation are also well documented at the end of the chapter. Thus the first four chapters of the book deal with various aspects of qualitative data.

A structured survey is a method of interviewing people to collect information using a formal questionnaire. The fifth chapter concentrates on how to design and conduct such a survey. It provides useful information on concepts and definitions to be used in the survey, questionnaire construction, its need for pre-testing, interviewing the respondents and the problems to be encountered by the interviewer and ways of tackling them.

The measurement of crop area, production and yield and their interlinked issues are discussed at length in Chapter 7. The next chapter discusses the need for exploratory analysis as it reveals simple structures and patterns in the data. It explains the nature of relationship among the variables and the possibility of spurious relationship between variables when they are linked with time dimension. Moreover, various measures of central tendency and their aptness in the empirical context, the need for trimming and transforming data, the

usefulness of standardised index, various measures of dispersion, the simple estimate of the slope of straight line, analysis of residuals and the effectiveness of moving averages in eliminating random noise are presented in the rest of the chapter. Suitable diagrams and algebraical formulae are given wherever necessary to explain the above concepts.

Advanced statistical tools such as test of significance, correlation and regression analysis, and analysis of variance are given in the penultimate chapter. It starts by comparing two sample means through the t-test. Further, the use of a 2 X 2 tabulation and cross-tabulation is demonstrated through Yule's Q, correlation coefficient (r) and χ^2 test. In addition to these tests, comparison of multiple means is done through the analysis of variance. Though this volume does not go into the theory underpinning this analysis, it offers a brief explanation of its functions, a warning regarding its misapplication and in some cases limited usefulness. Against this background, it is appropriate to quote the following from the volume (p. 142) under review: "Most monitoring and evaluation reports will lose little if the analysis of variance is omitted. What must not be omitted is sensible presentation of the basic tabulations and cross tabulations." The last section of the chapter briefly explains the concept of correlation and regression and gives cautionary comments about them. The issue of errors in dealing with a set of independent variables in multiple regression model and problems in step-wise multiple regression are briefly given. The last chapter highlights how to present the data to the user and presents the format of the report.

On the whole, this volume is perfect in all respects. It is a useful addition to the existing literature on Research Methodology in general and Monitoring and Evaluation in the context of Rural and Agricultural Development Research Projects in particular. It is of great interest to beginners in research, academicians and policy makers all over the world.

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Alternatives in Industrial Development: Sugarcane Processing in India, H. H. de Hann, Indo-Dutch Studies on Development Alternatives-1, Sage Publications India Pvt. Ltd., New Delhi-48, 1988. Pp. 175. Rs. 165.00.

This book examines, in the main, the viability of traditional and semi-modern techniques of sugar processing, in particular the Open Pan Sulphitation (OPS) process, as an alternative to the large-scale modern or the Vacuum Pan Sulphitation (VPS) process. This examination is done with such comprehensiveness, details and meticulousness that if one were to look for an ideal researcher, one would find him in the author of this book.

An idea of comprehensiveness can be had from the topics dealt with in the book. These include: placing the specific problem of alternatives in industrial development in India, a review of the debate on this industry, description of the techniques of processing sugarcane, history of the Indian sugar industry, description of the technical, economic and other related parameters of the different processes and evaluation of the main sugar technologies and speculation on the scope for improvement of the intermediate technology.

These topics have been dealt with in detail and meticulously. Thus, for example, the main question of alternative technologies has been examined not merely from different points of view - historical, technical, economic, social, political, severally and jointly, but also under a number of alternative assumptions in regard to some of the basic parameters

relating to recovery, interest, time-perspective and so on. The assumptions are all realistic and the rationale thereon is clearly explained. Along with the traditional method of investment decision and the criterion of private profitability, the author has also employed the modern methods of investment decision (NPV and IRR) and the social cost-benefit analysis. All of which join to make this book of value not merely to the academicians, but to the consultants, bankers, policy makers and administrators as well.

The book is based on secondary sources of statistical and other information and on the field work of the sugarcane processing units of the Bijnor district in Uttar Pradesh.

The book is divided into eight chapters. Chapter 1 highlights the main points of the general debate on the choice of scales and techniques in the context of the Indian development perspective, and examines the question of choice in the specific context of the Indian sugar industry. Chapters 3 and 4 discuss the OPS process and other processing sectors - gur and khandsari units and sugar mills. Chapter 5 describes the methodology and presents the estimates. Chapter 6 gives the evaluation of the main technologies. Chapter 7 speculates on the future scope of OPS. The last chapter presents the summary of the main findings and observations and their policy implications.

The principal conclusion of this study may be put in the author's own words: "The results of the cost-benefit analysis show that VPS is far superior to any other technology both at economic and social prices .... The net present value of VPS measured at economic prices is so much larger than that of OPS, that the losers from reallocating cane from OPS to VPS can be compensated in principle" (pp. 158-159).

What about the dynamics of that technology? To use again the author's own words: "OPS might become a reasonable alternative to 1,250-tcd sugar mill if its recovery rate were to increase to 8 per cent and its output to fetch a price of only 10 per cent less than the VPS sugar price. We do not expect that these rates will be attained in future" (pp. 159-160). And further: "Our final conclusion is that the OPS system will disappear if it continues to operate in the way we observed during the sample surveys in 1980-81 and 1985-86" (p.162).

For promoting growth and equity, the author pins his hope on large-sized units, based on modern technology, organised as co-operatives and located in the rural areas. As he puts it: "...we consider a large-scale co-operative mill a more effective instrument for capturing rural savings, since many more families can invest in a large-scale co-operative sugar factory than in an equivalent number of small-scale units.... the study has also made us more conscious of certain advantages of large-scale rural industrialisation" (p. 165).

These conclusions and observations will come as a disappointment to the protagonists of small-scale, traditional/intermediate technology-based industrialisation. However, based as they are on a thorough and competent study and on the insights acquired from that experience, they are entitled to receive more than bookish attention by all concerned with the central question of appropriateness of that kind of industrialisation in general, and with the sugar industry in particular.

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Extent and Measurement of Poverty in India (A Case Study of Rajasthan), Keshav Dev Gaur, Mittal Publications, Delhi-35, 1988. Pp. xix +240. Rs. 120.00.

Micro level studies on poverty have assumed greater importance in recent times. The book under review may, therefore, be said to have come at the most opportune time. Gaur's study attempts to measure the extent of poverty in Bharatpur district of Rajasthan on the basis of primary data obtained through a carefully selected sample of 458 households from the district. The sample is also stratified by rural and urban area covering 20 villages and two towns in all.

There are five chapters in the book. Chapter 1 presents a detailed literature review of existing studies on poverty together with useful discussion on the various alternative approaches of measuring poverty. Chapter 2, though partly repetitive, discusses various concepts of poverty and the methodology followed for his study. In Chapter 3 he has presented a detailed empirical analysis of his sample data. He then supplements the above with the analysis of secondary data obtained through various government and non-government publications. Finally, in Chapter 5 he summarises the findings of his study and gives some relevant policy prescriptions.

The distinct feature of his study is that over and above the traditional approach of measuring poverty through minimum calorie consumption, he has also adopted the minimum needs approach by considering the expenditure on clothing as well as housing over and above the expenditure on food. Two kinds of estimates of poverty, one based only on calorie consumption and the other based on 'minimum needs' are then tested in terms of their consistency with the help of regression technique. The author has also attempted to identify the factors causing variations in per capita actual diet and other relevant variables, through regression analysis.

The study finds that if only calorie criterion is adopted, 11.13 per cent of the households or 12.05 per cent of the population in Bharatpur are estimated to be living below the poverty line. However, if 'minimum needs' approach is used, then these percentages are estimated to be 21.17 and 24.28 respectively. The study identifies the factors like lack of irrigation, size of family, higher dependency ratio, illiteracy to be significant for causing variations in dependent variables across the households.

Although the author has not considered the expenditure on health, education and social customs for demarcating the poverty line, he does analyse them separately through Lorenz curves in order to study the inter-household inequality in terms of these expenditures.

The review of several government programmes such as IRDP, TRYSEM, RLEGP, etc., carried out by the author is also worth praising. What is to be noted is that he had also sought the information from the sample households regarding the beneficial impact of such government programmes on them, which clearly revealed that no significant dent has been made by such programmes.

Despite several good features, the work remains far from satisfactory. In the first place, there is a complete lack of systematic theoretical model for determining the poverty components as well as causes of it. Moreover, while specifying the regression functions, the simultaneity or two-way causality of several relationships has been thoroughly ignored leading to serious specification bias. It is also desirable that the author reports the statistics like $\bar{R}^2$ or 'F' of the multi-variate regressions which are used to test the overall goodness of fit of the regressions.

Moreover, in terms of organisation as well as grammatical aspects also the work does not appear to have been properly edited. Notwithstanding these limitations, the book is quite interesting and is likely to be quite useful for policy makers and researchers.

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Rural Industrialisation and Employment in Asia, Edited by Rizwanul Islam, Asian Employment Programme (ARTEP), International Labour Organisation, New Delhi, 1987. Pp. 327. $8.00.

Predominantly agricultural economies of the Third World have been, for decades together, confronting the problems of dependence of the majority of their labour force on agriculture, seasonality of work on farms, reliance on non-farm activities to acquire supplementary income, prevalence of traditional industrial activities and wide scale poverty of the rural masses. In fact, the life and prospects of village-dwellers in these countries are unbrokenly linked with the structure and performance of the country's agricultural sector. Given the slow pace of agricultural growth and inability of agriculture to provide enough employment opportunities to the rural people, development of industrial activities having backward and forward linkages with agriculture within the circumference of the villages has been envisaged by the planners and policy makers of the developing countries as a penacea for providing better employment opportunities to the rural folk in their own area. In this endeavour, each country has followed a course suitable to its environment, traditions and developmental strategies. Experiences of the countries are mixed with successes and failures. Therefore, an exercise in understanding the pros and cons of such experience was badly needed for the benefit of both the researchers in the area and the policy makers. The book under reference is a step in this direction.

The book is an outcome of the proceedings of a regional seminar on 'Strategies and policies for employment expansion through rural industrialisation in Asia' organised in 1986 by the ILO's Asian Regional Team for Employment Promotion (ARTEP) on the basis of its seven regional studies, six of which pertained to the case studies of Bangladesh, India, Nepal, the Philippines, Sri Lanka and Thailand and the seventh was a comparative study of four relatively developed East Asian countries, *viz.*, Japan, China, Taiwan-China and Republic of Korea. Research studies on Bangladesh, Nepal, the Philippines and Thailand explored the possibilities and potentialities of providing large-scale employment opportunities through a fillip to cottage industries and the constraints thereof. India's case is presented to find out the linkage between agricultural growth and rural industrialisation whereas Sri Lanka's study brings out the consequences of the policy of liberalisation. The comparative study of four East Asian countries unfolds their success stories so as to know if the experiments can be replicated by the other Asian countries on development path. These studies have a common framework encompassing the contents related to the nature and structure of rural industries, employment generated, extent of disadvantaged classes gainfully employed, labour productivity, technology, credit, marketing, competition with formal industrial sector, infrastructure, impact of agricultural growth and constraints. Highlights of the deliberations of the seminar are appended at the end.

On going through the contents of the book, it can be well said that the issue of rural industrialisation is very much linked with the pressing need of the labour-surplus less developed countries to provide an outlet to the rural labour force on non-farm activities

preferably within the villages. Hence, all programmes of economic development in general and industrialisation in particular have to be framed with this end in view. But each country has its own traditional set-up of rural industrial activities which cannot be dismantled easily for bringing out their reorganisation in consonance with the developmental process. As a matter of commonness textile activity is predominant among all activities, cultivators and landless labourers are largely involved in these activities, women labour is conspicuous, labour productivity in many industries is low, wages often are lower than those in agriculture, they are carried on mostly as means of family subsistence and the industries are constantly under pressure of competition from formal industrial sector and/or imports. This is perhaps the broad scenario of the rural industries everywhere without exception which has to be borne in mind while evolving any policy and programme for their betterment.

Since these industries have direct linkage with agriculture, it has been pointed out in the book that faster agricultural growth can stimulate rural industrialisation. Two factors assume importance here. First, for improving agricultural productivity, institutional reforms in agriculture are a must. Success stories of Japan, China, etc., reveal this as a beneficial ground preparation to enable the agriculturists easy adoption of new technology. These countries, however, did not face the problem of large number of landless labourers and so could smoothly and sooner bring about the land reforms. Other Asian countries with an army of landless labourers have to find their way with great difficulty and hence cannot emulate these examples easily even though they wish to do so. Notwithstanding this, they have to proceed on a workable programme of land reforms to create conditions conducive to high rate of agricultural growth. Secondly, necessary input package too should be adequately and timely provided to the agriculturists through well-developed institutional arrangement in order to attain sustained agricultural growth. Conditions on this front also are not up to the mark in many countries. Improvements in this respect are absolutely necessary. A pertinent question crops up at this juncture. Can agricultural growth by itself lead to industrialisation of rural areas both in terms of diversification and improved performance? T.S.Papola's study on India establishes that in the Indian case this hypothesis is partially validated. For complete policy frame, he advocates that rural industrialisation should not be viewed simply as an adjunct to agricultural growth, but as an integral part of rural development and industrialisation process. Within this perspective, actual strategy, however, will have to differ for the existing industries and those newly coming up.

Infrastructural development is brought out as another set of requirements. Proper development of transport, electricity and industrial estates would go a long way in the development of rural industrial activities on modern lines, consolidating them at advantageous locations, adoption of improved technology and introducing product improvement. The importance of vocational training and extension services cannot be neglected for improving the skills of the workers. Unfortunately, these industries everywhere are starved of adequate finance in spite of the existence of specialised financial institutions. Institutional financial structure needs to be systematically geared up to meet the financial requirements of these industries and to reduce their dependence on non-formal financial sources to zero. Marketing too assumes a significant position while striving to care for these industries. Normally, for most of the industries, the buyers of their products are low income groups of the rural areas. But, with agricultural growth and consequent economic prosperity in the region and with availability of transport facilities, the structure of demand for their product changes; the products are also exposed to competition with similar products from the high-tech formal industries and imported products. Thus the rural industrial units face a dilemma: should they retain their restricted rural market by shunning rapid agricultural

growth and infrastructural developments or should they confront the new situation? Obviously, the industries have to prepare themselves for the latter. In that eventuality, the government has to intervene with due protection to them. India exemplifies some such policy moves.

Happily, the case studies have made sincere efforts to bring out all possible aspects of rural industrial activities and the seminar deliberations have tried to integrate the case studies to establish certain generalisations, at times by bridging vital gaps and weaving loose ends. Importantly, the researchers were greatly handicapped by data deficiencies. The developing countries have to strive to make proper arrangements to cull adequate and multi-dimensional information about this vital sector of the economy.

One important omission throughout the pages was striking. When an all-out case for rural industrialisation is made, enough attention has to be paid to the growth of rural entrepreneurship too. Agriculturists, artisans and landless workers, who are seen shouldering the brunt of the responsibilities of the rural industries, have an outlook of producing industrial goods for supporting family incomes. The kinds of improvements envisaged require them to assume the role of an entrepreneur. Such a transformation is not easy to come especially when technological upgradation is a *sine qua non* for the survival and progress of such industries. How could this transformation be brought about ? How could new entrepreneurship be breeded?

The book is a good guideline for researchers on the subject who can use the case studies as blue-prints for studies of other Third World countries.

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Regional Rural Banks and Economic Development, A. B. Kalkundrikar, Daya Publishing House, Delhi-6, 1990. Pp. v+211. Rs. 190.00.

This book is an abridged version of the doctoral thesis of the author submitted to the Karnatak University, Dharwad. Recognising the important role played by Regional Rural Banks (RRBs) in the institutional credit delivery system, an attempt has been made in the book to review the working of RRBs and to evaluate the contribution made by this institution for economic development of Karnataka State. The study uses survey technique and case study method. While tracing the genesis and rationale of the RRB scheme, the features of the scheme including the objectives, functional aspects and its role in the rural credit market are documented in the book. The details of economic profile discussed in the book provide adequate background about the area of study. The identified parameters for reviewing the performance of RRBs in the State like branch expansion, deposit accretion, credit deployment and profitability are quantified and their comparison with RRBs in the nation brings out interesting findings. Two case studies conducted in Tungabhadra Grameena Bank and Malaprabha Grameena Bank attempted to bring out further detailed analysis about the performance of RRBs and their impact on the economic development of the area. Based on the case study and overview performance of the RRBs in the State, the book has made several recommendations for changing the structure and functioning of the institution.

Though the book attempts to cover broadly various aspects of functioning of RRBs, its major limitation is that the reference period of the study is 1976-82 and hence the question arises that how far the findings are relevant for the present period. As a result of this time

lag, a few of the recommendations have already been appropriately incorporated in the RRB credit system. Further, it is felt that the book has not made any effective contribution in suggesting a methodology for quantifying the variables for analysing the performance of RRBs. Even though the author claims that the book has attempted to ascertain the role of RRBs in the economic development, the findings are not well supported by the quantified variables collected from the sample beneficiaries.

However, the book is a well prepared document of details available about RRBs in the State. The author has presented a neat and detailed comparative account of the performance of different RRBs in the State. The book is a good empirical study and may serve as a reference for scholars on agricultural finance in the country.

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Agrarian Relations and Rural Exploitation, B. C. Mehta and Awadh Prasad, Ashish Publishing House, New Delhi-26, 1988. Pp. xii + 268. Rs. 175.00.

In the spate of regional studies meant to narrate the nature and process of exploitation that has caused and accentuated poverty, here is another work, undertaken in the locales of Rajasthan. Dissatisfied with the traditional approach to poverty, the authors start with the familiar Marxian premise that "Poverty is not a mere aberration, it is an inherent feature of a class society. Only the nature, form and intensity varies with the stages of development of relations of production" (p. 2). Thus, "poverty is caused by the exploitative of system". And the authors, painstakingly, proceed to empirically establish that there exists an 'exploitative system' in the study area. Moreover, "since the adherents of this (Marxian) truly scientific and radical approach to poverty and exploitation have too often not conducted their studies in true scientific spirit" (p. 4), the authors assume the responsibility of carrying out a scientific enquiry of the agrarian structure in Rajasthan.

For this purpose several forms of exploitation are identified and reported. The bulk of the analysis (pp. 34-184) is primarily based on well known secondary data (AIRDIS, NSS Reports, Agricultural Census, and the like). However, according to the authors, "the most important part of this study is the collection of case studies of exploitation", based on the field notes and observations. This part of the project is reported in Chapters 8 and 9.

One can make one's own judgement about the 'scientific spirit' from the data base of the 'most important part'. For instance, on page 16 one finds the frank admission that, "Our objective in undertaking this survey has not been to study the economy of the villages as such but to understand the nature and mechanism of exploitation and, therefore, we were not interested in aggregative picture of the villages. Rather the interest was to obtain as many case studies as possible so as to increase our understanding of the exploitative system".

To this reviewer's mind, purposive samples, and the said approach, do lend strength to Social/Political Organisations but they come in the way of scientific enquiry. However, in spite of this bias, the work provides passionate details about the highly inegalitarian production base of the rural economy and certain cases of exploitation of man by man. Tabular analysis and 'concentration ratios, defined on the basis of two positional statistics' (p. 66), form the basic statistical tool-kit.

It is shown that considerable regional differentials in the distribution of assets and liabilities, in all categories of households, exist in Rajasthan. Coming to the crux of poverty,

the authors conclude: "Thus, the highly unequal distribution of productive assets other than livestock and land is instrumental in keeping the productivity of the poorest families in rural Rajasthan at a very low level" (p. 69). And, about the poverty estimates it is stated that "the agricultural labourers and artisan households as a whole and nearly 50 per cent of the other non-cultivator households as well as bottom 15 to 20 per cent of the cultivator households constitute the block of non-viable economic households" (p. 73). One does not require any further proof of the degree of precision of this work.

On the strength of an extensive analysis of data, it is observed that, "Thus, the exploitative system for the village economy specially with reference to agricultural labour households is the same trinity of feudal landlords, rich cultivators and usurers-cum-traders. Thus, capitalist, feudalist and semi-feudalist modes of exploitation are present in the rural economy of Rajasthan, the most dominant role being played by the emerging rich peasantry which is transforming itself into capitalist class" (pp. 136-138).

The class-bias of the credit institutions is also highlighted. It is observed that co-operatives and commercial banks cater to the top, while government agencies are more or less class neutral. In contrast, most of the credit facilities by traders and professional money-lenders are made available to the poorer asset holders (p. 179).

So the work, though lacking in rigour, considerably reflects the Bardhan-Bhaduri approach. There is sufficient material for the students of 'mode of production' debate in Indian agriculture. However, the readers have to be careful for there are numerous spelling mistakes, slips and errors.

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Accelerating Food Production in Sub-Saharan Africa, Edited by John W. Mellor, Christopher L. Delgado and Malcolm J. Blackie, The Johns Hopkins University Press, Baltimore, Maryland, U.S.A., 1987. Pp. xix+417. $43.45.

Although many countries in Sub-Saharan Africa have emerged as independent nations, yet most of them are still experiencing acute problem of food supply required to feed the growing population that is expected to cross by 86 per cent before the end of the century. The recent Ethiopian drought condition is a grim reminder of the problems African countries are confronted with. Hence enhancing food production is the most critical challenge confronting the region to-day.

Africa has a variety of climatic zones ranging from tropical rain forests to arid desert. To-day it is facing with a serious problem of depletion of vital top-soil which is estimated to be a staggering 6 million hectares per annum. Yet one recent report claims that Africa's 51 countries can feed three times their present population. Hence it is a paradox that while it is potentially rich, it is extremely poor. No wonder most of the countries are faced with the problem of formulating food policy in the context of their overall national development strategy.

It is in this background 44 scholars and policy makers from African countries, bilateral donor nations and international organisations met in Zimbabwe to deliberate on accelerating food production in Africa. The conference discussed different policies to bring about a higher rate of food production, determine the current state of knowledge with respect to policy needs, to identify gaps in this knowledge and arrive at conclusions as regards the immediate

policy action needed.

The basic need to enhance food production for Africa, like any other developing country, arises from several forces, *viz.*, high percentage of labour force engaged in agriculture, application of improved technology in agriculture, enhancing agricultural exports to generate foreign exchange and to meet the huge estimated food imports to the tune of 40 million tonnes by 2000 A.D., the difficulties in providing physical facilities to handle such imports, etc.

The conference papers are divided into six parts and each part covers specific issues. Part I, which contains four chapters, is devoted to recent trends in the domestic food sector, relation of food production to nutrition and the need for policy action. In view of the deterioration in the food position, low nutritional base, malnutrition, etc., there is an urgent need to assess the situation and L.A. Paulino firmly believes that inadequate data is a hurdle in assessing and modifying food policy. Although an increase in food production is urgent, yet the question remains as to how it could be achieved? In fact D. Ghai and L. Smith argue that raising food production through higher prices, as is practised in Asian countries, is not desirable.

The eight chapters of Part II provide a bird's eye-view of current practices and potentials in agricultural technology development with an emphasis on vital geographic and ecological regions. While S.K. Kumar delineates the role of African women in agricultural production, P.J. Matlon, C.H.H. ter Kuile and M. Collinson emphasise the necessity for farming systems approach to technology design and implementation, which would allow innovations appropriate to the constraints faced by the small-holders.

Part III, which consists of five chapters, focuses on support systems, *viz.*, marketing, infrastructure and input supply systems. This section mainly deals with the use of technology which is closely related to the commercialisation of output, increased use of inputs, etc. It brings to the focus the important aspect that although governments follow different policies in their countries, the optimal role of the governments will vary greatly depending upon their ideology, technological change and poor infrastructure. Presuming importance of government in the provision of support service and infrastructure, the local participation of small-holders is vital in decision-making.

The seven chapters and one commentary in Part IV analyse the growth strategy, trade policies, price policy and a broad range of equity and national building concerns. Here one finds a sense of public strategy with respect to agriculture to tackle the various conflicts, *viz.*, agricultural price policies influenced by foreign exchange rates, related monetary and fiscal policies, etc., in favour of agriculture have been absent in Africa. Perhaps this is due to lack of capacity of agricultural development to give fillip to other sectors. While T.A. Oyejide talks of food policy in the context of choice of trade regimes and policies towards exchange rates, tariffs, and non-tariff barriers to trade, A.O. Krueger cautions on the short-run protectionism for food production. P. Ndegwa argues for Pan-African nationalism as a means of mobilising resources for development. On the other hand, K. Okhawa's central idea is that "African food problem cannot be understood without taking into account the nature of world system into which Africa is emerging." Indeed these are realistic observations.

The two chapters of Part V deal with the role of donors in influencing African food policy. Although these policies and technologies are not directly transferable to African agriculture, yet the processes followed to achieve them are relevant to the latter. Uma Lele says that donors did play a useful role in the development of indigenous capacity among the Asian countries in their early years of development. But this did not happen in African countries to-day. As far as food policies are concerned, both Lele and M.C. Mensah feel

that the donors have a vital role in enhancing host-country's capacity to do a fruitful job, especially in planning, budgeting and monitoring public investment in agriculture. It is equally true when A. de Lattre strongly feels that domestic policies are central to the success of foreign aid and donors have to take a realistic approach to assist these countries.

In Part VI, John W. Mellor *et al.* strongly plead for priorities for accelerating food production growth in this region. The question as to how far the African food sector moves depends upon the attitude and the political support provided by the governments. Hence to begin with it is desirable for African countries to concentrate on areas and crops where success is visible: and this could be a moral booster for both donors and local governments.

In fine, it must be admitted that the Victoria Falls Conference was extremely successful in bringing together a large number of eminent people belonging to different organisations and institutions together to deliberate on several vital issues pertaining to Sub-Saharan African agriculture. It is creditable that the book proposes a specific set of programmes both for African governments and assistance agencies. The book is immensely useful and valuable for all those who are interested in this subject.

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Cost-Benefit Analysis of Irrigation and Drought Proofing, K. Puttaswamaiah, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 1989. Pp. xix+175. Rs.145.00.

Integrated planning of land and water development is a pre-requisite to overcome the problem of drought. The book under review presents the cost-benefit analysis of few irrigation works taken under the DPAP and a brief survey of several studies done by the author. However, the major findings of this book are based on an extensive case study of a World Bank assisted DPAP project in Bijapur district of Karnataka State.

The book contains six chapters. Chapter 1 deals with the basic concept of drought, elements of DPAP objectives and the methodology of the study. Out of eleven talukas, eight talukas of Bijapur district of the State are selected to assess the impact of the following sectors on the beneficiaries: (*i*) minor irrigation, (*ii*) soil conservation and dryland farming, (*iii*) animal husbandry, (*iv*) afforestation and pasture development, (*v*) sericulture, (*vi*) horticulture and (*vii*) fisheries and credit.

The general characteristics of the project area are presented in Chapter 2, followed by sector-wise break up of the outlay along with physical targets with corresponding achievements in Chapter 3 which also spells out the details of the sectoral programmes. In Chapter 4, the cost-benefit analysis of minor irrigation projects (tanks) is carried out using socio-economic survey data. The general characteristics of the few selected irrigation projects are also discussed. This chapter is divided into three parts which respectively gives the details of the socio-economic study, assesses the impacts of the sectoral programmes using 'before and after approach' of project evaluation and spells out the problems and difficulties with respect to completion of the project.

In Chapter 5, the impact of the following drought proofing programmes is evaluated: (*i*) soil conservation and dry farming, (*ii*) animal husbandry programme, (*iii*) afforestation and pasture development, (*iv*) sericulture, (*v*) horticulture and (*vi*) fisheries. In Chapter 6, two and half pages are devoted to the concept of monitoring system which is weakly presented.

Statistics used in the book cover the period upto 1981 only. The book was published in 1989 and it was expected to provide data for some most recent years. The author has dealt

with the complex problem of analysing the impact of drought proofing on income distribution, assets formation and consumption pattern of various programmes.

The use of 'before and after approach' is partial. Incorporation of other economic criteria dealing with tangible and intangible benefits would have made significant methodological contribution to the subject in order to draw some meaningful information for those who are involved in drought management. The impacts of various programmes can not be assessed in isolation using the methodology suggested by the author. The analysis of impacts, therefore, does not reflect the true impact of individual project and may generate biased and inconsistent information.

The findings of this study need to be taken with caution in view of the inadequacies associated with the methodological framework used in the book. The reader who expects new insights in terms of empirical analysis or policy on drought proofing is not likely to be fully satisfied with the methodology and the arguments presented in the book. However, the book provides some information on the various measures of drought taken in Karnataka. The reviewer hopes that when the second edition of the book is planned, the comments and suggestions proffered here would help the author to make a valuable contribution to the drought proofing literature in economics.

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Peasant Struggles, Land Reforms and Social Change: Malabar, 1836-1982, P. Radhakrishnan, Sage Publications India Pvt. Ltd., New Delhi-48, 1989. Pp. 289. Rs.195.00.

The successful implementation of agrarian reform and social transformation achieved through it in Kerala have attracted the attention of many scholars, resulting in a number of studies. The book under review is one such study, particularly dealing with the Malabar region of Kerala.

The author has combined historical approach with micro study to grasp the emergence of peasant movements, agrarian legislations and social change in Malabar. He traces the peasant struggles to the Mappila revolts of the nineteenth-twentieth century, though many scholars think it to be communal in character. During the period of these revolts, various caste groups in Kerala formed communal organisations, and agitated for advancing their interests. Communal organisations of *Pulayas, Izhavas,* Christians and Nairs were thus formed, and through these organisations, agitations were conducted for redressal of their socio-economic problems. In such a context, what was unique about Mappila revolts was its violent character. The author glosses over the historical fact that it was the action of the Malabar Special Police, rather than the mitigation of Mappila's tenurial problems, which finally brought peace in Malabar.

In Malabar, the Mappila revolts were followed by the agitations of superior tenure holders called *Kanamdars* for advancing their interests. These agitations led to the enactment of the Malabar Tenancy Act of 1930, which satisfied the demands of the *Kanam* tenants to a great extent. However, the problems of inferior tenure holders continued to be acute.

Since the thirties, the inferior tenants were organised, mainly through the efforts of communist workers, in various parts of Malabar. Unlike the agitations of *Kanam* tenants conducted by educated Hindus through the use of press, public meetings, deputations, etc.,

the agitations of the inferior tenants were characterised by frequent eruption of violence. These activities made the Communist Party a formidable force in Malabar. Following the formation of Kerala in 1956 and general election in 1957, the Communist Party came to power, and this led to the enactment of the Kerala Agrarian Relations Act. It made the hutment-dwellers and tenants, the owners of land, and drastically reduced the size of land holdings. These measures led to strong reaction from the affected sections, but finally the main provisions of the Act were implemented. These measures led to a restructuring of social relations, particularly agrarian relations. These changes are described not only at the macro level, but also through data collected through a micro study in a village.

Even though the present study gives an account of peasant struggles, land reforms, and social change in Malabar created through them, it fails to identify the deeper forces creating these changes. Even though an attempt has been made to trace the cause of Mappila revolts, the author has failed to grasp that during this phase of Kerala history, caste-based activities were widespread in Cochin and Travancore regions also. The author also did not examine why the Communist movement became so successful in Malabar region, but not in other parts of Kerala or Madras Presidency, of which it was a part. It is questionable whether it is only the effectiveness of agrarian legislations that have created a transformation of agrarian relations, or whether there are other socio-economic forces at work. For Kerala is on the vanguard not only in respect of agrarian transformation, but in many other aspects of socio-economic development. Lack of concern with basic issues seems to reflect the author's belief that a modern *avatar* like Communism can bring about any miracle in society.

The period covered in this study is 1836-1982, and it is very strange that the author has completely ignored the emergence of agricultural labourers' struggles and social change created through them. Since the early seventies, agricultural labourers have been strongly organised in the Malabar region, and they have been conducting agitations against the erstwhile lower tenants. No author of peasant struggles can ignore these agitations and their socio-political consequences. The neglect of this phase of peasant struggle betrays the partisanal approach of the author. Similarly, the author also can not be excused for totally ignoring the economic consequences of the peasant struggles and their contribution to the stagnation of agricultural development in Kerala. These are strong deficiencies, even after taking into consideration that the study under review is a doctoral work. Such deficiencies make this study mostly a partisan and amateurish work.

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Agricultural Households and Institutional Finance, R. Rama Krishna, B.R. Publishing Corporation, Delhi-7, 1989. Pp. vi+180. Rs.130.00.

In an agriculturally preponderant economy the landless agricultural labourers, marginal and small farmers are generally identified as the 'target groups' which should receive a high order of priority in the strategy of planning for rural development. Any development strategy which aims at improving the lot of the rural poor must aim at either creating new productive assets for them or providing them suitable employment opportunities for generating income in a sustained manner.

The book under review which is based on the Ph.D. thesis of the author, presents empirical evidence on credit problems of landless agricultural labour households spread over six villages of Nakkappalli block in Visakhapatnam district in Andhra Pradesh. The study is

based on primary data collected from 180 households (120 with access to institutional credit agencies, *i.e.*, BAI and 60 with no access to institutional agencies, *i.e.*, BNA1) relating to the period 1982-83.

Contentwise, the study is organised under eight chapters. Chapter 1 covers the objectives and design of the study. Chapter 2 deals with the indebtedness of agricultural labour households in Andhra Pradesh. It is noted that their indebtedness has increased from 1950-51 to 1974-75. The increase in debt is attributed to the decline in real incomes of this class. Unfortunately, not a single table in this chapter is entitled with reference to the State. Chapter 3 gives information on the agro-climatic conditions and demographic characteristics of the study area.

In the fourth chapter, the author analyses the borrowings of landless agricultural labour households in the study area with reference to purpose of borrowing, source of finance, the interest rate on borrowings and the nature of security offered. The study reveals that though the institutional loans are advanced to this target group under IRDP, BAI have to depend upon non-institutional sources for supplementing their capital needs for productive purpose. However, the major proportion of borrowing from agriculturist moneylenders, the main source of non-institutional credit, is used for consumption by both the types of borrowers. The author points out that more than 70 per cent of the loan is borrowed at 18 per cent interest rate or above. However, the author's presentation of data in Table 4.12 and the subsequent conclusions drawn on page 58 are confusing. It is surprising to note that the practice of keeping children as security for loans is still continued. The influence of various factors on borrowing is studied with the help of regression analysis. However, the relation between savings and borrowings is erroneously hypothesised (p.65). Chapter 5 highlights that the loans of about two-thirds of the households are associated with 'extra-interest obligations' such as labour service. However, not all obligations were found to be exploitative. The sixth chapter deals with the repayment problem of landless agricultural labour households. It indicates that repayment of institutional loans is relatively lower as compared to the non-institutional loans. The loans associated with exploitative terms are repaid promptly. The use of multiple regressions to study the factors influencing the repayment of debt lacks theoretical precision. For example, the author expects a positive correlation between the percentage of dependents and the labourer's repayment capacity, assuming that "higher the percentage of dependents in the household, the lower will be the repayment performance of the labourers" (p.108).

Chapter 7 reviews the credit policies of the Union and State Governments relating to agricultural labour. The author finds (based on published data) that the access to institutional agencies for these households was not commensurate with the size of landless labour population. In the final chapter the author concludes that if the institutions confine exclusively to production credit only, it may help to recover their loans easily and therefore will help them to improve their operational efficiency (p.147). Then, how does the problem connected with consumption needs of landless labour is solved? Perhaps the author expects the readers to answer the question.

The book, on the whole, could be seen as micro-level evidence on the problem of indebtedness of landless agricultural labour households in the context of programmes like IRDP and consumption finance to the weaker section. However, it fails to provide the much needed theoretical framework for such an analysis. Precision in the use of statistical tools would have enhanced the quality of the work. Presentation of regression results on p.65 and p.109 is redundant.

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National Symposium on the Role of Scientific Research and Its Management in Accelerating Socio-Economic Transformation, Edited by K.V. Raman, R. Choudhary, A. Bandyopadhyaya and S. Maiti, Agricole Publishing Academy, New Delhi-24, 1989. Pp. xx+211. Rs.200.00.

This book is a compilation of 16 papers read at a seminar (bearing the same title) organised by the Agricultural Research Service Scientist Forum at the Indian Agricultural Research Institute from 19-20 September, 1987, divided into six sessions of which three had only one paper each. The organisers need to be commended on the selection of an eminent person as a keynote speaker for each session. One obvious omission in the book is the summary of the discussions on conclusions reached or recommendations made at the seminar. There is no index, either.

The contribution of the Agricultural Production Sub-system to the Agri-Business Sub-system dominates in India. It was as high as 85.92 per cent in 1961 compared to 12.62 per cent in the U.S.A. To accelerate development, the potentials for improvements in the other three sub-systems, *viz.*, supply, processing and distribution also need to be identified by agricultural research scientists (ARS). Many participants highlighted the need to devote more attention on bringing about improvements in oilseeds, pulses and coarse grains production. Likewise, forestry has virtually remained ignored by the ARS and emphasis still seems to be more on expanding the area under forests and preserving the beauty of the nature rather than increasing the productivity of the existing forests.

Agricultural research has been one of the prime movers of the great achievements realised in the agricultural sector. The number of research workers per million persons or hectares seems to have a relationship with the agricultural advancement of the States, implying that the States which are lagging behind in agricultural progress would have to strengthen their agricultural research systems by employing more trained ARS. However, one should go about carefully assessing which disciplines need to be strengthened rather than straight away jumping at the conclusion that "the present manpower of about 28,000 scientists in the Indian Agricultural Research System should grow five fold by the turn of the century" (p.68). This would be too difficult to come by, firstly, because the system cannot produce so many trained scientists in a decade, and, secondly, they cannot be absorbed in the system because "the financial support to the agricultural research system is declining over time in proportional terms" (p.69).

For accelerating the impact of the available technology on improving production, productivity and socio-economic conditions of the rural masses, the need has been suggested for "adopting a project approach in the matter of agricultural research and technology". The existing experiences are on too limited a scale and how these need to be expanded are not discussed adequately, particularly in the session on "Research Project Management-Responsibility and Accountability of Scientists and Administrators".

There are however several sweeping observations, over-optimistic derivations or infeasible applications. And there is no dearth of such sentences in this book. For instance, it is easy to conclude that "even the present technologies available in these areas, with proper farming and management can increase the pulses and oilseeds production by 3 to 4 times and the production in dry land conditions can be improved by 50 to 200 per cent" (p.29). But why it is not so easily coming? What is proper farming and management? If this is an area of constraint, should the agricultural researchers not devote more attention to this field?

Again, "the value of incremental foodgrains required by the year 2000 .... is Rs.12,300 crores. Assuming a rate of return of Rs.10 per rupee invested, the necessary investment in agricultural research would be Rs.1,230 crores per annum. Considering ..... other targets .... the investment on agricultural research should reach the level of about Rs.2,000 crores per annum" (p. 68). Consider this requirement against "the estimate of about Rs.800 crores as the expenditure on agricultural research during the Sixth Five Year Plan period" (p. 192) which supports the ICAR as the second largest agricultural research organisation in the world and 21 State Agricultural Universities. The story of the landmarks in Indian agricultural research has enough in its portrayal (p. 102) and "Hard work, dedication bordering on missionary zeal are needed for sustaining excellence in agricultural/animal husbandry education, research, extension and in developments covering the segments of production, processing, warehousing, financing and marketing" (p. 112). Imagine where we do not need these traits! These observations apart, many papers do make an interesting reading and provide the potential areas of research and its management to accelerate socio-economic transformation of the rural people in India.

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Public Policies and the Misuse of Forest Resources, Edited by Robert Repetto and Malcolm Gillis, Cambridge University Press, Cambridge, 1988. Pp. xiii+432. Paper back: £ 19.50.

There is a proverb in Kannada which asks: "If the fence itself starts grazing the fields, what can save the crops?" The theme of the book can be said to be to show how forest use in many countries illustrates this proverb. Departing from the usual stand which blames deforestation on causes like population pressure, multinational companies and atmospheric pollution, considered extraneous to government policy and practice, this book identifies the governments of the countries themselves as the major and even direct culprits.

This argument is based on very painstaking research, analysing detailed data and evidence through seven thought-provoking case studies of different types of countries/regions - Indonesia, Malaysia, Philippines, China, Brazilian Amazon, West Africa and the United States. The case studies follow an excellent overview and conclude with a very valuable chapter on policy implications. Though India is missing, one does not have to guess too hard as to what the book would have shown about the role of the government here or about relevance of its theme to our country.

Whether the governments did this intentionally or inadvertently is beside the point, since it is ultimately the impact which counts. Yet, the governments do not come out as innocent, helpless or passive actors in the sordid drama of deforestation at least as revealed in the book. They could not have been unaware of the consequences of their policies on the state of their forests.

This has been done, as the authors point out, for worthy objectives - industrial or agricultural growth, regional development, job creation or poverty alleviation. But the objectives have either been not realised, or attained only at excessive cost, - cost not merely in terms of deforestation but also in terms of economic and fiscal losses. The sad part of the drama is that this cost was avoidable without prejudice to the above-mentioned objectives.

Government policies impinging on the forests relate both to forest policies and practices

as well general economic and social policies outside the forest sector. Both are carefully analysed. Within the forest sector, concessions to logging interests granted by the government were a major factor behind depletion. The economic rent in excess of the cost of exploiting the trees was hardly ever captured by the governments, resulting both in a big revenue loss to them and into an incentive for deforestation since the logging interests got their timber at very cheep rates which hardly reflected environmental or opportunity costs involved. Incentives given to wood processing industries to boost industrialisation or foreign exchange earnings had also a similar impact.

As for the policies outside the forest sector, a major factor pointed out by the authors is the government encouragement to extension of farming, plantation crops and ranching, "by providing artificial incentives that lower the costs and increase the private profitability of alternative land uses. These subsidies can become so large that they encourage activities that are intrinsically uneconomic, or push alternative land uses beyond the limits of economic rationality" (p. 32). A conspicuous example is that of Brazil which tried colonisation of forests by encouraging settlers to have huge farms mostly of 100 hectares each. Studies also show how even tax concessions helped projects to compete for more land at the expense of forests.

These policies over-estimated the value or the benefits from alternative land uses, and grossly under-estimated the value of standing forests, particularly the wealth of 'minor forest products' which are valued greatly by people living in or near the forests. The biological richness particularly of the tropical forests and their potential benefit to the future progress of humanity is also underrated. For example, "tropical forests contribute genetic material for plant breeders that confers disease and pest resistance and other desirable properties to coffee, cocoa, bananas, pineapple, maize, rice, and many other crops" (p. 13). Another vital feature of tropical forests brought out here is that very often the soils on which forests stand are intrinsically inferior, their productivity for sustaining forests being maintained by constant recycling of the forest organic matter. Once the forests are depleted, the nutrient quality of soil is irretrievably lost. Farming on such lands can be only at excessively high costs.

The editors rightly assert in their conclusion that reforms of public policies can save forests without sacrificing revenues for the governments, and suggest several constructive measures. First such reform would be for the governments to capture the economic rent instead of charging well below stumpage value and to use *ad valorem* royalty on timber harvested, differentiated as per quality, with higher rates for more valuable species. Valuation of logs for royalties should be on the basis of their export prices in world markets after discounting for harvesting and transport costs. Timber concessions should be such as to provide incentives for sustainable use and penalise squander and neglect of regeneration. Higher export taxes on logs than on processed wood like lumber and plywood are suggested instead of concessions in income tax and credit for sawmills and plymills. The authors also plead for greater priority to non-timber forest products, as they could generate more revenue and employment, while conserving forests at the same time.

It is in respect of reforms in policies in the non-forestry sector that more difficulties are likely to be faced. For example, the editors suggest the abolition of incentives and subsidies- direct or indirect- which make conversion of forest land to other purposes look more profitable. Governments are likely to find it difficult to resist the temptation of handing over forest lands to solve the problem of poverty and unemployment. But the editors also plead for greater international aid to countries to enable them to solve these problems in

ways other than causing deforestation, and also for directly aiding reforestation. Similarly, they plead for full reckoning of environmental costs including displacement costs in any project evaluation, so that project choice can be more rational.

All in all, a very sensible book which should be a compulsory reading not only to forest officials, but also to the Presidents and Prime Ministers of all countries.

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Local Politics: The Law of the Fishes: Development through Political Change in Medak District, Andhra Pradesh (South India), Marguerite S. Robinson, Oxford University Press, Delhi, 1988. Pp. xv+345. Rs. 190.00.

The authoress of the book under review is a social anthropologist and is a Fellow at the Institute for International Development at Harvard University. The study is based on material collected primarily from a village and its taluk. It covers the period 1957-81 in the village and taluk but includes relevant national and State events upto March 1985.

The book is a study of the dynamics of power in one part of South India. In particular, it is about the ways in which poverty and political power have been mutually dependent there over the last two and half decades. The authoress believes that some aspects of local South Indian politics can only be understood in the context of Hindu thought and its concepts of mutual dependence, opposition, complementarity which are essential components of Indian *real politik*. Consequently, in the Indian agrarian system, the ties which bind the landless to the land, the creditor to the debtors and the high castes to the untouchables are as powerful as their opposites. This system has many anchors which the authoress is well aware of, but she chooses to focus on the nature of the transformation which is taking place even at the village level. The focus of the study is on the consequent social and economic changes which have occurred in one village and its taluk - both as the cause and effect of the political process.

With the achievement of Independence, the hope was that the manifold inequalities prevalent in the political processes would be eliminated if democratic methods were pursued. However, the authoress concludes that the electoral process has led to the reinforcement of wealth and power of the dominant land holding castes, while more than 40 per cent of the population continues to live in conditions of absolute poverty (p. 2). The book primarily attempts, fairly successfully, to understand a small number of such impoverished people (in the village studied) and their living conditions, philosophies and position in the body politic.

In the first chapter titled "Poverty and Power", the relation between poverty and rural development, developments in the field of agriculture, the relationship between poverty and local politics in the village under review are discussed.

Chapter 2 titled "Caste, Politics, and the Agrarian System" studies selected aspects of the caste hierarchy, agrarian system and local power which are inextricably inter-dependent in the Narsapur area. The chapter also discusses the complex connections prevailing among land, capital, caste and power as well as the processes and directions of their changes which have been occurring in the area. The point of entry to these underlying issues is the electoral process and the transactions through which it operates. One of the most interesting sections here is the Role of Force in the political process which operated as a sanction for insuring

obedience - as an aid in acquiring control over land, to establish political and economic boycotts and an element in the delivery of vote banks. Considering the present operative levels of local politics in the country, these are not only very relevant but can be extended to control over the electoral process itself, depending on the local situation.

Chapter 3 provides detailed information with maps and tables and diagrams, about Medak district, Narsapur taluk and the village as of 1972. The phenomena such as bonded labour, control through physical force and use of the untouchables as the musclemen of the village leaders were common. Though representative, the village had undergone rapid and complex changes, being provided with electricity, motorable roads and pumpsets. However, the benefits have accrued almost entirely to one family of the locally powerful landowning Reddy caste. As a result, much of the land, labour and votes of the rest of the village were mortgaged in one way or another to this family.

Chapters 4 and 5 consider the voting processes in the elections conducted from 1957 to 1972. While Chapter 4 attempts to answer why the people voted as ordered by the village leaders, the next chapter attempts to answer why the leaders chose to instruct the people to vote for X as against Y. The term 'vote bank' is used by the authoress simply to mean the votes which a leader is believed to be able to deliver to his candidate for whatever reason. This is too limited a perspective. Thus while different types of elections were held for the panchayats, Legislative Assembly and the Parliament from 1957 to 1985, the same actors appeared and reappeared in each set of elections. The authoress succeeds in showing the pattern of alliances from the relations among the participants over time. Four major groups influence the pattern of transactions underlying all elections. These included alliances between landowners, between landowners and Komaties, between landowners and Harijans and among the lambadars. Though these groups together constitute less than a third of the population, it is they who dominate the political arena (p. 151).

Chapter 6 studies the political and economic changes in the mid-seventies which generated a different kind of voting behaviour. The authoress contends that during the seventies vote banks in India became largely inoperative (p. 16). This is rather a sweeping statement and not entirely correct since vote banks continue to determine the electoral process though their scope and base may be much more specialised. She further contends that while in some regions this occurred by the 1971 Parliamentary elections, in other areas including Medak district this happened first in the 1977 Parliamentary elections. This is particularly relevant since Medak had been the constituency of the late Mrs. Indira Gandhi. She also contends that subsequent elections cannot be understood primarily in terms of vote banks. However, she later goes on to say that the dynamics of the agricultural overhaul and changing role of the vote bank are closely related (pp. 248-250). No one can deny that the role played by vote banks has changed, but to contend that vote banks have become 'inoperative' in India since the seventies is factually incorrect. New types of vote banks, sophistry and excessive use of force as well as the criminalisation of politics dominate the electoral process. Types of vote banks continue to dominate the electoral process, despite whatever 'changes' have been brought in through the modernisation process.

The book is a valuable contribution to the understanding of the development process in India. The study of the village is placed in a broader context and it attempts to relate the insights derived from small scale studies to larger scale trends in order to contribute to our understanding of both. Thus the study of the political process is emphasised as well as its relation to social and economic development. Particularly useful is the exhaustive bibliography on the subject as well as the detailed tables which provide a wealth of material for

research scholars in the field. However, since the period covered is upto 1985, at least two very useful contributions have been omitted. These include Leslie Calman's "Protest in Democratic India" (1985) and Rudolph and Rudolph "In Pursuit of Lakshmi".

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Management in Agriculture and Rural Development, R.K. Samanta, UDH Publishing House, Delhi-6, 1989. Pp. 147. Rs. 125.00.

Improvements in management are necessary to keep pace with the changes in science, technology, and economic environment, and political and social milieu. The author has described the management process as consisting of planning, organisation, staffing, motivation and control. He has not explicitly recognised that management job is also performed by millions of farmers, livestock breeders, self-employed artisans and businessmen. Improvement in the management at these levels is also very important to accelerate the pace of development in this country. The book is divided into eight chapters.

In the second chapter, the author discusses the role of managers. He describes the manager as a leader, co-ordinator, decision-maker, human relations practitioner, public relations man, delegator of authority, symbol of authority, guardian of business ethics and as trustee. In addition, a manager has also to fulfil his obligations to the society.

"Management of Agricultural Research Projects" forms the theme of Chapter 3. The problems in defining priorities and goals of research and cost-benefit analysis of investment in research and transfer of technology have been very well presented in first two pages of this chapter. Then the author defines the project and tries to distinguish the project activities with, what one might call, non-project activities. He concentrates on finiteness, complexity, series of tasks or a system and non-repetitive characteristics of project activities. He then goes on to discuss varied nature of placement of projects in an organisation, responsibilities of the project manager, problems of project management and the project management cycle. While quoting Rensis Likert, the author states that the performance will increase if more individuals from all levels are involved in planning and decision-making process.

Chapter 5 is devoted to the management of rural development programmes. The author has examined three aspects, *viz.*, systems approach to rural development, training needs and renewal of organisation for better productivity and development accomplishment. He characterises rural development as an integral process seeking to combine economic, political, socio-cultural and ethical dimensions. In this chapter, the author has included a description of some rural development programmes also.

The next chapter is titled as "Technology Transfer in Agriculture" but has been numbered as Chapter 4. The printing error has been to the extent of misplacing the chapter altogether.

The concept of technology transfer has been presented well. Then he goes on to describe the meaning of appropriate technology and agricultural technology. He has only briefly touched upon the merits and demerits of the emphasis on appropriate technology. He has also defined transfer as the successful creation of opportunities or situations in which people gain the abilities and the stimulation necessary for successfully meeting their needs and interests in such a way as to attain continuous improvement and self-satisfaction. He has

emphasised the role of three parties in the transfer of agricultural technology, *viz.*, extension system, client system and research and support system. The author has quoted quite a few research studies to throw light on the characteristics for identifying contact farmers for speedy transfer of technology. Apart from other factors, availability of ready market (market orientation) has been shown as an important factor in transfer of technology.

Communication strategies for agricultural development have been presented in Chapter 6. In this chapter, planning for providing communication support, type of information needed for developing communication strategy, components of communication plan and functions of communicator have been discussed appropriately. The role of change agents through effective communication has been clearly brought out. The author has rightly pointed out that the farmers are not just the passive recipients of information, but are active participants in the communication process. The author has ended the chapter by listing 15 characteristics of successful communication strategies.

Decision-makers need information that is relevant, timely, accurate and usable. In rural development, a great deal of information is generated in various combinations. It often costs a lot to obtain, process, analyse and digest the information. Rapid Rural Appraisal (RRA) is a technique to generate relevant information at minimum possible cost. This forms the scope of Chapter 7 of the book. RRA embodies trade-offs between timeliness and rigour. It is inter-disciplinary, exploratory and rapid learning process through intensive interaction with local rural inhabitants. The author has compared RRA (original idea from Robert Chambers) with normal surveys, record keeping methods and Farming Systems Approach to Research (FSAR). Recently RRA has been proposed as a monitoring technique in FSAR. He has quoted some international studies to show that RRA has been tested by a large number of agricultural organisations to diagnose locational problems, to select appropriate technologies for farmers, to reorganise agricultural administration and to equip development administrators for participatory work. It has found successful application in Irrigation Water Management, Agro-forestry and Nutrition. The analysis and review of work related to RRA clearly bring out that RRAs are not only cost effective in terms of personnel, time and money but also powerful tools for directing and motivating rural development professionals.

Population planning and utilisation of human resources through integrated rural development form the scope of the last chapter. The role of population education should be viewed, the author argues, as an integral part of the programmes of socio-economic regeneration of rural areas. He has also talked of rural development strategy in this chapter. In the later part of this chapter, the author has stated that Indian rural masses are lagging in the adoption of modern agricultural technology due to lack of communication information system. The extension workers need to be equipped with appropriate communication tools.

By and large, the book is a welcome addition to the literature on management in agriculture and rural development specially when quite a few universities have started or are in the process of starting post-graduate programmes on Management in Agricultural and Rural Development. However, there are quite a few printing mistakes in the book.

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Agro-Processing: Strategy for Acceleration and Exports, Edited by U.K. Srivastava and S. Vathsala, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi, 1989. Pp. xxiii+435. Rs. 250.00.

Agro-processing industries play an important role in the early stages of industrialisation and development through their backward and forward linkages besides the direct impact they have on employment and rural development. In India, agro-processing in general and food processing in particular, have recently assumed added significance with the setting up of a separate ministry of food processing industries. It was after this that there has been a renewed interest in agro- and food processing industries by the academicians, policy makers and administrators. A series of seminars and conferences have been organised throughout the country during the last two-three years. The entry of Pepsico in food processing in India through a joint venture project in Punjab further interested many researchers, policy makers and interest groups. In this background, the Centre for Management in Agriculture {CMA} at the Indian Institute of Management, Ahmedabad organised a three-day national workshop on "Policy Support for Agro-Processing and Exports" in February, 1988 at Agra where people with varied interests and backgrounds but associated with agro- and food processing in one way or the other contributed papers. The present volume is a collection of papers presented at the workshop and the recommendations thereof.

The volume in all has 44 chapters which include a keynote address by Y.K. Alagh, the then member, Planning Commission, theme papers by V.R. Gaikwad, B.R. Shah and Kr. Fateh Singh Jasol, besides 28 papers on different agro- and food processing industries, the recommendations of different commodity sessions, one paper each on finance and packaging and lastly a valedictory address by M.R. Sivaraman. The keynote address by Alagh and one of the theme papers (by Gaikwad) bring out the importance of farm-industry linkage approach for development with special reference to agro-processing industries through their backward and forward linkage. The other two theme papers deal with the growth, structure and trends in exports of processed food from India and suggest ways and means to promote Indian exports of processed foods.

The second part of the volume has papers on eight different agro- and food processing industries but most of the papers have been devoted to marine products, soya products, meat and meat products, fruits and vegetables and the plantation crops. Part III has a paper on the nature and scope of NABARD's credit facilities for agro-processing industries by the bank itself and M.R. Subramanian's paper on the packaging problems of specific agro-processing industries, future prospects and the nature of packaging policy for export promotion.

Now, some comments on the theme of the book and Part II which contains 28 papers on different agro- and food processing industries. Some of the papers included are no more than mere industry profiles or export profiles of specific industries. Also, most of the papers focus only on the export side of different agro-processing industries though the title suggests that the volume is on the strategy for the acceleration of agro-processing industry and its exports. It would have been better if the title was: Agro-Processing Exports: Strategy for Exports, given the nature of papers included in the volume except a few.

Even the choice of industries with which the papers deal does not seem to represent the agro-processing sector as a whole. Most of the food processing industries included in the volume fall in the realm of secondary level food processing industries such as fruits and vegetables, snack foods, etc., which perhaps is the result of the recent commonly understood meaning of the term 'Food Processing'. Almost all the cereal-based primary and secondary

food processing industries such as rice milling, wheat milling, bakeries, maize processing, etc., which in fact form the basis for some of the secondary food processing industries such as snack foods, as a source of raw material, have been left out. Thus without the development of primary processing industries, how could one expect the development of secondary processing industries and their export promotion? Also, from the export promotion point of view, some very important industries like dairy products, biscuits and bakery products, sugar products, etc., have not found any mention in the volume. In fact, all these items fall within the purview of the Agricultural and Processed Food Products Export Development Authority (APEDA) - a nodal agency for agro-processing export promotion. Even from the point of view of agro-processing in general, predominant industries in India like cotton and cotton seed, oil and oilseeds, tobacco, forest products like paper and wood products have not drawn even a single paper in this volume. One editorial comment: we do not know what led the editors to include their own paper on Integrated Fisheries Project, Cochin, in the category of snack food when there was a separate section on marine products where the paper could fit better.

Notwithstanding all this, some of the papers in the volume like the ones by Girja Sharan and Sandeep Kayastha on the post-production system of apples in Himachal, by the editors of the volume on the Integrated Fisheries Project, Cochin, by S.P. Seetharaman *et al.* on the market strategies of Indian silk exporters, K. Radhakrishnan's and K. Seshagiri Rao's papers on leather industry and B.P.N. Singh's on the soyabean processing technology certainly add to the value of the volume. The point to be noted is that the papers of the above type belong to academicians by profession. It would have been better if some selection criterion was adopted while choosing the papers for inclusion in the volume so that only analytical and rigorous research papers were included in this volume on an important topic of research. Even a reputed publishing company like Oxford and IBH does not seem to have insisted upon the quality of papers to be included in the volume. Further, the price of the book is well above marginal utility, and is not likely to be bought without a subsidy. But as a whole, the volume is very timely and a welcome addition to the very scanty literature on agro-processing, especially the food processing industries. It will, if nothing else, provide insights and issues to the researchers to take up work in the areas related to agro-industrialisation and employment, agro-processing and rural development, agro-exports and technology and so on.

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