

PLANNING FOR AGRICULTURAL DEVELOPMENT IN INDIA*

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I am, extremely grateful to the Council of the Indian Society of Agricultural Statistics for inviting me to deliver the technical address at this inaugural meeting of the XIII Conference. While fully appreciative of the honour, I am free to confess that I also feel greatly embarrassed. This is because of grave misgivings as to the propriety of my undertaking this assignment and as to my competence for carrying it out. A technical address delivered before an association of statisticians needs to be based on a knowledge of statistical techniques to which I can lay no claim. The only excuse I can offer for having accepted the assignment in spite of this inability is the persistence of the Hon. Secretary of your Society.

In thinking of this address I faced an initial difficulty. This was to find a subject in relation to which I could say something useful but which would also prove of interest to members of the Society. On my turning to him for advice your Hon. Secretary helped me out of the dilemma by suggesting that I should speak on planning for agricultural development. This suggestion, I have accepted. I shall, of course, deal with the subject from the point of view with which I am familiar and in relation to the technique in which I have had training. I can only hope that the address will be found to contain some material which is of general, though not technical interest, to the agricultural statistician.

I shall begin with a brief review of the present position of agricultural planning in India. I hold that there is little of, what might properly be called, planning practised to-day in this country; and there is less of it in agriculture than in most other areas of economic activity. I also hold that in order to achieve any measure of success in planned rapid economic development, an attempt must be made to plan the effort as much as possible, in the domain of agriculture also. My

* Technical Address delivered on 8th January 1960 on the occasion of the Thirteenth Annual Conference of the Indian Society of Agricultural Statistics, held at Poona.

statement regarding the existing absence of planning in Indian agriculture is not intended to suggest that no efforts at development of agriculture, in a variety of directions, are being currently made or that a number of these efforts have not met with success, large or small. Only I feel it necessary to distinguish carefully between generalized developmental effort and specific planned action.

The concept of a programme for agriculture is old and dates, in some respects, from the time of the famines of the last quarter of the 19th century. In their present form most development programmes emerged chiefly during the days of the dyarchy of the inter-war period. More specifically, one may refer to the monumental report of the Royal Commission on Agriculture as providing an important landmark in their evolution. The next stage was the Grow More Food campaign of the war and post-war period and it is, I believe, correct to state that both in the formulation of the constituent programmes and in the measurement of their results little change in the procedures evolved in the G.M.F. campaign has been made by the adoption of the First or the Second Five-Year Plan.

Two features of the approach evolved in the G.M.F. era and continued to-day are important from the point of view of planning. The first is that the programme is conceived of as consisting of a series of independent development activities. The Planning Commission's Review of the First Five-Year Plan has the following:

“The targets for agricultural production for the First Five-Year Plan were worked out on the basis of the results anticipated from the completion of a number of development programmes. These included major irrigation programmes, minor irrigation schemes, supply of manure and fertilizers, production and distribution of improved seeds, land reclamation and improvement, plant protection and other measures for intensive agriculture. For each programme yardsticks of increase in production potential resulting from its fulfilment over given areas were adopted.”

The second feature logically followed from this approach of thinking in terms of the overall effects of nation-wide programmes. It was that the targets are first obtained for the country or the State and then broken down notionally for smaller areas. The Report of the Agricultural Administration Committee (October 1958) contains the following: “The existing practice is to break district-wise the state targets of schemes of land development or for distribution schemes and then break up the district targets into Block and Tehsil targets. The village agricultural plans are attempted on this basis.”

Even for the country as a whole the targets produced through a putting together of the expected results of a number of programmes of development have little significance. For example, it had been expected that the result of the total effort in the First Five-Year Plan period would be evidenced in a large increase in the production of rice, a substantial increase in the production of wheat and moderate increases in millets and other cereals. The actual result appeared very different. Whereas in wheat the general expectation had been more or less fulfilled, the increase in production had fallen considerably short of the expected increase in rice and, on the other hand, it had greatly exceeded expectations in case of millets and other cereals. It is important to note that no satisfactory explanation of this divergence of the overall result from expectation was available.

The Planning Commission, when putting forward the Second Five-Year Plan, evidently realized the limitations of this approach and decided to modify it. The intentions or aspirations of the Planning Commission are indicated by the following extract from the Second Five-Year Plan.

“Despite the uncertainties to which agriculture is necessarily subject, it is important that a more studied effort to introduce a planned approach to agricultural development should be made. The main elements in agricultural planning are:

- (1) Planning of land use;
- (2) determination of targets, both long-term and short-term;
- (3) linking up of development programmes and Government assistance to production targets and the land use plan, including allocation of fertilizers, etc., according to plan; and
- (4) an appropriate price policy.

Each district and, in particular, each national extension and community development project area should have a carefully worked out agricultural plan. This should indicate for villages the targets to be aimed at, the broad distribution of land between different uses, and the programme of development. Within the framework of an overall price policy such as has been outlined in an earlier chapter, such local plans will be valuable steps leading to more careful planning for States and regions and for the country as a whole.”

In fact, however, no effect was given to any of the above proposals contained in the Second Five-Year Plan and the approach and the

procedures established in the First Five-Year Plan period, and earlier, continue to be followed till this day. Reviews of progress of agricultural plans of State carry the calculations regarding additional production potential attributed to individual schemes of development and the main test of plan achievement remains the progress of expenditure. Many years ago the Bombay Grow More Food Policy Committee (1951) attempted to check through field surveys the official estimates of "additional production achieved" both in the total and as attributed to individual schemes and found considerable shortfalls. The Agricultural Administration Committee recorded in 1958: "At present we have a spectacle of financial targets being fulfilled without the proportionate additional production being realized."

The approach to agricultural planning through framing national schemes of development suffers from two major defects. In the first instance, it fails to provide for full use of development potentials. Schemes formulated with reference to general or average situations must prove inapplicable or inappropriate, in varying measures in particular situations. Even more, in special circumstances, the scheme-approach may itself prove wrong and something not even provided for in the general schemes may have to be attempted. The report of the Agricultural Administration Committee devotes a couple of pages to illustrating the wasteful and often ludicrous results of the present approach. The description opens thus: "Agricultural Departments have no effective say in framing policies which contribute to production. In some States, it was felt, that although Blocks were sometimes peculiarly different from each other, the pattern of work and allocation of funds were uniform and rigid." The description ends with the following instance and observation: "In a State over thirty-five lakh of acres were said to be water-logged but no scheme had even been included in the State Plan to effectively check this menace and its adverse effects on production. If adequate emphasis was given to programme planning a serious omission of this kind would not have been possible."

The second equally important defect of this approach is that it leads to a very low degree of correspondence between expectation and achievement in agricultural planning. I have referred above to large divergence between anticipations and actuals even at the national level. The degree of non-correspondence naturally increases with the derived calculations on the basis of smaller and smaller areas.

A plan which attempts a co-ordinated development of all sectors of the economy in all regions and locations must attain a high degree of specificity. It must not only attempt a full use of the potential, but

it must also ensure that the planned development of specific resources in each sector is properly dovetailed with use or consumption in the development plans of other sectors. There is thus need for a large degree of correspondence between expectations and achievements in both production resource plans and area plans if the development process is to move with reasonable smoothness. But this can happen only if the present approach is reversed and the agricultural plan is derived, in the main, through a building up, a putting together of plans originally framed locally rather than through a breakdown of programmes and estimates framed at the national level.

Curiously enough, there appears to be no serious disagreement regarding the need for this change of approach. I have already quoted the Planning Commission's view in this regard. The report of the Agricultural Production Team sponsored by the Ford Foundation writes: "Equally important, improvement programmes should be tailored to fit the condition faced by individual cultivators, village by village, block by block and area by area." The Agricultural Administration Committee puts the matter even more emphatically.

"The Agricultural Departments should evolve plans for increasing agricultural production in every village rather than for executing the targets of distribution of fertilizers and seeds and of executing the various and development schemes in the Second Five-Year Plan. If integrated plans for increasing the production in a village are prepared and executed, the targets prescribed for the Second Five-Year Plan will be taken care of automatically, and even if these targets are not achieved, it would not matter, so long as agricultural production in every village is pushed up."

At the same time a national plan of economic development is much more than a summation of village plans, and no village plan would itself be possible without the general framework provided by a national plan. Planning has, therefore, been rightly called a two-way process. What is meant by this phrase is that whereas the overall objectives and policies, the degree of intensity of effort and the manner of co-ordination of various activities would be determined for the country as a whole or for States, the extent to which and the manner in which effort in any given direction in a region or location will go, has to be determined for each specific situation. Therefore, while the estimate of what should be attempted in each specific situation has to be made in relation to the overall objective and directives, the actual targets set for the total effort can be determined only in relation to the totality of the estimates of possibilities assessed for particular situations. It is only by providing

for such a mutual influencing process that a national plan that is realistic, meaningful and detailed can be framed.

The two-way process in planning is important in all sectors; however, its need is specially great in the peculiar circumstances of Indian agriculture. Where Government directly controls any activity, planning by Government is related, in the main, to the efficiency of Government administrative machinery. Planning in the non-government areas is related to activity on the part of units not under direct control of Government. Such units can be acted upon in a variety of ways by Government. They may be directed, they may be induced, they may be encouraged, or they may be coerced. To the extent that the units in any area of activity are few, so that the various ways of acting on them and their reactions are well established and known, appropriate arrangements can be made in Government policies and plans and the fulfilment of targets, etc., is assured without difficulty. In the sphere of agriculture, however, not only are the production units almost all non-governmental but also they are mostly small and are extremely numerous. Moreover, they are inevitably dispersed over the whole of the area of the country. In Indian agriculture the unit of production, the independent unit of entrepreneurship, is, by and large, the family farm. Each family farmer conducts his business separately and the ultimate results in terms of total agricultural production are the added results of the activities of millions of family farmers all over the country. It is their decisions and their actions that have to be influenced; and planning for agriculture necessarily means planning to induce or influence this innumerable body of individual small entrepreneurs to take the decisions and perform the actions that are expected to give the desired results.

Before going on to consider this central problem of agricultural planning, that in relation to the activities of individual agricultural producers, I shall refer briefly to certain aspects of the other side of planning for agriculture in India, namely, the general framework of policies at the highest level. Clear formulation of appropriate policies and their co-ordination at both the Central and State levels is an essential requirement of planning in any sector. At present there is obvious lack of this necessary action on the part of the Central Government. I may illustrate the resulting situation by reference to a few salient issues. It has been generally agreed, since the beginning of planning in India, that an appropriate price policy on the part of Government is required for the implementation of a plan for agriculture. However, this price policy has been entirely absent. To confine oneself to recent years, the period of the Second Five-Year Plan began with complete

decontrol on the part of Government. Subsequent to the decontrol of 1955, no policy in relation to regulation of prices of even food-grains has been evolved by Government. In view of the rise in these prices in 1956-57 Government appointed a Committee which presented its report towards the end of 1957. No action was taken on the report and even the relatively mild recommendations relating to the socialization of trade in food-grains made by the Committee were not accepted by Government. Almost a year after the presentation of the report of the Committee, Government suddenly announced a decision regarding what was described as State trading in food-grains. This decision has been variously interpreted in the different States and has led to making the total disorder in food policy merely greater than before. Recently, the Union Minister of Food resigned, presumably on an issue relating to policy about food trading and prices, but the resignation has not led to or been interpreted as implying a definitive decision by Government in regard to its food policy in either direction.

To-day the only operative part of this policy is the functioning of zones. The Food-grains Enquiry Committee, which reported in 1957, recognised that zones may play a useful role "especially during the transition period between free trade and physical controls". The Committee went on to note that: "The object of zones is to match deficit areas with surplus areas and thus to minimise the demand on Government supplies and also to eliminate cross-movement of food-grains. But if the zones are changed too often, that upsets the normal trade pattern and creates considerable difficulties all around. The possibility of obtaining modification of the system of zoning also encourages political pressure. Prior arrangements for adequate supplies for deficit areas outside the zones should invariably be made before any scheme for zoning is implemented. Once a zone is formed it should be maintained on a relatively long-term basis so that the trade patterns are not frequently disturbed."

These observations indicate how difficult it is to interpret meaningfully even a measure of policy which in some form or another has continued over the years. The zones instead of being treated as covering a period of transition appear to be the only permanent feature of the present official price and trade policy regarding food-grains and instead of being regarded as relatively fixed they are so changed as to lead exactly to the evil effects apprehended by the Food-grains Enquiry Committee.

Not only is there no intelligible actual policy in operation but also it is difficult to be clear as to the intentions and objectives of

Government. During the last few weeks, for example, Government spokesmen have expressed satisfaction in relation to the current fall in the prices of food-grains. Before general adoption of trade and price control it was universal experience in all underdeveloped countries and it has been the experience in India, in particular since 1953, that prices of agricultural commodities, especially food-grains, tend to reach their lowest level immediately after harvest and their highest a few months before it, and that there is a marked difference in the average levels of prices in the two six-monthly periods. In the circumstances, Government would be entitled to express satisfaction at the fall of prices at harvest only if it intended to break into this cycle of price changes and took effective action to stabilize prices at the low harvest level. In the absence of announcement of any such Government policy and of concrete measures taken by Government to stabilize prices, the utterances of Government spokesmen in recent weeks could only be interpreted as indicating satisfaction at the continued discomfiture of peasant and consumer and at the assured good fortune of traders. The almost deliberate refusal of the Union Ministry of Food and Agriculture to formulate and announce a definite price policy, even after months of cogitation, has great significance in this connection. The situation relating to the prices of agricultural products and food-grains not only exemplifies the inability of the Government of India to make up its mind regarding basic issues in plan policy, but also raises serious doubts regarding the real social objectives pursued by those in authority.

Reference to the problem of the supply of manure and fertilizers may next be made to illustrate the lack of overall thinking and of co-ordination of the activities of the various ministries. The Agricultural Administration Committee noticed in its report that it was generally felt in the States that sufficient fertilizers are not being allotted to them by the Government of India. In view of the central position held by fertilizers in relation to a programme of increased agricultural production, it is difficult to underestimate the importance of adequate supply. At the same time Government have been encouraging the export of groundnut cake. This policy is presumably based on the recommendations of the Export Promotion Committee which reasoned as follows: "We are already producing fertilizers on a large scale and importing that part of the requirements which cannot be met from internal production. Further, molasses could, we are told, be used increasingly as cattle feed." No agricultural expert is likely to agree with this Committee's complacent view regarding the supply of fertilizers, but evidently Government in one Ministry accepts it.

The position regarding groundnut cake provides an interesting study. In Bombay State, for example, the use of groundnut cake as manure was not only advocated by Government but its knowledge and use were actively spread through a policy of acquisition of stocks of groundnut cake from mills and of subsidising the sale of groundnut cake as manure. Within the last two decades, groundnut cake has been established as the most important manure in general use in the State, especially in relation to crops like sugarcane. Evidently, Government or its experts now take the view that the use of groundnut cake as manure is wasteful and that it would be more profitable to export it and earn foreign exchange therefrom. Granting the validity of the changed view, there are at least two steps that Government must take before changing its policy radically. In the first instance, through active propaganda and demonstrations, at least the more progressive cultivators should be induced to accept practices which either entirely dispense with use of groundnut cake or reduce greatly its extent. Secondly, Government must, at the same time, arrange for the supply, in adequate amounts, of substitute fertilizers or manures that its experts recommended in place of the groundnut cake to be displaced. Having some knowledge of the matter, I can say with confidence that neither of these steps has been taken by Government, at least in this State. To-day, though the internal price of groundnut cake has increased greatly, sugarcane farmers continue to use it in almost as large quantities as before and as a result the cost of production of sugarcane has gone up considerably.

This short account exemplifies another extremely important aspect of agricultural planning in India. This is that there is relatively little connection between research and its application on the field. The Royal Commission on Agriculture had noticed this as a basic defect of the Indian situation, and the 1958 Agricultural Administration Committee also records that though the experimental stations in the country have collected scientific information on manurial requirements of crops, this has not been translated into practical application. At the same time, in framing agricultural policies, Government and its experts operate with the results of experiments which they have never bothered to translate into practical application. (The reference to molasses as feed in the quotation earlier is a good example.) It is necessary to emphasize that the responsibility of agencies of Government to prove the results of research in the field and to propagate them is as great as the conduct of research itself. To take action on the results of research experiments without caring to see whether they have been translated into practical application and have been generally

adopted, is to jeopardize the success of planning; because this undermines the confidence of cultivators in research and in the basis of Government policy as being reasonable. The position in relation to supply of fertilizers also emphasizes absence of co-ordinated thinking at the centre and absence of comprehensive estimation of needs of overall programmes. It also perhaps indicates a grave lack of co-ordination between the activities and thinking of such related ministries, as Ministry of Food and Agriculture, Ministry of Commerce and Industry and Ministry of Finance.

I may end this discussion by reference to a problem in connection with which a positive programme of action by Government is needed to make planning in the field successful. This is the problem of the alleged current non-full utilization of irrigation resources. It is obvious that in case full utilization of water resources provided by a work of irrigation is sought early, much more action must be planned and executed than the mere construction of the irrigation work. This planning in advance includes the supply of water to the ultimate user in the field, proposals for the pattern of future land utilization with rotations of crops and appropriate tested varieties established for use in particular circumstances, the technical training of the cultivator in the adoption of the new programmes, and the supply to him of credit, materials, etc., required for them. It involves also the planning and construction, together with the new works of a system of transportation, of market centres, processing plants and other equipment which go with the new crops and production patterns. Of recent years, considerable interest is being shown by those in charge of irrigation works in assessment of economic benefits of the future or of economic performance of the past. In relation to this I would advocate that the approach be not confined to merely economic calculations. In relation to all future programmes, for example, it appears to me necessary to undertake full planning by joint expertise of engineers, agronomists, economists and others, of the region that is being commanded by new irrigation works. Such an effort at preparing an optimum plan for use of water and land resources in the region will bring to surface all the problems involved in the development process, and the resulting quicker and fuller utilization of new irrigation resources will amply repay the expenditure and effort put in.

Ultimately, the plan for increased agricultural production depends not so much on State action as on action of individual cultivators. State action, in the main, creates possibilities of wider, more intensive or better use of land and other natural resources; realizing these possibilities,

in fact, is a matter mostly for action of individual cultivators in the particular areas. Therefore, the basic problem of agricultural planning is the problem of inducing and directing, individual cultivators to act appropriately.

I have already referred to the notable agreement, which exists to-day in relation to the need for a changed approach in the planning of agriculture, the need to plan from the bottom upwards. I shall now turn to a consideration of the central question as to why it has not yet been found possible to give effect to this approach and what appears to be required to give the desire for change a practical shape. This planning from the bottom has to be a two-way process and has to take into account both the physical equipment, with its limitations, and the human resources, with their dispositions and motivations, of the individual cultivator.

I shall consider the requirements of effective planning from bottom in agriculture, for lack of which no progress has been made so far, under two heads: Organization and Knowledge. I may make clear that when I refer to organization I do not mean thereby organization for production in agriculture, *i.e.*, for example, how large or small the unit of production in agriculture should be and whether it is the independent farmer or the co-operative farming society that is the exclusive or the dominant form. I refer at this place to organization of the units of production in agriculture whether individual farmers or co-operatives.

Effective planning presupposes organization of individual production units. The requirement flows from a number of desiderata, among which the more important are the following: It is highly desirable to eliminate erratic or conflicting patterns of behaviour among producers and to attain some uniformity in their actions and procedures, if goals of planning are to be attained without wastes and lags. Secondly, to the extent that an area of economic activity is occupied by numerous small, weak and ill-equipped units, co-ordination of the efforts of all these is necessary to give them economic and technical strength. Finally, when activity in an entire economic field is sought to be guided, it is highly useful to have this done through a relatively small number of organizations of the units in the field. This not only facilitates the two-way process, but also makes for efficient operation through cutting out of considerable external administrative effort and leaving the plans flexible because of the possibility of internal adjustment.

The need for organization and the functions it performs are exhibited in the experience of both capitalistic and communistic countries during the last three decades. The New Deal found it necessary to

depart in radical measure from the principles and prejudices of American State policy and to bring into existence organizations of manufacturers and labourers to carry out the new policy. A whole series of Marketing Boards was set up in the U.K. for bringing order and efficiency into the marketing of agricultural produce and economy in the operations of British farmers. All communist countries had to begin with organizing farmers into various types of well-knit organizations; the series of terms, "the co-operative, the collective and the State farm", or "the Production Brigade, the Co-operative and the Commune" indicate the higher and higher stages of organization required for purpose of communist planning. Non-communist underdeveloped countries have also widely resorted to State-sponsored systems of co-operation for general agricultural development or for particular measures of agricultural reform. This was done in Mexico and in South Italy, in Egypt and in Turkey. And the remarkable performance of agriculture in post-war Japan is based on a complete system of agricultural co-operation. Yugoslavia after its retreat from collectivization operates its planning with the instrumentality of rural co-operatives.

As long as the agricultural producers in India remain as dispersed and unorganized as they are to-day, it is futile to talk about planning in relation to them. The first step in making agricultural planning possible in India is to get agricultural producers organized in such a way that they and their organization become interested in the objectives of planning, say, increased and efficient production and are induced to act appropriately. Also, the organization must be such that planning ends could be met without any great exercise of coercive powers or Governmental authority.

I may illustrate possibilities by reference to the details of operations of a co-operative sugar factory. Here is an organization of a number of sugarcane farmers which by the nature of its business is vitally interested in securing an adequate supply of sugarcane of good quality from its members. Therefore, the organization attempts to do all it can to ensure a rational spread of sugarcane cultivation and its efficient operation. It becomes profitable for the organization to maintain a staff of agricultural officers, fieldmen, etc., to look after the farming of sugarcane by its members. The organization is interested in seeing to it that cane is planted at due season, that the methods used in planting and subsequent operations are the most efficient, that members obtain ample credit and administer adequate dosages of manure and fertilizers, etc., at appropriate times, that the water-supply with farmers is adequate and evenly maintained, that protection is afforded against pests and

diseases, that the quality of planting sets is maintained and, if possible, improved and so forth. Over the years the interest of sugarcane co-operatives in all these matters has led them progressively to take steps, employ staff, and incur expenditure to achieve these objectives. However, the co-operative itself is not an authoritarian organization. Therefore, parallel to the organization of its agricultural officers and fieldmen, it sets up committees for small groups of contiguous villages where leading members consult with officers, fieldmen and members of the Board of Directors and express their views regarding the proper functioning of the organization. The assistance of the Group Committees is available in a variety of ways: for bringing difficulties of members to the notice of officers, for persuading members within the group to adopt innovations, for obtaining co-operation of members in proper alignment of roads, etc.

Organization is needed both to encourage the adoption of good methods and to discourage uneconomic or unsocial practices. One of the problems faced by some sugarcane co-operatives is, for example, the over-extension of irrigation on wells by members. In such case, the apparent short-run interests of members may be in conflict with what is desirable from the long-run point of view. Detailed measurement of the capacity of each well, convincing the members of the undesirability of over-extension and, in the last analysis, even being prepared to sanction coercive measures where a minority appears recalcitrant, have all to be undertaken in such cases. But all this, which is no more than what is involved in the planning effort, can be attempted only because a relevant organization which can evoke enthusiasm, has specific knowledge and resources, and can also exercise some sanctions has previously been built up.

Therefore, the first need in agricultural planning is to organize agriculturist producers in a co-ordinated and purposive system. The only such organizational device available to us is a many-sided and federal co-operative system. There are already many elements in the existing co-operative organizational structure, which have significance from the point of view of planning.

I may refer, for example, to the crop loan system of co-operative credit. When credit is given for production of particular crops and is related to the acreage under different crops the co-operative credit organization becomes vitally interested in the crop pattern and the acreage under different crops. As credit is given chiefly for certain inputs, it is interested in seeing that inputs of adequate quantity and quality are in fact put in and as the credit is recovered from the sale

of the crop, it is interested in a proper arrangement for sale. Already in the operation of the co-operative credit system, the principle of supplying materials in kind as far as possible and directing the cultivator who has taken credit for the growth of particular crops to sell his produce through named marketing or other co-operatives is well established. If supply of credit and of materials, including the supply of consumer goods, is with the co-operatives, and if marketing and processing of the produce is undertaken by them, the co-operative system as a whole can look after the operations of the cultivator, beginning with improved seeds and fertilizers and ending with the proper processing of the produce and economic sale of the processed goods. Development schemes, with related intermediate and long-term finance, can similarly be integrated with the total co-operative organization.

It is curious that little reference is made in our Plans to the marketed surplus in agriculture or to measures of obtaining control over it. While, in relation to the agriculturist, planning should be concerned with increasing agricultural production as a whole, in relation to the non-agricultural sector, the plan is specially interested in the volume of the marketed surplus of food and of industrial raw materials. The planning of exports of agricultural produce, or the production of industrial goods through transformation of raw materials produced in the country, or planning of supplies of food-grains to feed the urban population and keep down inflationary potential, all depend on the ability to estimate correctly the marketable surplus and to obtain control over its flow. From this point of view also planning requires that the marketing and processing of agricultural produce should be suitably organized co-operatively. Only through this could supplies and stocks of agricultural produce be kept continuously in sight. The importance attached to regulated markets in this connection is highly misleading. Experience has proved that regulated markets, however carefully regulated in theory, are of little effective use except where strong co-operative organizations operate on them. It is not so much the regulation of marketing but the concentration of agricultural produce in the hands of co-operative marketing and processing organizations that is required for planning.

It is, to my mind, a condition precedent of undertaking agricultural planning in India that the scattered agricultural producers be organized into a total integrated co-operative system so that at each stage of their operations, their extent, direction and efficiency are within the cognizance of one or another unit of the co-operative system. It is only when this happens that, in the first instance, it will be possible

to obtain sufficient information relating to actual operations at various stages of the producers, and next, to influence them effectively. However, as long as any step in the chain is missing it will be impossible to plan effectively. Apart, therefore, from other reasons for spreading the net of co-operative organization in the country, I put in a plea for the immediate creation of a completely integrated State-sponsored co-operative organization throughout the country as the initial step for making effective planning of agriculture possible.

It is perhaps not necessary to argue in favour of the creation of a co-operative structure, because there appears to have been very general agreement arrived at in this matter in recent times. The Ford Foundation Team which reported some few months ago has emphasized the need for seed supply and distribution of fertilizers to be placed with co-operatives and for general transfer of responsibility of supply lines to the co-operative department from the agricultural department; the last recommendation has been made independently by the Agricultural Administration Committee also. In relation to processing the Ford Foundation Team states emphatically: "The greatest need to-day is for more co-operatively owned paddy hulling and rice mills in major rice-producing areas," and the Team has suggested that strength could be given to marketing and supply co-operatives by using them as agency for price stabilization. Moreover, recent reports indicate that the Ministry of Food and Agriculture has agreed, in principle, to a pilot programme to increase food production based on the recommendations of the Ford Foundation Team. This programme appears to include adequate supply of farm credit based on production potential, adequate supply of fertilizers, pesticides, improved seeds, improved farm implements and other essential productive needs, all made accessible through strengthened co-operative societies. The programme also appears to contemplate price incentive to participating cultivators through guaranteed minimum prices announced two years in advance. The marketing arrangements and service, preferably co-operative, will enable cultivators to obtain the full market price for their marketed surplus. The organization and operation of co-operative processing will be facilitated wherever feasible.

This is a matter in which, however, mere agreement in principle is not enough. What is required is immediate country-wide action. If Government is prepared to organize and assist cultivators of certain food-grains in seven districts in a particular manner there is no reason why the same type of organization and assistance should not also be available to others. If planning is to yield significant results it must

be undertaken simultaneously to cover all sectors and areas. From the point of view of agricultural planning I would emphasize two points in this context. In the first instance, the requisite organization of the small, scattered units could come about only with Government initiative and assistance; this is universal experience. Secondly, though the ultimate aim should be a fully integrated co-operative system, considerable latitude for adjustments and improvisations should be left in the transitional stage. The creation of a fully integrated co-operative system will inevitably take time and cannot progress in all areas at the same pace. As the immediate aim is to organize cultivators for participating in planned activity the substitution of *ad hoc* or looser forms of organization, e.g., farmer's clubs or borrowers' groups for the co-operative society may have to be made to fill the gap temporarily. No harm will ensue as long as no steps taken immediately militate against transformation into full-fledged co-operative activity in due course. At the higher levels, State activity will assume greater importance. I would, for example, advocate the immediate incorporation into a State-cum-co-operative system of all mechanical power-driven processing plants operating in connection with all types of field crops. The plants, in future, should all be operated co-operatively, but for immediate acquisition they should first be taken into the public sector and transferred to the co-operative sector, in due course. What is required is immediate, universal action and seeing that the tiresome, unreal controversies regarding co-operative forms do not hold up this urgent requirement.

The problem of organization for undertaking agricultural planning from the bottom has two aspects. The first is that of organizing cultivators so as to enable them to participate in planning. The second is the organization of the planning process itself at the lowest levels. I shall now turn briefly to the second aspect. The two important questions in regard to the lowest level are: (i) the area of coverage, and (ii) structure of the planning authority. In my opinion, it would be a mistake to have the village as the lowest planning unit. Even at the lowest level the planning process must be informed by a multi-sided view. In particular, considerations of supply and sale must have weight. Therefore, a unit smaller than what might be called a market area seems inadvisable. Ordinarily, in this lowest area unit, agricultural conditions may be taken to be relatively homogeneous.

The more important question, perhaps, is the structure of planning authority. I should emphasize one point in this connection. It is that the structure should not allow for the membership of elements

who are not functionally related to the activities that are being planned. For, when this happens, the door is left open for the entry of political and other considerations which deflect planning activity away from its real purpose. It is common experience that when persons discuss and take decisions about activities in which they are all interested from a specific point of view, the influence of extraneous consideration is likely to be kept at a minimum.

The planning authority at the lowest level should be composed of three elements. Firstly, an element representing the local self-government organizations of the area. This is necessary because it is these organizations that will provide, in the main, local socio-economic overheads which are essential for all planning effort. They will be responsible for the schools, the road system, local cesses and imposts, for organization of marketing facilities and, in due time, for the administration of town and country planning legislation, including rural housing. The second element should consist of representatives of the expert official technical personnel. The third and the main element should be the representation of co-operatives of all types and at all levels directly connected with the economic life of the particular area. I assume that at this level the interests represented will not only be agriculturists but all others such as artisans, transport agencies and even labourers, to the extent that labouring interest was separate and had been organized co-operatively within the area.

I suppose that planning authority of the lowest unit will be concerned chiefly with the development of resources within its area and the increase in production and efficiency of all economic units within that area. The data discussed will be the past performance, current operations and future projections of activities of the varied organizations represented and that the main task will be to dove-tail in a meaningful plan for the area the operations of the various economic agencies and units as well as the activities of officials and the local self-government authorities. The operation and plan for each village or for each independent unit or agent will be derived from this total plan.

I conceive the superstructure of planning, above the lowest unit as that of the district, above the district the region which would mean a relatively homogeneous economic geographic area within the State, and the State itself. It is important to have a fully operative planning organization at each of these stages. The composition of the planning unit at each of the stages would be similar in principle to the composition indicated for the lowest unit. Only, a higher degree of governmental participation may be apparent at the higher stages, and other

elements as, for example, organized industry and private finance will come in importantly at the higher stages. Not only is it necessary that all elements in the planning authority should be functionally related to the activities being planned, but also that each planning authority must be endowed with real functions and with appropriate powers. Unless each superior organization allows for the organization below a due measure of devolution and liberty to adjust, it is useless to set up elaborate tiers of such organization. It is only if the federal principle is acted upon in reality that such an organization will have strength. To the extent that the authority for planning is real at the bottom enthusiasm and spontaneous activity will be generated, if not, a meaningless structure which merely clogs progress will emerge.

Before turning to another aspect I shall offer a few remarks on organization for agricultural planning at the Centre. In the field of agriculture the Centre has only a limited role to play. It has to establish appropriate trade and price policies; it has to indicate broad objectives and general principles—but no more—in the context of land reform, co-operative organization, etc., and it has to maintain an adequate flow of especially imported supplies and regulate their distribution. This is apart from its universal role as general co-ordinator. It is obvious that the Centre has failed in most of these respects. I have already commented on price policy and fertilizer supply. In relation to co-operative policy the curious combination of high-handedness and vacillation exhibited by the Centre has merely created confusion and held up progress. There is reason to believe that, in good part, these defects flow from the present organization of planning at the Centre. Looked at from the point of agricultural planning there exists a good case for the abolition, at least the suspension of the activities of the Planning Commission and placing the work with a Policy Committee of the Cabinet. The grounds for this are two-fold. As an agent of planning the Commission contributes not new knowledge but only old prejudices. But even more serious is the apparent effect of the existence of the Planning Commission on the working of the Central Cabinet. Individual ministers and the Cabinet as a whole, evidently treat the operations of the Planning Commission as an excuse for not making explicit and consistent policy. We had clear proof of this in the evidence led by the Ministry of Agriculture before the Food-Grains Enquiry Committee in relation to decontrol; and very recently the ex-Minister for Food has publicly blamed the Planning Commission and the N.D.C.—another policy-making body to which no responsibility is attached—for failures on his part. It is high time, the public demanded that economic policy

will be made deliberately, consciously and explicitly by the Central Cabinet as a whole and that the pronouncements of individual ministers from time to time and of all ministers over a period will fall into a pattern and be consistent with announced Cabinet policy. I believe, that the suspension of the activities of the Planning Commission will help in forcing the acceptance of this view on the Cabinet.

I have left for consideration to the last that requirement of the planning of agriculture which is of greatest interest to members of this Society—knowledge, statistical and other. The nature of this knowledge has to be related to the process of planning from the bottom, sketched above. Obviously the data required are detailed local data and data in the field. Inevitably, data from sources other than official will also have to be collected and used, though its processing and technical handling will mainly be the concern of official experts. The organization of the data will also have to be for units that have significance for the new approach in planning. It is well known how thinking in policy and administrative practice shape the collection and collation of data. When, in this State, we had the continuous operation of the revenue survey and settlement organization, data for even parts of talukas were separately collated and analysed, and the revision survey reports contain considerable useful material for students both of economic geography and economic history. Similarly, the exigencies of administration in famines led to the compilation of special famine statistics and a Famine Atlas whose existence even, I have found, is not known to officials and students to-day. For effective agricultural planning, it is, I believe, necessary to revert to this older approach of local economic geography. For this, appropriate agricultural statistics, of course, provide the main base. Where agencies for the collection of local data exist this involves mostly some reorganization and reshaping; at the same time where these do not exist it indicates the need for the proper organization and setting up of agencies for collecting local field data in relation, in particular, to extent of availability of natural resources and their use.

There are some requirements of agricultural planning which suggest, in my opinion, a new approach to collection of the relevant agricultural statistics. To-day, it would appear that most calculations of requirements of inputs and of their effects are based on data of a small number of experimental farms and perhaps even these, one suspects, have been congealed for some time in conventional yardsticks. Realistic planning requires that use be made rather of actual farm data. If in due course, for purposes of multiplication, demonstration, etc., a large

number of progressive cultivators get connected with the activities of official experts, this should provide a useful source of data. But special efforts will have to be made in relation to their collection and record. Also, where a strong co-operative organization is built up it would, in the course of its activities, collect considerable data which should prove useful both to the natural scientist and the economist. This would, of course, involve close co-operation between official and non-official agencies which is in existence elsewhere. In Japan, for example, grading of produce is effected chiefly through trained graders on the staff of the co-operatives.

In the field of economics also systematic collection and collation of data from a variety of sources will have to be attempted. There are a number of problems central to agricultural planning on which there is little relevant knowledge available to-day. For example, it is admitted that we know almost nothing about the relation between prices and agricultural production in Indian conditions. Similarly, it is not possible to estimate even for the country as a whole, with any confidence, the marketed surplus of important crops. For planning you not only require knowledge about the actual surpluses, at least region-wise, but also about possible variations in them and their causation. There is again the pattern of land use and of cropping. I must confess that I was more amused than impressed when I learnt of the setting up a group at the Centre for a study of land use in the country. For, I know, having often to deal with the data, how scanty they are for any useful study at that level. We have yet to make even a beginning with proper research relating to the restraints, limitations and motivations that fashion the decisions regarding the crop pattern of individual cultivators. A lot of this effort will be in the nature of case studies and you will no doubt have to handle and make do with data which the purists among you would shudder to touch. But, after all, improvisation is the very soul of planning in an underdeveloped country.

I have no competence in relation to the manner in which these problems can be best handled. I am only a consumer and as such I have tried to place before you a few ideas on planning in agriculture and have tried briefly to frame the requirements in relation to statistics flowing out of them. However, on one point I feel sure: That the bane of economic policy in this country in the post-independence era has been centralization and that in the field of statistics the crying need continues to be the strengthening, co-ordinating, and in the new context, proper planning and initiating of the work of primary field agencies. This judgment is founded on a view which I have held for many years

and which I put on record in the following words on the eve of the initiation of planning in this country: "For policy formation you require, not so much the National aggregates, but much more detailed information concerning specific regions and activities and a fairly clear idea of the actual operations of specific parts of the economic system. When you have gathered a fair amount of such specific information the National aggregates may help you to build an overall realistic framework which will give meaning to National Income and Accounts; but as long as the detailed information is not available, National aggregates by themselves would prove of little use for policy formation or for judging of its implications."

With this reiteration of the emphasis on local, decentralized effort and with renewed thanks for giving me this opportunity of expressing my views on this important subject, I close my address.