Overseas Development Institute

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# The Implementation of Agricultural Development Policies: Organisation, Management and Institutions

Summary and Comment on the Second International Seminar on Change in Agriculture, at the University of Reading September 9-19, 1974

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Guy Hunter





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**Guy Hunter** 

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# Foreword

The Second International Seminar on Change in Agriculture, jointly organised by Reading University and the Overseas Development Institute (London), and sponsored also by the World Bank, was directed to the study of the field implementation of agricultural and rural development policies in less developed countries.

The material used in the Seminar included research work generated by the Reading/ODI Joint Research Programme, a large number of contributed Papers, and a number of Plenary Addresses spaced throughout the ten days of work. 225 members from 50 countries attended.

It will take some time before the Papers and proceedings can be published, even in abridged form.<sup>1</sup> It therefore seemed desirable that some summary of the major issues discussed, and of what appeared to be the general movement of opinion among the membership, should be prepared quickly, not only for the use of members but also for those unable to attend.

This Summary is designed to meet that need, in the clear understanding that it cannot be comprehensive, or even reflect fully the diverse ways in which the membership would have placed their chief emphasis. A large number of excellent detailed suggestions have inevitably been squeezed out, although I hope that members will see traces of them at many points. It is a personal impression of the main drift and significance of the Seminar. Although it is therefore subjective and incomplete, I hope that it may prove useful.

I would like to acknowledge the assistance given by Professor A. H. Bunting, Anthony Bottrall and Robert Wood in checking and improving this Summary and Comment.

#### Guy Hunter

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<sup>&</sup>lt;sup>1</sup> A full list of the Papers and Addresses is given in the Appendix. Individual copies can be obtained from Professor A. H. Bunting, Plant Science Laboratories, University of Reading, Whiteknights, Reading, RG6 2AS.



# **Introduction: The General Problem**

It would at least be generally agreed that the central problem which confronted members was not simply how to increase total agricultural output in developing countries — an important aim in itself in the light of world food and population prospects — but also how to ensure that a far larger proportion of small farmers and of the rural poor should share both in the increase of output and in the gains in income and well-being generated by higher productivity. And, indeed, it is unlikely that even the needed increases in output alone could be achieved without drawing upon the potential of this small-scale sector which represents, in most developing countries, the great bulk of manpower and farming experience, even if it does not often account for the biggest percentage of agricultural and pastoral output.

This problem of stimulating small-scale production involves 1) political, 2) technical, 3) social, 4) commercial and 5) administrative issues of quite formidable dimensions; and it was to these issues that the Seminar discussions were directed. Although these problems are intimately inter-related (being only abstractions from total situations), it may be useful to treat them separately, under the above headings, which in fact follow the order in which the Seminar programme was arranged.

# **I** Politics

It would have been futile to exclude political factors from the concerns of this Seminar: every member was fully aware of them. It would have been equally futile to discuss the virtues of rival political attitudes and their embodiment in economic and social situations. The Seminar was asked to consider the effects of the overall political philosophies and aims of governments on the actual organisation and implementation of rural development. If, for example, it is decided that private traders shall not be allowed to buy some major agricultural products, then alternative, public-sector or co-operative systems must take their place. How efficient are such systems, in comparison with private trade; how is 'efficiency' defined in this connection; what problems beset such state-inspired systems? If, *per contra*, private trade is encouraged, what social or economic dangers may arise, and by what means can government control or guard against abuses?

# **The Papers**

The Seminar had before it a major Paper by Sir Arthur Gaitskell, considering the choices of implementation methods which might be adopted for agricultural development deriving from the huge Mekong Valley irrigation schemes; mainly descriptive Papers from Egypt (E1 Kammash) and Yugoslavia (Professor Stancl) on the problems and policies in each country; a Paper by Professor Schran on the development of rural organisation in mainland China; a Paper by Dr. K. Mathur indicating the political and administrative difficulties in ensuring that the benefits of the Green Revolution in India should reach the small farmer group; a survey by Professor Barraclough on political motivation and its effects on the co-operative movement in five Latin American countries; and a more general Paper by Dr. Werner Klatt on the needs for land reform in Asia.

# Discussion

It was widely felt that the level of discussion in groups on this subject was not satisfactory, for three main reasons. First, it was difficult to handle as the first topic, when members were strange to each other; second, the objective of the group discussion was not sufficiently clear or understood; and, third, there were not enough members from centrally planned or fully socialist countries to contribute vital detail to the debate. Nor did the Plenary Address by M. Paul-Marc Henry, though brilliantly delivered, provide the Seminar with a tool of analysis which members found easy to apply to the subject. In fact, some of the most important and concrete political issues came up in later sessions in pragmatic discussion of three difficult problems. The first is related to research and technology. It is by now a commonplace social/political judgment that major advances in technology have normally tended to favour those members of society who are best placed to exploit the new opportunities which are offered ie those with most economic resources, greater ability to bear risk, better education and better access to power-centres and government services. Unless specific efforts are made to counteract this tendency, there will be a widening of social and economic inequality. This topic will arise again under the technical and research heading.

Second, and closely related to the first, it is widely agreed that the actual distribution of assets (and, in this case, particularly of land) will give much greater absolute rewards from new productivity to the larger holders than to the smaller: here again some countervailing force is needed to reduce economic inequality, assuming that to be a political goal. This issue was dealt with in some degree by Professor Mellor's Paper (under Section II) and by Professor Johnston's Plenary Address (Section IV), both of which spelt out, from slightly different approaches, the greater gains to the total economy to be expected from a technical and administrative approach which specifically aimed at inclusion of the smaller holdings in productivity gains. But this does not cover the whole problem; and the need for a range of measures of agrarian reform, particularly in some regions, recurred constantly in the group discussions.

Third, a question of political values arose in relation to the various types of 'grouping' by which farmers could organise themselves both to increase their dynamic capacity and to provide the administration with a means of delivering services, not to millions of farmers individually, but to a far smaller number of organised groups. In situations where villages have been dominated by a few 'magnates', the establishment of elected Committees, Panchayats etc is likely to result in the capture of such institutions by these magnates, thus increasing rather than reducing their dominance. Two difficult sociological and political problems arise here. First, is it possible to avoid this effect by varying the methods by which groups are formed  $\rightarrow$  eg by stimulating the growth of much smaller groups of farmers concerned with a particular need or facility (a tube-well or a store for example) so that such groups, self-selected by a common interest, do not reflect within the group the social structure of the community as a whole? This was an issue raised by Shri B. Sivaraman in his Plenary Address. Second, the question of leadership arises: how far is it possible to bypass the existing ('natural'?) leadership of a closely-knit society in an endeavour to create new opportunities and new elements of leadership from below?

A major point of theory and practice is raised here. Sweeping ideological generalisations tend to give the impression that *all* magnates are oppressive or that *all* merchants are exploiters — not necessarily from deliberate wickedness but because their position in a total system determines their behaviour. In detailed practice this is not by any means always the case: some of the most successful and best-managed co-operatives, for example, have been initiated by men in leadership positions who have brought gains, not merely to themselves, but to the whole farming community, including small farmers. Thus there may be more 'give' in many systems than the rigidity of such generalisations suggests.

Nevertheless, although there may be some room for manoeuvre and reform in almost all systems, the gap between those who believe that only a total restructuring of society can bring substantial social equity, and those who are prepared to take advantage of any opening in that direction, remains largely unbridged. The issue was not faced head-on by the Seminar, since its agenda concerned organisations and institutions for implementing policy; and, even after revolutions, such organisation (eg the timely delivery and financing of inputs, and collection of surpluses) is still needed.

The Seminar came nearest to this issue when, in the final report summarising discussions on extension and farmer groupings, an impression was given, perhaps from Latin American experience, that without major restructuring of the whole society, efforts at extension, 'animation' and organisation of smaller farmers were doomed to fail, or at least to amount only to 'tinkering'. There was quite vigorous reaction to this among some members. For 'total restructuring' is not a tool of action which can be picked off the shelf at will: and executives of developing country governments, technical and research staff, consultants and technical assistants, and donor agencies, live in a world in which they have to do their best in taking action from month to month and year to year within whatever political context they find themselves. While a revolution (eg in Ethiopia) may open new positive possibilities, 'tinkering' is not to be dismissed; some of the most striking agricultural advances (the Kenva Tea Development Authority, the Kilimanjaro Native Co-operative Union, the Federal Land Development Authority in Malaysia, land consolidation in Africa and India, and many more successes) have been achieved within existing political structures. This may be because governments are seldom monolithic in their attitudes to change. It may be that successful 'tinkering' in fact only shows up the need for even more radical change; and indeed, by doing so, helps to concentrate attention on further problems. This could reasonably be said of the Green Revolution itself. Further, 'total restructuring' has large and unavoidable social costs (whatever its benefits) and leaves lasting scars. Some would argue that it is a cardinal

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virtue of a political system to be able to adjust constantly to changing pressures and thus avoid the heavier costs of recurring total breakdown and fresh starts.

It can be said that at least the will to 'tinker' more effectively, and to tinker in the direction of greater equity and opportunity for small farmers to share in the potential gains which science can offer was strong throughout the whole Seminar, as the suggestions under subsequent subject-headings will clearly show.

# **II Technical and Environmental Factors**

The actual choice of what crops to grow or what animals to rear is dependent on a large number of factors, which include the physical environment (soil, water-supply, temperature, elevation, etc) the technology available for various purposes (tools, power, seed, fertilisation, irrigation, storage, fencing), the size and tenure of holdings, economic determinants, location (proximity to town, road, etc); and social determinants (what is allowed by society, the form and availability of labour supply, etc). The pressures of these factors, acting simultaneously, produce 'a farming or pastoral system' in a given place at a given time: and substantial changes in any of them (irrigation, prices, mechanised power) may sharply alter the system. The particular combinations of these factors operating at given times and places are highly individual and specific: it is obviously not possible to make generalisations about what specific local programmes should be.

The Seminar was therefore not called upon to discuss these factors in themselves, but a much simpler question — how far do the farming systems resulting from these factors give a guide to the type of organisation, administration, management or institutions which can most effectively be applied, in a given case, for support and improvement?

It is clear that traditional systems, over long periods of time, and with few changes in the determining factors, found their own answer to this question. If certain factors required the efforts of a whole community or lineage, then a tradition of community effort for that work was built up; in nomadic or transhumant pastoral societies, the collective arrangements for movement and for grazing rights were worked out to ensure survival; in systems where the use of a river or well was critical, institutional arrangements for access and use were invented and observed by the community itself. Such arrangements were aimed usually at survival rather than at rapid improvement of output and at optimising the results obtainable for the whole society concerned, within the possibly very limited range of available technology and means of managing the environment. In consequence such farming systems, unsupported by modern scientific knowledge but also based on a very detailed and often profound pragmatic knowledge of local conditions, seem, by modern standards, to be systems of high persistence but very low productivity. But, taking one decade with another, they were viable and matched by appropriate institutions. A government anxious to increase productivity has to find not only an acceptable way of introducing technological variants into the farming system and of releasing constraints by investment, but also the type of institution which may be acceptable and suited to the new, more productive combination of factors.

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To give one or two examples — it seems reasonable to suppose that the organisation needed to introduce innovations and to service and sustain them in a densely populated area of small holdings will be different from that needed to improve and sustain productivity in a sparsely populated pastoral area. Major canal irrigation systems may need different disciplines and groupings from systems relying on tubewells serving small acreages. Systems involving high uniformity and regularity of output and exacting cultivation and husbandry methods (horticulture, modern palm-oil production) will require different organisation and supervision from that needed for production of standard cereal crops. Thus one criterion for the choice of administrative and institutional tools of development lies in the actual nature of the existing and the proposed farming system, which, in turn, is a result, and a useful epitome, of the multiple physical, technological and social factors already mentioned.

# **The Papers**

A number of the Papers written for the Seminar illustrated this issue in relation to different farming systems. The three general Papers on pastoral and nomadic systems (R. Baker, M. E. Adams, H. E. Jahnke with H. Ruthenberg) pointed out, in very similar ways, the dangers of 'developmental' action applied to these systems without a full understanding of the ecological and social conditions within which they had been traditionally developed. Thus, better control of disease in cattle, and provision of extra water holes, without control of stock numbers and movement, led first to larger herds, adding to pressure on the environment, then to gross over-grazing and erosion round the waterpoints, and finally to an even worse catastrophe when the years of severe drought came. Each Paper pointed out that unrestricted private ownership of herds, competing for a limited common resource of grazing and water, makes both range management and environmental control impossible. Various alternative methods of control and management were suggested by the authors involving either governmental or co-operative management of large areas, to include sufficient offtake from herds to prevent overstocking and also strategic control of grazing movements.

A Paper from Botswana (B. Thompson and G. Hunter) reinforced a point made by Adams, that modern commercialised development schemes tend to destroy traditional systems through which the smaller cattle owners could share in herd management and to some extent in the food available to the group as a whole. The more commercial and individualised such schemes become, the greater the danger that traditional provision for the poor will be excluded. Further, land pressure at the margins of the cultivable area may result in occupation of this

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area by settled farmers, thus depriving the nomadic or transhumant groups of a resource which is absolutely necessary to their system. If, in consequence, the system fails, the seasonal resources of the outer, semi-desert, area will not be used at all, at a time when all resources are precious.

A fifth Paper, by N. S. Jodha, which gave a case-study from Rajasthan, showed how carefully a new enterprise (sheep rearing) had to be fitted into both the local ecological and 'traditional' farm-management systems of the area.

All in all, the Papers seemed to hint at a very carefully constructed common management for the larger range systems, giving the utmost possible scope for retaining traditional communal features where they still have a social and economic role; limited expectations of either high returns on capital or substantial increase in direct employment; and, as Baker put it, a holistic approach to both environment and traditional social arrangements — that is to say, one which included ecological and social as well as commercial objectives. These requirements imply a considerable element of government planning and supervision.

Turning now to irrigated systems, Dr. Thornton's Paper gave a most useful review of the various types of organisation which have been used for the management of irrigation systems; and this Paper was complemented by a short but stimulating account of self-organised small irrigation systems in northern Thailand (J. B. Downs and N. Mountstephens) and of the spontaneous development of very simple technology (the sampan motor used as a low-lift pump) in South Vietnam (J. F. Cunningham).

Only two other detailed types of farming system were dealt with in the Papers — the combination of forestry and agriculture, 'agri-silviculture', (Professor Roche) and the very widespread system of (mainly rain-fed) agriculture in the huge dryland-farming systems of northern Nigeria (Dr. D. W. Norman). This latter Paper was notable for its rigorous examination of the relation between the farming system itself, with its labour constraints, the capacity of the system to make room for new crops and technology, and the administrative capacity of government to introduce and service new technology and farm-management systems.

The attempt to spread higher productivity, employment and income to the lower levels of the farming community was analysed by two main Papers. The first, by Professor Mellor, discussed the social and economic implications of government policies in terms of the type of technology used and of price policy for staple crops, pointing to the delicate balance between rewarding prices to cereal growers (benefiting farmers but putting up costs of living to labourers, except farm labourers paid in kind) and lower prices (benefiting labourers, both rural and urban, but restricting incentives to farmers). From a different point of view, Dr. J. W. Thomas's Paper on rural works pinpointed the relative gains in employment, incomes or infrastructural investment by various types of rural works schemes, with various types of aim and of organisational methods.

It is obvious that two variables which are under human control (the technology applied and the controlling/servicing organisation) can have profound effects both on farming systems and on the distribution of gains. It was, therefore, very necessary to look at the output and application of agricultural research, from which the technology actually available to farmers ultimately springs. This was covered in a Paper by Dr. B. Okigbo, who emphasised that research, from the earliest stage of its design, should be far more closely linked to the farming systems into which it would be introduced. Thus, research based on maximising yield in monocultural conditions may be very hard to fit into a traditional system (such as that of Eastern Nigeria) in which multiple cropping, both simultaneous and serial, has been the response, based on long experience, to local conditions and food requirements.

## Discussion

This was a formidable agenda for discussion. Although both the Papers and the discussions in groups tended to underline strongly that various types of farming systems, resulting from environmental, technical and social/economic pressures, require different organisational and administrative support and control, it would have been quite impossible, in the time, to suggest a whole set of typologies matched to a corresponding set of organisational requirements. Indeed, since whole situations and the resulting whole farming systems are, even under a broad classification, much more numerous than the range of organisational and institutional tools, it is clear that only certain key elements in the various situations could be used as criteria for organisational choices. For example, certain systems (eg pastoral, irrigation) imply a key element of control; some require a high quality of technical service; some, with less technical demand, require the sensitive stimulation and support of self-organised groups. It was therefore easier to approach such a subject from the opposite end — ie by analysis of the actual range of organisational tools available, and their virtues and defects for handling particular types of situation. This was done largely in the discussions of Sections III, IV and V of the Seminar.

Many members were particularly interested in the design and organisation of research, as the means of advancing the knowledge base for development. The main issues were set out in Dr. Okigbo's paper and in the Address devoted to this topic by Professor Bunting at the clos-

ing session of the Seminar. The discussions, as reported, emphasised that research is often insufficiently relevant to field problems, and that the social and economic as well as technical constraints must be taken into account if the results are to be effective in real situations. How is this to be achieved, and even institutionalised? Some stress was laid on a better flow of information from and about farmers themselves to the research staff, and also on more exposure of research staff to actual field conditions before the research design is crystallised. This would naturally apply to research with a 'farming system' emphasis: but it is also significantly relevant to research intended to increase the yields or returns from particular crop or animal enterprises or to research within disciplines (eg agricultural engineering), since the results of all research, in the last resort, have to find acceptance in field conditions, among the farmers and extension workers concerned. There was considerable support for the idea that staff with economic or sociological training should join fully, as members, in the work of technical research teams (and not come in merely as transient and alltoo-often unsympathetic visitors). This would not only improve mutual understanding, but also help to define the objectives of research and the types of technology, arising from it, that are most likely to be accepted by farmers. While agricultural economics is fairly well recognised by natural scientists as a respectable discipline, rural sociology has not yet been so widely accepted, and there was some banter between some sections of the membership on this issue. It was further suggested that applied natural scientists should be so trained that they understand more fully the social and economic factors which affect the application of their work.

It was also stressed that, while it is necessary to know the maximum vield which a given environment can physically sustain, and the ways in which it can be attained, the practical prescriptions for farmers have to take account of inputs (such as cash or labour) which do not come from the natural environment. Prescriptions must therefore consider economic, operational and social elements also. In the light of the real situation of huge numbers of small farmers, a crop variety with maximum yield, which requires substantial inputs, full and regulated water-supply, intensive protection against pests and diseases, and has to be sown, weeded or harvested at times when the farm community is hard pressed by the needs of other crops or of non-agricultural activities, may be a much less suitable gift from research than a variety which can be relied on to give a satisfactory yield under suboptimal but more convenient conditions and management. For example, a variety which can be sown at a time when the farm family has labour to spare, is a stable composite rather than a hybrid, resists pests and diseases, and is acceptable in taste and appearance (even if it contains less lysine), is far more likely to be used by small farmers.

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at least in the early stages of their progress towards greater productivity and more effective methods, than a 'high-yielding variety' which has impossible cultural requirements and is not welcomed by the consumer.

There is still a long way to go before both the staff and the governing bodies of research centres (national and international) understand how to design new farm technology so that it can support an agricultural policy intended to be within the reach of small farmers as well as within the servicing capacity of government field services. To progress in this direction, research workers need to understand more clearly than they do the underlying objectives and constraints of the existing farming systems, and the points at which they are capable of absorbing innovation.

# III Farmer Organisation and Delivery of Services

It was suggested in the Plenary Address by Guy Hunter that the organisation of farmers' groups and the delivery of services to the farmer have usually been seen from two opposite approaches. The first starts with the farmer and village community, and asks how energy and effort can be mobilised there to provide a dynamic force without which agricultural development can barely be kept moving. This approach deals with self-organisation of farmers, up to the level of co-operatives, which may be in themselves the means of providing services of many different kinds to the farmer-membership.

The second approach starts from the government end, and asks how government can stimulate farmer groupings, how the extension service can be organised to provide technical advice and other inputs, and how the various departments of government can be co-ordinated, both for planning and at the field level.

In both approaches both sides must play a part. Little success can be expected from farmer organisations unless supported initially from outside; and no extension service can succeed without a vigorous response from below. In both cases a great deal will depend upon situation and timing. Organisation, on each side of the point where local effort and government effort meet, depends heavily on whether it is designed for the earliest stages of development (eg for a tribal, traditional, semi-subsistence economy) or for much later stages, in which the farming community is already advancing rapidly in sophistication.

## **The Papers**

The Papers can initially be divided into three rather similar groups, leaving out the Paper by Uma Lele on Project Design and Management, and the two Papers by Scarlett Epstein, and D. H. Penny and Masri Singarimbun, which will be dealt with later.

The Plenary Address by Shoaib Sultan Khan concentrated mainly on the side of popular effort and of 'listening to the farmer', with close support from government to meet ascertained needs of local farming communities. He explained in some detail the type of local organisation which is being built up in the North West Frontier Province of Pakistan to service the groups of farmers forming in certain areas in response to official visits, at which farmers were encouraged to spell out their most urgent needs. The Paper by D. Gentil illustrated the careful growth of a participatory organisation of farmers in Niger, stimulated and supported by government. Papers by J. Gordon (Ghana) and P. Mbithi (Kenya) gave some indication of how voluntary organisations can often respond rather more flexibly than government to the demands of local communities. The account by R. Dean and A. Moyes of voluntary 'integrated' schemes of agricultural, health and educational improvement in Guatemala and the Paper by W. M. Dyal describing the support given by the Inter-American Foundation to a wide range of local initiatives should also be grouped here.

When it comes to the creation of much more formal co-operatives, we are in a halfway house between governmental and community action. J. M. Texier's Paper dealt with the formation of small, pre-cooperative groupings at the primary level, supported at the secondary level by a more formalised organisation for commercial managements; B. J. Youngjohns, in a detailed survey of the aims, tasks and organisation of formal co-operatives, emphasised that two, sometimes conflicting, roles were expected from them — democratic, cohesive selfgovernment among a self-chosen co-operative membership, and efficient performance of quite complex financial and commercial operations in an organisation favoured and quite closely controlled by government as a tool for carrying commercial functions in place of private traders. From a social-anthropologist's viewpoint, Göran Hyden's Paper pointed out how the values and norms of action strongly imbedded in clan and patronage groups would be repeated in the methods of management of such groups when organised, for development purposes, into co-operatives. These very significant findings were to play a considerable part in the subsequent discussion. As a pendant to this group of Papers, G. E. Hansen's Paper on some experimental institutions in Indonesia further points the moral that large, semi-representative institutions, established as a result of government policy or pressure, have normally a poor chance of survival and efficiency; but the Paper on Farmer Associations in Taiwan (T. H. Shen) quotes a notable exception to this rule, in its record of complex organisation built up, over a long time period, by determined and commercially sound government policies.

The Papers dealing directly with government extension services covered cases from the Philippines (G. Castillo), Ecuador and Paraguay (J. Higgs), Ghana (E. Bortei-Doku), Uganda (R. Watts), Cyprus and the Solomon Islands (G. Jones and M. Rolls), Nigeria (Q. B. O. Anthonio with A. U. Patel and C. A. Osuntogun), from the Shell experiments in Italy, and from India (K. Subramanyam). Considering the geographical range, they make, on the whole, very depressing reading. In almost all of them the deficiencies, of many kinds, of the current samples of extension work show up painfully. In the Philippines the more sophisticated farmers doubt the technical competence of young extension staff; in Ecuador and Paraguay numbers, training and deployment are inadequate to cover even a quarter of the farming

community: in Ghana serious problems of communications with the farmer weaken the service; in Cyprus there are conflicts between the economic farm management advice of the Extension Service and the necessities of village life; in Nigeria inadequate access to services and some conflict between the modernising institutions (co-operatives, credit) and more traditional ways of meeting needs. In contrast to this attempt at wide coverage with inadequate staff and training, the Shell experiments show what can be achieved by a single officer, with firstrate training and support, if he is given time and opportunity to get to know local people and local problems more thoroughly. The need for time and detailed knowledge is re-emphasized by Watts's description of pilot research smallholdings, where the farmer's performance is monitored in great detail by Makerere University staff. The staff discovered many more of the real reasons why changes in farm practice and farm management are far more difficult for the smallholder than is often believed.

Two extracts from published books (Scarlett Epstein and D. H. Penny with Masri Singarimbun) record exceptionally successful sequences of development among particular groups in the Pacific and in Sumatra, in which progressive development of indigenous institutions and initiatives, with fairly minor government support, seem to have played the leading part. Mrs. Epstein's contribution is a rare example of the tracing of the steps of change from a traditional system towards a commercialised agriculture.

# Discussion

It is extremely hard to identify any consensus on major elements of this subject, partly because the Seminar here came nearest to wellworn discussion of the training and quality of extension officers and the need to mobilise the effort and enthusiasm of farmers. Further, while two of the three groups charged with this issue as a special subject for the final summary made a large number of practical 'tinkering' suggestions, the third emphasised the view, strongly held in Latin America, that without major political restructuring there was little hope of effective help to the smaller farmers.

There were, however, three or four points which have not been thoroughly discussed in earlier literature and meetings. First, a good deal of discussion arose round the issue of how the real local needs and opportunities can be better identified; and this issue links closely to discussion of farming systems in Section II. In fact, extension staff usually have little opportunity to identify and little discretion to act according to their judgment. Nor are they trained to listen rather than to instruct or deliver a pre-packaged programme decided upon at much higher levels of government. Such packages often reflect a national need (eg for more home-grown cotton): a particular technique (high-yielding seed *plus* chemical fertiliser); or a broad generalisation about potential (soil, rainfall, etc) which may not prove applicable in many local circumstances.

There was little decisive discussion of how to identify the chief constraints and chief opportunities for change within these systems on a scale, at a cost, and at a speed which would be administratively possible and acceptable. In projects and other specially favoured programmes, initial diagnosis is heavily stressed and often carried out by experts far senior in training and experience to the normal field staff. Really detailed research might require a team (agronomist, economist and sociologist) for a minimum of six months to tackle a single system over a fairly small area; on a large scale, this is impracticable. Probably a combination of two methods might be workable. For fairly uniform major areas in India — eg parts of the Gangetic Plain — the University should be able to set up such a team to cover, say, three scattered sample areas in depth; and their work would provide a check-list of problems to which a less skilled assessor should keep his eves open. Meanwhile, for month-by-month working of the extension and other field services, the District team of staff, with minor strengthening as training output increases, should be able, block by block, to review the suitability of current programmes, and identify any special needs of a block (a bridge, storage, road, water or land improvement), in consultation with farmer organisations and with reference to a specialist if necessary. Regular periods (of about two weeks?) could be set aside for each of these reviews at intervals in the year.

In general, it is clear that, since development is essentially an interdisciplinary activity, much more attention needs to be given to the management of surveys, to the interaction between specialists, and to avoiding the omission of essential and relevant information before programmes are finalised.

Secondly, it seemed to be fairly widely agreed that, while action to improve health, education etc is clearly part of a wide rural development programme, such efforts should be related to the *national* capacity to spend revenue on clinics, schools, etc and therefore fall naturally to the programmes of existing Departments of Health or Education, rather than special branches of 'project organisation', which are apt to favour their small area disproportionately. Better incomes to the small and poor farmers (of which much will be spent on food) and rising employment generated from such incomes, form a better basis both of finance and of self-respect from which social services can be improved; and such income rises flow mainly from agricultural output, strengthened by physical infrastructure (roads, water-control, etc). The Paper by Uma Lele emphasises this point and also warns that pro-

jects which collect up many functions from various Departments often find difficulty in handing them back when the project phase ends.

A third point of fairly wide agreement was an emphasis on the different role of extension services as between the earliest phase of changing a traditional system, and a phase when farmers have become far more sophisticated and cash-conscious. The earliest phase demands the ability to listen, gain trust, stimulate groupings or organisation among farmers, with a fairly simple technical input. A strong case can be made, in some areas, for using members of the farming community itself as leaders and extension officers provided that they are well supported with information and periodic short training. The later phase demands much better technical and farm-management skills, as farmers ask for more specialised advice. Since whole countries, or even provinces, almost never move all together to higher levels of technical performance, the technical training of extension staff is virtually wasted in some areas (except for 'diagnosis', which may require a temporary but special skill input) and becomes quite inadequate in others. This would imply much more flexible management and deployment of field staff, related to their local task.

Finally, with the exception of some members who felt, for various reasons, absolutely committed to the co-operative as a generally applicable tool of organisation, there was considerable support for smaller. need-oriented farmer groupings (eg to run a tubewell or finance local storage), partly as a means of focusing real local cohesiveness, partly to avoid the danger (mentioned above) that larger, whole-community organisations are apt to replicate the power-cum-wealth-dominated structure of the local community as a whole. While there was 100% support for co-operatives based on local enthusiasm and acting as a help to the smaller men in their struggle for more equal access to bencfits, there was far less enthusiasm for co-operatives used simply as a convenient tool for distributing government services, particularly where membership is semi-compulsory by making it a condition for the receipt of such (often subsidised) services. Clearly, the smaller and less formal groupings, where they succeed, might well develop into more formal co-operatives, as their experience and self-confidence increased; by that time the membership might well be able to stand up better to any threat of exploitation.

In general, the Seminar as a whole seemed to move towards the view that agricultural development, if it is to come, must come primarily from the aroused energies of farming communities, and that the role of government lies mainly in presenting viable opportunities, in stimulating and supporting farmer groups, in investment where (as nearly always) the physical environment is a constraint, and in necessary technical or social control. It may well be true that some governments *de facto* do not wish such development from below. But until

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the organisation of extension and supply services, even at the existing level of investment, at least avoids more of the proven mistakes and inefficiencies, it is premature to attribute all failures to political obstruction, save in countries where political forces are continuously and pervasively designed to prevent progress. In most countries the opportunities for advance have not yet been exhausted.

This stress on the development of local capacity and the need to husband scarce resources of government administrative and technical manpower chimes well with one central thesis of Uma Lele's Paper on major projects undertaken by the World Bank in Africa. The Paper emphasises the danger of building up a structure of skill and administrative capacity in a project (often with Technical Assistance help) which could not be replicated on a wider scale, especially if the project does not have time to build up equivalent skills, training output and experience from within the country concerned. Lasting development will only come from the growth of such local abilities.

Finally, the 'job descriptions' for extension staff, so often written at conferences, often imply a volume of staff with a quality of technical knowledge, social skill in communication, diligence, devotion and range of imagination which the richest countries would be proud to possess. In practice, those governments may fare best who find the best way of using the simple staff at their disposal, and who elicit and encourage from the community itself the practical abilities of its members for local action in the local circumstances of their own life.

# **IV The Commercial Function**

The supply, distribution, selling and buying of farm inputs, the financing of this process, and the processing, storage and marketing of farm outputs is, *prima facie*, an important element of trade and commerce; and most of the classical economic studies of these processes are, with modifications, applicable. Questions of prices, margins, wholesale and retail distribution, the skills required of the trader, and the conditions under which trade can prosper to the mutual benefit of both buyer and seller, have been exhaustively studied.

The reason for two reservations in this statement ('prima facie' and 'with modifications') arise from the fact that a very large number of governments in developing countries have rejected all, or part of, the concept of the free market, on the grounds that it is inequitable to the producer, and especially to the small producer; his purchase of inputs costs too much, and his outputs sell for too little. Government intervention therefore takes place at two main points; to subsidize inputs, either by price subsidy or by subsidised credit, or by both; and to displace the trader-purchaser by forms of purchase by government or by publicly-controlled marketing boards, or through a co-operative trading system. The attempt to construct publicly or communally managed trading systems thus inevitably forms a very large part of the agenda for discussion of this whole topic. Most of the very varied issues discussed in fact concerned a single question — how efficiently do these managed systems work, what are their real total costs to the economy. by how much is the producer — and particularly the small producer benefited by them? In more detail, there are also the questions, which type of managed system works best (in certain conditions), and at what point or points in the whole process is government intervention most effective in both minimising costs and maximising benefits?

Resources have to be allocated in an orderly way. If the free market is ineffective in some sector, government has various choices of where and when to intervene. There are also choices in the method of intervention, from total take-over to relatively minor adjustment and supervision.

It may be convenient to discuss the work of the Seminar under six main headings: 1) the open market; 2) government purchasing; 3) co-operative trading; 4) fully integrated management of inputs, credit and output for single crops; 5) financing (credit, etc); 6) supply (fertiliser, pesticide) and storage, and to deal with both Papers and Discussion for each heading.

### The open market

Lord Seebohm, in his Plenary Address, after a wide definition of the commercial function in development, set out extremely clearly the sort of conditions in which a commercial bank or trading company could invest with prospects of reasonable return on capital and reasonable prices to producers — conditions in which the size of marketable surpluses, the accessibility of producers, and the quality and uniformity of the product (three vital factors in the costs of buying) inevitably played a large part.

At the lower level of small-scale commerce, however, traders can show quite a lot of enterprise in conditions which would not appeal to the larger commercial units. Some members felt that Lord Seebohm's statement that such traders were useful in static conditions but not for dynamic change was not applicable at this level. F. A. Wilson's Paper described some interesting strengths and weaknesses in the marketing of fruit and vegetables in Kenya; and Miss Chen mentioned the continuing significance of the free market for minor produce in mainland China.

There was discussion in some groups on this subject, and more than one was inclined to take the view that, where traditional trading systems exist (and it is rare to find no form of interchange), the first step should be to support them and make them both more efficient and more competitive. It is at this point that improvement in weights and measures, access and transport, market buildings, and effective regulation were primarily discussed. The point was also made that many traders are operating on a very humble scale; trade provides employment for some of the poorest members of the community. The private trader is free of cost to public funds; his labour costs may be lowered by using unpaid family help; he may be selling to as well as buying from the farmer, and in general his unit costs may be lowered by the wide range of miscellaneous jobs he can do. Some much needed research on the social position and functions of such traders would be more useful than a blanket condemnation.

There are, unfortunately, many areas of the developing world where producers, in a mainly subsistence economy, are not served by allweather roads, and produce extremely small individual quantities, of uneven quality, as surpluses for sale. Since these are surpluses over subsistence needs, they also fluctuate from year to year. Where the products are also perishable, it is hard to see how any improvement can be made on a very local market, to which goods come by headload. With less perishable goods, systems of locally licensed buyers, gradually amassing sizable quantities, destined for a more central purchaser (as in much West African palm and cocoa trading) become feasible. Beyond this, a process of simultaneous 'opening up' the area by road and intensive extension effort to develop a worthwhile cashcrop appears to be the next step. At this point, sub-systems of shared transport and possibly storage, perhaps through forms of co-operation, may be important.

# Government/marketing board operations

There was little new to say here. The Paper by Peter Stutley outlined well the assumptions and aims which commonly govern state action in this field, the tendencies to be drawn further and further into the procurement and marketing field, to understate the full real costs of these operations, and to use marketing board surpluses as a convenient way to transfer resources from the rural producers to investments in the modern sector (which is apt to be a transfer from the poor to the rich). The Papers by Peter Schran and by Miss Chen both gave the impression that state operations on key crops in mainland China, where the government has complete control of the marketing of the crops concerned, was operated effectively through a fairly simple structure of purchasing, relying heavily on the integrity and efficiency of the cadres at Commune level. What the costs, or the returns to the producer, or the degree of transfer of resources may be in this system is extremely hard to estimate, since payment by 'work-units' can be varied in real content, and the system does not appear to be costed in monetary terms.

The two Working Papers by Mrs Harriss gave a useful glimpse of the complex situations which arise when government makes a partial intervention in the business of fertiliser distribution, and in the attempt to subsidise food prices to a class of the poorest consumers. Partial interventions, often in times of scarcity, in a market system which is *not* fully controlled, liable to wide fluctuations and sometimes not fully understood, are likely to run into great difficulties.

Outside China, it would seem that the more successful and efficient systems are usually based on single crops, where specialisation of staff is possible, and on crops of fairly high value which will cover the rather high bureaucratic management costs. On the other hand, central handling of staple cereals, where the farming system is not specialised to grow these primarily as marketed ('cash') crops, is seldom efficient, constantly bedevilled by large fluctuations in output (for weather reasons), and leakages of the crop into local black markets and other uses. It can, however, be argued in favour of official procurement of staple foods that government, as a buyer of last resort, helps to reduce fluctuations, and can use its operations to acquire famine reserve stocks.

# **Co-operative methods**

A powerful plea was made in the Paper by Gavin Green for the marketing co-operative as the best tool for handling not-immediatelyconsumable cash crops, illustrated mainly from experience of East Africa. In the detail of this Paper is found a heavy emphasis on management training of the staff, on accounting and audit, and on proper payment and career prospects for the staff. It is certainly difficult to know whether to take the too-frequent failures of co-operatives as a sign that too much is being asked of small farmers, at their present level (in a given country) of education and commercial aptitude, so that simpler or more officially managed systems are needed; or whether to regard the failures as a process of learning and advance which is inevitable, and to point more resolutely to the successes (which are considerable) and to the basic logic of the system.

It does, however, appear to be true that, where there is a fairly well developed indigenous private trading system, co-operatives have extreme difficulty in competing successfully with it, and particularly in the case of staple cereal crops. Even where co-operatives are the approved source of subsidised credit to farmers, it has certainly been true in the Indian sub-continent that far too often the crop has been sold to private traders, making the credit-debt very hard to recover. This may happen not because of the price offered by the trader, which may be lower than the co-operative price, but because of the convenience of an immediate cash payment, at the farm gate, as against a much delayed co-operative payment for a crop delivered at the farmer's expense to a co-operative buying point. The final rapporteur's statement on this issue stressed the difficulty of handling staple foods and the greater success with crops requiring processing, with a single (domestic or international) marketing channel, and made a plea for more realistic expectations of what co-operatives can do, simpler tasks, more training of staff, and acceptance of a longer period of learning and build-up before looking to substantial success.

## Integrated single crop management

The Papers by T. A. Phillips and M. P. Collinson, K. Padmanabhaiah, Tunku Mansur Yacoob, R. H. Thakar and that of Dr. Waheeduddin Khan<sup>1</sup> refer to management systems covering tea, sugar. tobacco, milk, rubber and palm oil production under various authorities (Commonwealth Development Corporation, co-operative, Federal Land Development Authority, company or public board). The systems could be regarded as an evolution from plantation systems, under the pressure to preserve smallholdings and to harness the self-interest of the smallholder (as contrasted with the plantation employee) in improving the volume and quality of output. In all cases the system consists of a central management organisation providing to growers services which frequently include research, provision of seed or plants, credit, technical advice, purchase, grading, processing and sale. Not all provide every one of these services. The key factors in this system are: 1) the

<sup>&</sup>lt;sup>1</sup> In Guy Hunter and Anthony Bottrall (eds.) Serving the Small Farmer. Croom Helm for the Overseas Development Institute, London, 1973.

co-ordination of management in a single efficiently run centre; 2) total control of the purchasing and marketing of the crop; 3) services, incentives and supervision to the growers, and a considerable degree of farmer discipline, without which the timing of deliveries and the quality and uniformity of the product to satisfy market requirements cannot be maintained. The discipline is, of course, most easily ensured in monopoly conditions.

There seems little doubt that these systems have had the highest degree of success of all the tools of agricultural development. While the element of monopoly could be disadvantageous to growers, in fact it is relatively visible and easy to control by government. (Governments do not always apply the same critical eye to their own monopolies.)

Only two points require special mention. First, concentration on a single crop, when the grower may have a mixed farm (eg growing a food crop or another minor cash crop), may at least postpone a stage when the productivity of the farm as a whole, and the allocation of land to various purposes, is properly considered. Second, management costs are fairly high, and this makes such systems difficult to apply to low-value food crops. However, the fact that the full costs of unco-ordinated management (government extension service, subsidised credit, private marketing, government research station, etc) are seldom added up realistically, for comparison with costs of the integrated system, must modify judgments of cost.

No detailed suggestion for the extension of integrated systems of this kind to other types of crop emerged from the Seminar, probably because the key conditions would not be satisfied. But, within these conditions, there is doubtless room for geographical expansion.

## Financing inputs and farm investment

Four Papers to the Seminar deal with this subject — by J. C. Abbott, on the subject of credit to small-scale and traditional livestock farmers; by F. A. Wilson, on the experiments in credit from commercial banks to farmers in Zambia; by J. D. von Pischke on Kenya co-operative savings schemes; and, finally, by A. F. Bottrall, in his very valuable and concentrated review of some of the main conclusions of economists and others (including the massive *AID Spring Review*) on the costs and benefits of institutional credit schemes, with additional comments on savings, private sources of finance, and the role of banks.

This subject by itself would have been worth a full day's discussion: but the Papers are of very high quality, and participants will be able to study them at leisure. The final report by Uma Lele concentrated on a few main points — that short-term credit is costly and ineffective unless a viable and profitable technology, which small farmers have the ability and the will to adopt, is effectively available to them; that interest rates must cover the full costs of credit administration and that subsidised rates not only distort the rural money market but can act to the positive detriment of the smaller farmer in a number of ways (mostly mentioned in Bottrall's Paper): and that realistic rates will still reduce the cost of credit to the farmer in cases where extortionate rates have previously been charged. These remarks apply particularly to short-term (seasonal) credit; for loans over periods of several years, where substantial assets are likely to be involved, and where individual loans are usually much bigger, rates can often be lower, and may have to be if the investment is still to be profitable to the borrower.

Over the years, very large sums indeed have been poured out through official credit schemes, with a bad record of value for the resources committed. It is timely that this Seminar should have looked with an extremely critical eve at the assumption, so widespread among donors and administrators as to be almost automatic, that institutional, often subsidised, short-term credit is a first necessity for inducing small farmers to adopt innovations. It may well be the very last resort, when it has been proved that savings are impossible, that there is no cash flow in the lower levels of the rural economy, that family systems or traditional arrangements for loans do not exist, that the proposed innovation is readily acceptable and can be properly serviced by timely inputs, that less expensive inputs could not give small farmers a considerable gain as a first step-in a word, that it is simply and solely the lack of £15-20 of crop-season credit which is preventing adoption. These conditions will not readily be fulfilled in many parts of the developing world. Where they are fulfilled, it is unlikely that farmers would reject crop-season credit for two acres' worth of inputs at a six month interest rate of 10% or 12%. If the innovation is worth the effort, it should very quickly put the farmer in a position where he is both creditworthy, less dependent on short-term credit, or able to use more substantial credit for investment in still higher productivity.

# Supply and storage

Two Papers on supply of inputs — by D. J. Halliday on the FAO fertiliser programme, and by C. J. Lewis on the costs and results of product and market development enterprise (pesticide) — provided the Seminar with somewhat contrasting implications. The fertiliser programme was, *de facto*, heavily subsidised, the initial supplies being donated (by donor governments or by the industry) and sold on credit terms ('at a moderate or sometimes purely nominal rate') so as to provide a revolving fund for subsequent fertiliser purchases. Further, areas chosen for the scheme (as in the case of the Indian IADP) were the most favourable, criteria of choice including 'presence of cap-

able extension officer, favourable attitude among farmers and local authorities, easy availability of banking services and existence of favourable infrastructure (eg all-weather roads, post office, etc)'. These criteria may have been wise, and have no doubt had a good effect in spreading the knowledge of fertiliser use; but they limit the lessons to be learned about agricultural development in circumstances which are so often far less attractive.

In contrast, the campaign described by Mr Lewis was a carefully costed attempt to measure the effort required to market, at an economic price, a package of pesticide or herbicide measures in four Blocks of one District in India. Although the indications were that a five-year effort might produce results which would be commercially viable, the investigation proved the very large effort of planning and expert advice necessary to cover even a part of one of India's 325 Districts.

These two Papers go to show just how much time and patience will be needed to achieve the conventional 'Green Revolution' over a more substantial proportion of the developing world, and particularly among the smaller farmers. It must be added that 'single item' campaigns are bound to be far more doubtful in results than programmes which, from the start, deal with the whole farming system and seek to loosen its key constraints; for neither fertiliser (as was so well shown in the Minimum Package Programme of Ethiopia) nor pesticide may be the key to agricultural advance in many areas, which may yield to water supply, or stall-fed animal production, or a road, or a price, but more usually to several factors in a critical combination.

As to storage, a short challenging Paper by Dr. Polly Hill illustrates how intimately traditional on-farm storage is related to the household economy and the process and timing of marketing crops; and the Paper by P. E. Wheatley and D. Adair, dealing more widely with storage and processing problems, also emphasises the need for research in developing countries on the improvement of these methods. There is often no local agency concerned with the improvement of existing storage or processing technology or the introduction of new methods. To add to the worries of plant breeders, some members suggested that 'storeability' should be, where it is not already, one criterion in selecting strains for release to farmers.

There is little doubt that storage is a factor of prime importance to the small farmer's income; that better storage space for small traders is much needed; and that, in terms of total food supply, reduction of crop losses in the field, in transport, and in storage, are major issues. In some areas local storage systems are clearly within the task of extension, as they probably should be. But this is an expert subject, and some additional training is required within the extension service, in detail for a specialist officer and on general principles for all staff.

# **V** Administration

Although the structure and style of government administration, and the desirable quality and role of both its local levels and of local representative organisation, are indeed well-worn topics, some extremely worthwhile discussion took place on these subjects, no doubt partly due to the evenly high quality of the Papers and to the shapeliness and strategic level of the Plenary Address (by B. Sivaraman). The criteria of relevance to the Seminar as a whole used in this section are relevance 1) to earlier discussion; 2) to the movement of opinion; 3) to political factors, and 4) to choices of action. The section is divided into; issues affecting central government; local planning, management and politics; effects of place and time; major political issues; and practical implications.

# The central level

What is done by the centre, and what is demanded by the centre, affects and often constrains what can be done at local level. Since so much of the discussion of earlier issues emphasized the need both for far better knowledge of the field situation in its realities (farming systems, etc) and far wider discretion to adapt action to these realities, it was natural that much discussion was directed to loosening the grip of the centre. In terms of programmes, there was an emphasis on broad guidelines, to be turned into programmes more locally, and a strong aversion to centrally-decreed targets. In terms of finance, a similar emphasis on broader headings and limits, with less constant upward reference for authority to incur expenditure within already agreed main headings; but the importance both of audit and of annual budgeting locally, as a normal exercise of prudent administration, was also stressed. The Paper by K. Davey was a useful check on overenthusiasm. There was a general sense that demands from the centre for statistics (quite often due to the over-anxiety of donors and also of planners) should be much reduced: whether in industry or in government, the judgment of what is the absolute minimum of key statistics is a fine art, too often neglected.

In terms of structure, the tendency to top-heaviness at the centre was countered by two main suggestions—first, that very strong reasons are needed to justify the creation of special new departments, authorities or boards to meet apparently new needs, rather than modifying or re-invigorating existing ones; and, second, that conditions of service, incentives and career rewards for field staffs need to be improved. Further, the tendency for government to accept — or invade — functions which could be carried by other agencies (eg commerce or local government) should be sharply restrained. In Africa particularly, the

temptation to believe that, if something needs to be done, government must do it, is a legacy from relatively recent colonial government in societies which, even by the time of independence, had not generated much of the indigenous manpower and experience for non-governmental initiative and management, whether in strong modern institutions of the community or in the major units of commerce and industry. Finally, it was agreed that in certain fields central rationing of resource-use would have to be accepted, and in certain fields (eg conservation, disease control) an element of compulsion would be needed, with the appropriate delegation to field agencies.

## The local level

It was suggested that, ideally, the outline planning of local agricultural (and associated) programmes should be done at the lowest level where a varied administrative and technical staff of adequate training and experience can be provided — this level can be called 'the District', assuming there to be a lower level ('the Block') at which the final detail and field operation is executed. Papers by C. Andrade and H. B. Fisher on regional planning, and by A. F. Mercer on physical planning for the large Lilongwe project refer. At this point issues of interdepartmental 'co-ordination' always arise. At least one discussion group made the forcible point that co-ordination is apt to be considered only at the moment of implementation; and there are in fact insuperable difficulties when it is discovered — as is almost inevitable - that the co-ordination of departmental policies at the headquarters planning stage had failed to foresee the multiple ways in which even broadly co-ordinated plans, made at a distance, are found, by the test of local reality, to have unexpected inner implications of conflict. The answer suggested is that, as far as is humanly possible, planning should be done by those who have local responsibility for implementation, and adjusted within this working-team relationship. Co-ordination, as has long been realised in large industry, springs from the requirements of the facts and of the science (engineering, water control, agronomy) involved, not from the 'authority' of a generalist 'co-ordinator' (which is always resented), save in last resort or emergency situations.

It is here that the Papers on management (D. Belshaw and twin Papers by R. Chambers) were particularly relevant. Although there is considerable and valuable detail in the suggested schemes for improving field-level administration, their emphasis is essentially on a style of management which places far more stress on accurate job description, achievement incentives, feed-back and repeated progress review; Chambers suggests significant differences in style between positive stimulation activities and policing and controlling activities. Some of the extension management systems have been tried in the field with encouraging results.

Alongside these official systems the Seminar gave considerable thought to local representative and political action. There was, on the whole, a fairly wide consensus in favour of the bolder policies of creating, and supporting with both authority and tax-raising powers, effective local political representation (the Paper by R. N. Haldipur refers). The groups were not unaware of the objections of administrators against 'political interference', of the dangers of party or factional politics, or of the probability that priorities as seen locally are not always consonant with priorities as seen at the centre. On this last point there may even be a gain. For a multitude of small investments, meeting clear local needs, may very easily have a better benefitcost ratio than a single, large, centrally conceived scheme, and will at least tend to give rural areas a better and more widely dispersed share of investment capital. What was not taken fully into account at this point in the argument is a very serious issue raised by both the Sivaraman and the Hunter Papers — that local elected bodies tend to be captured by local élites - of which more later. One further, and perhaps decisive advantage of local political participation is that local enthusiasm is better aroused thus than by officials: and that coercive measures (see above) are infinitely easier to enforce if they are backed by local leaders.

# **Time and place**

As always, the Seminar was nervous of generalisation over such wide disparities of situation and stage of development. Governments short of trained personnel may have to adopt simpler, more authoritative systems of administration, and attempt less. Extension services for primarily subsistence communities will differ both in content and style from those serving more technically sophisticated farming areas. Government organisation, which may have to be heavily concentrated at first on local initiatives, persuasion and services at field level, will be relieved of some of this as farmers organise and positively seek innovation, and as commerce develops to meet increasing demand and increasing surpluses: government action will then be freer to concentrate more on central supply and control functions and more sophisticated research and advisory service.

## Larger political/administrative perspectives

Mr. Sivaraman's Plenary Address led the Seminar, by logical steps, to confront directly two of the principal difficulties of the whole

Seminar. The first is the difficulty of delivering services to millions of small farmers. This he faced more confidently and more simply than is usual. Clearly, personal service to every farmer by an extension agent was impossible. Second, in India the larger farmers were already getting adequate service, from both commerce and government. Since the smaller men must be served, they must be encouraged to club together in groups large enough to make service practicable, and possibly even to employ their own extension agent. For this purpose, India established the concept of Farmer Service Societies at the local level. The reward to farmers for forming groups will thus be a much better service, supported by government.

The second difficulty is political. In a society such as that of India, using universal suffrage under reasonably free conditions, the huge majority of the poor can make their voice felt at the level of national government, from their sheer numbers. Central politicians and the central administration may therefore seek to help the poor and powerless. But at the periphery, at village level, a local élite of the more powerful and rich has such influence that, in a multitude of ways (partly patronage, partly intimidation, partly manipulation) they can dominate local elections. The local officers of the administration, by themselves, are not easily able to break through this ring. It is therefore through less formal, non-elected groupings of small farmers, for the technical purposes of agricultural innovation (including inputs, credit and marketing), stimulated and supported by official services at local level, that direct assistance can be given.<sup>1</sup>

We are left with some possible conflict between this solution and the earlier consensus in favour of elected, tax-raising, and executive local authorities, in which the same élitism is liable to be manifested. The difficulty might be alleviated in one main way. If the informal groups develop in success and self-confidence to a point where they can widen their functions and assert themselves more strongly, a multipurpose elected body would be more democratically balanced, with the advantage of including some of the richer and better-educated members of the Community who, after all, have much to contribute, including experience of the wider world, and have been regarded as leaders, even if somewhat exploitative ones, in the past. This pattern approximates very closely to the analysis in J. M. Texier's Paper.

This would lead to a suggestion that more formal, whole-village, elective bodies might (where choice is possible) be established at the second, rather than the initial, stage of development, giving time for the emergence of a more equal balance within it.

<sup>&</sup>lt;sup>1</sup> The argument repeats the discussion, on the same general issue, as between co-operatives and smaller need-oriented groupings.

## Implications

The consensus was clearly towards a more decentralised administration, and towards more vigorous and varied experiment with types of small-farmer organisation, better management of field services and more enterprising local planning to fit local conditions. In this connection it is clear that a great deal more research is necessary, for example, on local farming systems, and through experiments and evaluations of different approaches to farmer organisation, including records of the performance of the Small Farmer Development Agency in India described in the Paper by Shri Venkatappiah and of Farmer Service Societies as they become established. We need also better and more detailed work on the exact possibilities of local planning (at about District level) and on the degree of discretionary power which can devolve from the central administration and from the central planning organisation, whatever its form. The work of Chambers and Belshaw on the management of field implementation needs a complementary input on programme planning, with the same depth and close reference to practice. Trapman's small book on administrative structures<sup>1</sup> opens up several possible fields of further research — and, indeed, the Ford Foundation's Indian work is also highly relevant. The experience of the Special Rural Development Programme in Kenya, upon which Trapman drew, could be more fully analysed, since the programmes in individual areas were preceded by an extended planning phase, in which local opinions and suggestions were actively sought. The present estimate is that the local contribution was disappointing, possibly because staff were below establishment, overworked and too frequently transferred. Much of any success which can attend efforts to fit programmes better to local areas depends upon overcoming these difficulties and defining far more closely the exact contribution which must come from local and from central sources.

<sup>&</sup>lt;sup>1</sup> Christopher Trapman, Change in Administrative Structures: A Case Study of Kenyan Agricultural Development. Overseas Development Institute, London 1974.

# **VI** Conclusion

## The general field — subsistence and market

In the opening address to the Seminar, Professor Bunting laid an overriding emphasis on 'sales off the farm', almost as shorthand for the main concern of agricultural development.

In a great number of ways this remark was illustrated in the proceedings of the Seminar. Again and again, some of the most hopeful methods of organising production, credit and marketing had to be qualified by a rider: 'This would not apply to staple foods largely for subsistence consumption with only a very small, locally sold, almost unprocessed surplus'. Indeed, if we look at the broad history of agricultural development in Africa and Asia over the last half-century, the major successes would surely include the Gezira cotton scheme, the development of tea, sugar, tobacco, cotton, coffee, and dairy schemes in East Africa, and of cocoa, palm products and groundnuts in West Africa; rubber and palm products in Malaysia; a similar range of commodity production schemes in South Asia, though without the emphasis on coffee or cocoa. A variety of types of production organisation are included in these successes — sometimes a major, centrallymanaged scheme, under a company, co-operative or board, but sometimes (cocoa, milk, cereals, African-grown coffee) from individual small farmers. The common factor lies in the highly organised marketing systems.

This list of successes has not yet mentioned the Green Revolution the success in staple cereals, wheat in Mexico and the Punjab, hybrid maize, and the re-invigoration of rice-growing in South and South-east Asia. Here, apparently, is an unusual success in staple cereal foods. But, most noticeably in the case of Punjab wheat, and to a lesser degree in the case of rice, these successes come, in the main, from market-oriented farmers with substantial marketable surpluses from medium- to large-sized farms, although a small fraction of three-four acre farmers were included. With rather larger 'small' holdings in parts of East Africa (ie a lower percentage below ten acres than in India) the improved maize has penetrated lower down the scale.

This, then, is 'cash-crop' production, even where a staple cereal is involved. Far less dramatic, and often almost negligible, is the success in improving staple food crops grown for subsistence, where at most a small proportion of output enters a multitude of free-market channels. Yet the great majority of the very small farmers are in fact primarily subsistence farmers, and constitute, with the labourers, the core of rural poverty. The Green Revolution tackled this problem on the assumption that the subsistence farmer could be made into a market farmer by the same capital-intensive system of high inputs of seed, fertiliser and protective chemicals, supplied on credit, which worked well enough for large farmers growing for the market. Although technically these innovations are neutral to scale, no doubt we should have seen much sooner, and more clearly, that for a number of reasons this was a false assumption. To consider credit only, it is unlikely on the face of it that a farmer who was capable of providing the staple food for his family at virtually zero *cash* cost (seed kept from year to year, bullocks fed on crop residues and grass, dung or green-manure fertilisation, low-yielding but disease- and drought-resistant varieties) would be willing to spend precious cash to grow a crop *three-quarters of which he and his family would eat:* and, if he did take a loan, it was unlikely to be easily recovered. This would not apply to the fifteen-thirty acres often held in the Punjab, of which a small proportion only is needed for subsistence.

In the light of growing concern for poverty and income-distribution, and now, as the World Food Conference shows, a sharp anxiety as to the danger of famine precipitated by population growth and the inadequacy of world food output and stocks, the problem of the semisubsistence farmer and of the approach to him assumes urgent importance. Will higher cereal prices really induce him to treat his food crop as a cash crop? In view of high fertiliser prices (there is also an energy crisis) is it possible or even desirable to continue to persuade him to reduce the share of land devoted to food (by new, fertiliser-using technology) and devote more to a non-self-consumed cash-crop such as rubber, cocoa, jute or kenaf, silk, tobacco, cotton, which may also require chemical inputs? Uma Lele's Paper emphasised the danger to nutrition of an excessive concentration on cash crops and the perhaps dangerously high differential price incentives in favour of non-food production.

Thus, one major residue from the Seminar discussions relates to the techniques to be recommended to small, semi-subsistence farmers, to the incentives which can be offered to them (prices of inputs and outputs), to the organisation and services which can be provided to them, and to the advice which should be given to them — to produce marketable surpluses of staple foods or to minimise their food acreage and to concentrate on the other 'cash-crops' which, in the past, have been the engine of advance from a subsistence to a market farming economy. And here, despite world food shortages, the very smallness of their holdings tends to point to intensive cultivation of the highest value crops, if farm income is to be markedly increased. Will cereals become a high-value crop? If they do not, and if famine really threatens, will the small food producer retreat into growing food without chemical fertiliser, simply for his own survival?

A second major residue, whatever advice is to be given to small farmers, relates to the means of giving it and supporting it. Here the

Seminar traced the issues through their whole sequence — from the ways of identifying these needs, through the organisation of research better calculated to meet them, to the training and deployment of field staff, and to the stimulation of farmer-groupings through which the field staff could work. As discussion proceeded it became increasingly clear that the field staff must be able to cope with different situations needing different skills. At their extremes, one situation is the virtually untouched traditional system, requiring one type of approach; the other extreme is a far more sophisticated situation, needing less stimulation but higher technical advisory skills. These two situations may coexist not only in time but, to some degree, in place; and although the small farmers may well be moving towards the more commercialised end of the scale, this movement may be slow and irregular. Field staff will have to be organised, trained, and deployed to deal with both types of farming, in whatever proportions they may exist in a given area and time.

The third major residue concerns commerce. In the orderly allocation of resources the extremes of choice are totally bureaucratic and totally free market systems. But there are intermediate choices in the real world. The Seminar clearly recognised a responsibility on government to ensure that small producers had a fair opportunity both in buying inputs and selling outputs. Yet many members, recognising the multiple difficulties of widespread petty commercial operations carried out through the public service, felt that in many countries a private trading system should be more readily welcomed as an important resource which can reduce the load on government, and that more attention should be given to improving the facilities of the market, to more efficient regulation and inspection, and to improved credit facilities for buyers and stockists and for storage. The 'informal sector' has at last been recognised as a major source of livelihood and employment, and much of this sector rests on small-scale trading, processing, and services.

Finally, there was considerable discussion, in differing contexts, of the need for certain key measures of discipline. As population pressure mounts, so also does the need to conserve and even ration resources of land, irrigation water, grazing, forest cover; as farmers move into a market system, so do the commercial disciplines of regularity and quality of production, and of disease-control, become more necessary. The design of such disciplines, and of ways in which they can be made acceptable, requires a good deal more research and discussion.

## The state of the art

It will have been clear to anyone reading this Summary that, in studying the implementation of agricultural and rural development, it has been necessary to traverse the boundaries of several disciplines political science, sociology, public administration (with a dash of management theory) and economics, not to mention the physical and biological sciences and the unifying concepts of ecology, including its human component. It is partly because agricultural development involves such a wide range of factors that few efforts have been made in the past to find generally applicable guidelines to the subject, or to array the multiplicity of experience in any intellectual order-an order which would give to the administrator rational criteria for choice between the varied courses of action available. These efforts have been made more difficult by the obstacle which all the social sciences have to overcome at their very outset — that all social situations, in the most detailed analysis, are in certain aspects unique. While the need for generalisation is compelling - for choices must be in some degree rational — its dangers have been heavily stressed, and never more stressed than in this Seminar, which might indeed have had as its theme-song that appropriate programmes for agricultural development are both locale- and time-specific.

However, this objection is in some ways more specious than real. For, granted the particular accidents of time and place, all social sciences detect a number of more general principles which underlie the variety of experience and which, used with due caution, can be helpful. It was in order to make a start in suggesting such principles in this subject that the Reading University/Overseas Development Institute joint research programme was initiated five years ago. The Paper on the Reading/ODI research and hypothesis and my own Plenary Address were devoted to this attempt, and they are illustrated, in some degree, by the product of this programme — the book containing six studies by Indian scholars, Trapman's small book on administrative structures in Kenya, and the summaries of work from the Universities of Ibadan and Ife.<sup>1</sup>

In outline, this work suggested that, in choosing an organisational or institutional method (extension, credit, co-operative or other grouping, marketing organisation, etc) four main types of criteria are needed: 1) social (attitudes, capacities and needs of farmers); 2) technical and economic (the physical environment, the pattern and density of settlement, the technology available, and farm economics); 3) the market system; and 4) the administrative resources available.

Of the six studies in Serving the Small Farmer two (by Dr Kahlon and Dr R. Rao) were designed to illustrate the differences of organisation and approach needed at two opposite extremes of development

<sup>&</sup>lt;sup>1</sup> Guy Hunter and Anthony Bottrall, Serving the Small Farmer. Croom Helm for the Overseas Development Institute, London 1973. Christopher Trapman, Change in Administrative Structures. ODI, London 1974.

- the Punjab and a tribal area; one (by Dr Waheeduddin Khan) to compare two integrated management schemes (tobacco, through a company, and rubber, through a public board): one (by P. R. Sinha and S. P. Jain) to examine both the democratic and the development effectiveness of local, elected committees; and two (by Dr Jodha and Professor S. Rao) to compare details of performance in contrasting Blocks. It was noticeable, in Professor Rao's study, how the standard pattern of Indian organisation (input distribution, credit and banks, co-operatives) flourished and multiplied in the Blocks with highest potential and withered to ineffectiveness in the more difficult ones: the former area was ready for the market-oriented treatment, the latter was not. To illustrate the 'locale-specificity' which local planners should take into account, it is interesting that comparison of development between Districts (11 million population) in Dr Jodha's study hopelessly masked wide differences in local performance within Districts: only comparisons at Block level (70,000-100,000 population) were meaningful and showed the real differences.

Trapman's study of Kenyan agricultural administration shows an organisational system having to move into reverse gear to meet changed conditions. From a system of central Boards and Authorities, geared to commercial farming by Europeans on sizable (eg 200-acre) farms, the organisation had to be readjusted to serve twenty times as many ten-acre African farmers; and this readjustment is not yet complete. The two Nigerian studies seem to indicate that a system was adopted for which the administrative resources of personnel and infrastructure applied were far below the threshold of effectiveness in staff/farmer ratio, mobility, distance (access to services) and relevance — thus illustrating the fourth criterion.

While this framework of reference has been of the greatest use to me, and did in fact stimulate discussion in the Seminar, it is clear that much more detailed work needs to be done to refine and characterise categories and types of farming situations, to identify different sequences of development as a whole process (here Scarlett Epstein's Paper is of extreme interest), and to refine both the political and the sociological approach. Here it is not eschatological generalisations ('nothing can be done before the Revolution') which will be helpful, but practical studies of farmer groupings, 'leadership' at village and Block level, the techniques needed (probably less capital-intensive) to assist the poorer, smaller farmers to break out of their limiting and limited farming pattern, the training and deployment of government staff, and the ways by which a market system can be utilised without, on the one hand, sacrificing all social justice, or, on the other, involving government in complete executive responsibility for the multifarious, detailed commercial activities on which improved agriculture depends.

One positive conclusion certainly emerged from the Seminar — that there are many different combinations or packages of organisation and institutions (more than is often remembered) available to meet the variety of total situations; that more flexibility and even inventiveness is needed in this field; and that a better rationale for choosing the appropriate package is needed. It may be that the rationale or theory presented by Reading/ODI work is still at the phlogiston stage; but the point is not to abandon it (and return to fashion) but to improve it.

## **Continued work**

Year by year, despite the massive experience of the last twenty-five years, governments, donors, or consultants set up or approve schemes which have, from the record, minimal chances of success — extension without the necessary investment or mobility, credit schemes of very high cost, co-operatives in circumstances where they have little chance of fulfilling either their social or their cconomic purpose. Part at least of the reason for this lies in the weakness of the development profession. In turn, this weakness can be split into two elements — first, very poor communication between doers and thinkers, and between fields of action or discipline — administrators, engineers, agronomists, physical scientists, social scientists; second, the very absence of an adequate analytical framework through which to guide choices of action. These two weaknesses imply a low level of impact of the lessons of experience on practice.

As a first step towards remedying these weaknesses, an experienced group of Seminar members discussed, amended and finally approved, as individuals, a proposal designed to improve communication across these boundaries of action and discipline, to improve the state of the art, and to improve its impact in action. A good deal more consultation will be needed before practical action can start on this proposal. For the time being, this consultation will be undertaken by the Overseas Development Institute.

# Addresses

- 1. Opening address (Mr. E. M. Martin, US Co-ordinator, World Food Conference).
- 2. Plenary Lecture I: Change in Agriculture (A. H. Bunting, Professor of Agricultural Development Overseas, University of Reading).
- 3. Address on behalf of the International Bank for Reconstruction and Development (Dr. M. Yudelman, Director, Department of Agriculture and Rural Development, IBRD).
- 4. Plenary Lecture II: Effects of political policies (M. P.-M. Henry, President of the Development Research Centre, OECD).
- 5. Plenary Lecture III: Effects of environmental, technical and economic determinants (Mr. J. O. Akinwolemiwa, Controller of Agricultural Services, Ministry of Agriculture and Natural Resources Secretariat, Ibadan, Nigeria).
- 6. Plenary Lecture IV: Organisation and institutions and the Reading/ODI Joint Programme (Guy Hunter, ODI).
- 7. Plenary Lecture V: Organisation in the community: institutions at the grass roots (Mr. Shoaib Sultan Khan, Director, Pakistan Academy of Rural Development, Peshawar, Pakistan).
- 8. Plenary Lecture VI: The commercial function efficiency and social justice (Lord Seebohm, Barclays Bank).
- 9. Plenary Lecture VIII: The agriculture-industry continuum (Professor Bruce Johnston, Food Research Institute, Stanford University, California).
- 10. Plenary Lecture VIII: Administrative tasks for Government (Shri B. Sivaraman, Planning Commission, New Delhi).
- 11. Plenary Lecture IX: Review of the Seminar.

# List of Papers

Sir Arthur Gaitskell: Alternative choices in development strategy and tactics: The Mekong River Project in South East Asia as a case study.

Magdi El Kammash: Agricultural policy in Egypt.

Branko Stancl: Agricultural development policy in Yugoslavia.

Peter Schran: The organisation of agricultural development in the Chinese People's Republic.

Kuldeep Mathur: Organisational consequences of political policy: Agricultural development and administration in India.

Solon L. Barraclough: Interactions between agrarian structure and public policies in Latin America.

W. Klatt: Causes and cures of agrarian unrest in Asia.

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*John W. Mellor:* Economic and social implications and choices related to change in agricultural technology.

Randall Baker: Administration, technology transfer and nomadic pastoral societies.

*M. E. Adams:* Development planning in the Savannah region of Western Sudan.

Hans E. Jahnke and Hans Ruthenberg: Organisational aspects of livestock development in the dry areas of Africa.

Brian Thomson and Guy Hunter: Agricultural development in Botswana: Matching policy to administrative, ecological and social constraints.

N. S. Jodha: A semi-nomadic farm family (from the arid zone of Rajasthan).

D. S. Thornton: The organisation of irrigated areas.

J. B. Downs and N. Mountstephens: Farmer participation in irrigation schemes, Northern Thailand.

John F. Cunningham: The development of locally manufactured irrigation pumps in the Republic of Vietnam.

D. W. Norman: The organisational consequences of social and economic constraints and policies in dry-land areas.

Laurence Roche: Agri-silviculture: a possible alternative to bush fallow in Nigeria.

John W. Thomas: Public Works programmes: goals, results, administration.

Bede N. Okigbo: Fitting research to farming systems: based on observations and preliminary studies of traditional agriculture in Eastern Nigeria.

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Uma Lele: Designing rural development programmes: lessons from past experience in Africa.

T. Scarlett Epstein: Extract from Capitalism, Primitive and Modern: Some Aspects of Tolai Economic Growth.

D. H. Penny and Masri Singarimbun: Economic activity among the Karo Batak of Indonesia.

*Dominique Gentil:* The establishment of a new co-operative system in Niger. *James Gordon:* The role of the church in rural development — work of the Christian Service Committee in Northern Ghana.

*Philip M. Mbithi:* The role of voluntary agencies in rural and agricultural development in Kenya.

Ros Dean and Adrian Moyes: Integrated rural development programmes, Ghimaltenango, Guatemala.

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William M. Dyal, Jr.: Assisting agricultural change in Latin America and the Caribbean.

J. M. Texier: The promotion of co-operatives in traditional rural societies.

B. J. Youngjohns: Co-operative organisation.

Göran Hyden: Co-operatives as a means of farmer grouping in East Africa: expectations and actual performance.

Gary E. Hansen: Agricultural Institutions in Indonesia.

T. H. Shen: Farmer Associations in Taiwan.

Gelia T. Castillo: Agricultural Extension Services and the Filipino rice farmer. John Higgs: Extension in Latin America, with special reference to Ecuador and Paraguay.

E. Bortei-Doku: Communication — the potential bottleneck to agricultural change.

Ronald Watts: The testing of innovations under peasant farming conditions — the Makerere Experimental Small-holdings, Uganda.

G. E. Jones and M. J. Rolls: Planning extension programmes to suit local environments.

A. U. Patel, Q. B. O. Anthonio and L. F. Miller: Institutional and administrative constraints in agricultural development at village level in the Western and Kwara States of Nigeria.

C. A. Osuntogun: Institutional Determinants and Constraints on Agricultural Development (Nigeria).

T. Griffith-Jones: Experience in initiating agricultural change.

K. Subramanyam: Some experiences with agricultural extension and administration in India.

#### IV

F. A. Wilson: The structure and organisation of the internal market for fruit and vegetables in Kenya.

Peter Stutley: Government intervention in agricultural marketing.

M. F. Chen: The organisation of input supplies and agricultural marketing in mainland China.

Barbara Harriss: Effect of fertiliser scarcities in Tamil Nadu.

Barbara Harriss: The effects of the paddy-rice levy on free market prices in Tamil Nadu.

Gavin Green: Marketing Co-operatives in East Africa: the commercial function and management.

T. A. Phillips and M. P. Collinson: The organisation and development of smallholder schemes in the programmes of the Commonwealth Development Corporation.

K. Padmanabhaiah: Development of the sugar Co-operative movement in Maharashtra.

Tunku Mansur Yacoob: Land development and settlement, as carried out by the Federal Land Development Authority (FLDA).

**R.** K. Thakar: Warana dairy project — an integrated programme of intensive dairy development on Co-operative lines.

Waheeduddin Khan: Management systems for agricultural development — two case studies. (From Serving the Small Farmer: Policy Choices in Indian Agriculture, ed. Guy Hunter and A. F. Bottrall).

J. C. Abbott: Devising viable credit systems for traditional and small scale livestock farmers.

F. A. Wilson: Commercial banks and farmer finance — a Zambia case study. J. D. von Pischke: A penny saved . . .: problems and opportunities in Kenya's co-operative savings scheme. A. F. Bottrall: Financing small farmers: a range of strategies.

D. J. Halliday: An industry view of the FAO fertiliser programme,

Cadwaladr J. Lewis: Pesticides in India — a product and market development project.

Polly Hill: A plea for the development of indigenous methods of grain storage in the West African Savannah.

P. E. Wheatley and D. Adair: Small scale storage and processing of tropical produce.

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K. J. Davey: The financial administration of agricultural development,

C. Preston Andrade, Jr. and H. Benjamin-Fisher: Pilot research project in growth centres: an experience in micro-regional planning in rural India.

A. M. Mercer: The role of the agricultural development unit and the service centre in rural development, illustrated by reference to the Lilongwe Land Development Programme in Malawi.

D. G. R. Belshaw: Improving management procedures for agricultural development.

Robert Chambers: Two studies in rural management. I. The management of Extension.

Robert Chambers: Two studies in rural management: II. The management of natural resource conservation.

Ramdas N. Haldipur: Elected bodies and agricultural development in India. B. Venkatappiah: Small farmers: an Indian experiment.

Christopher Trapman: Change in Administrative Structures: a case study of Kenyan agricultural development. ODI.

Guy Hunter: The Choice of Methods for Implementation: Reading/ODI Research and Hypothesis,









