

## SYMPOSIUM ON INTENSIVE AGRICULTURAL DISTRICT PROGRAMME (PACKAGE PROGRAMME)\*

DEAN ARTHUR D. WEBER, Project Leader of the Ford Foundation, initiated the symposium. He started with the genesis of the programme and described its salient features. The urgent necessity for combining all factors into one integrated approach to achieve rapid increase in food production so dominated the thinking of those who formulated the objectives and contents of the programme that "Package" is now generally accepted as the one word most expressive of what the programme must be.

It follows then that those, who would understand the reasons for this programme and its unique features, must be familiar with its philosophy. Only those who are directly associated with the programme are likely to keep abreast of developments as reported in various publications, official documents, reports and the like. Others not directly involved, but whose understanding and interest are essential for favourable public opinion and support will likely want to limit their reading to a few key reports such as the following:

- (A) Report on "India's Food Crisis and Steps to Meet It" by the Agricultural Production Team sponsored by the Ford Foundation; issued by the Government of India, Ministry of Food and Agriculture and Ministry of Community Development and Co-operation, April 1959.
- (B) Suggestions for 10-Point Pilot Programme to increase food production. Mimeographed summary issued by the Ford Foundation, November 1959.
- (C) Intensive Agricultural Districts Programme Conference, Report of the First Central Training Course for Key Personnel of the Programme held at Extension Education Institute, Nilokheri, December 5-14; issued by the Government of

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\* Symposium held in January 1961 during the Fourteenth Annual Meeting of the Indian Society of Agricultural Statistics at New Delhi under the Chairmanship of Shri V. Shankar, Special Secretary to the Government of India, Ministry of Food and Agriculture and Vice-President, Indian Council of Agricultural Research, New Delhi.

India, Ministry of Food and Agriculture, Directorate of Extension, New Delhi.

The basic reasons which led the Ford Foundation to the initiation of this programme were (1) Humanitarian considerations, (2) Economic growth, and (3) Making democracy secure. He then mentioned the role of food production in achieving social justice, in bringing about economic growth and in securing democracy. According to him, food production is India's No. 1 problem. Though food production is increasing steadily, the rate of increase must be trebled by 1966 if the requirements are to be met. The past experience relating to attempts for increasing the food production rapidly has shown that there are no easy steps to successful solution of the food problem in India. There are other aspects of the food problem, which should also be taken into consideration while planning for increasing food production. They relate quality of food in relation to calorie intake and protective foods. Food production plans in India should be given top priority. Urgent action is called for. India's people should organise their resources to meet the great crisis before them. Package Programme is intended to do so; the programme is planned to demonstrate the most effective ways of increasing food production. In short, the objectives of the programme may be stated as follows:

1. To demonstrate in selected areas how co-operative efforts will result in immediate increases in food production.
2. To increase the cultivator's net income.
3. To strengthen the village economy.
4. To provide the basis for more rapid economic development and social improvement.

The basic contents of the Package Programme are:

- (1) adequate farm credit based on production potential readily accessible through strengthened co-operative societies;
- (2) adequate supplies of essential production needs (such as fertilizers, improved seeds, pesticides, improved implements) through Service Co-operatives;
- (3) scientific demonstration through intensive educational and increased staff efforts;
- (4) technical and farm management assistance through preparation of farm improvement plans of the cultivators;

(5) marketing arrangements and services through co-operative societies which will ensure full market price to the cultivators for his surplus and help recovery of production loans;

(6) strengthening of transport arrangements so that supplies may easily be mobilised and staff can render help in time;

(7) village planning for increased production and improvement of live-stock, fruit and vegetable production and their preservation, strengthening of village organisations such as panchayats, co-operatives, development councils and village leadership;

(8) analysis and evaluation of programme which consists of benchmark study at the beginning and progressive analysis of the programme subsequently with the help of data relating to production, farm income, input-output relationship, effectiveness of methods, procedures and organisation, etc.;

(9) co-ordination of all resources on a priority basis to ensure maximum speed and effectiveness.

It is not that efforts have not been made in the past to increase agricultural production in India. This programme, however, differs from other programmes attempted in the past in many ways. In this programme all the production factors are being provided simultaneously which was not done earlier or even now in other areas; supply requirements will be met in full in areas covered under the programme, while at present hardly 50 per cent. supply requirements are met; agricultural credit will be available to all the farmers for whom production plans reflecting productive potential are prepared while at present only credit-worthy farmers receive agricultural credits; agricultural and co-operative staff will be strengthened in order to help farmer in preparing production plans and to supervise their execution; credit and marketing will be linked so that the farmer will receive maximum return for his surplus production. Composite scientific demonstration on cultivators' fields will be conducted so that he may be convinced of the utility of the scientific technique of cultivation; the demonstration officers in charge of the execution of the programme in the blocks will have preferably agricultural qualifications which will provide necessary bias towards agricultural production plans; assessment of extra production by conducting crop-cutting experiments by random sampling methods will be made in order to know where we stand which is not being done at present; the executive authorities at the district and block levels will be delegated necessary administrative and financial powers in order to ensure speedy implementation of the programme.

If the programme is successfully implemented, it is expected that it will maximise the agricultural production in the area selected for the purpose. It will also serve as demonstration to be followed up in other districts.

Dr. J. P. Bhattacharjee of the Programme Evaluation Organization, Planning Commission, started by explaining the meaning of the term "Evaluation". He said that assessment of the progress of the programme and its results or impacts are two essential and logically distinct aspects of what is commonly known as evaluation. It is desirable not only to keep this distinction in mind but also to follow it operationally in attempts to assess the working of the Intensive Agricultural District Programme. Both types of assessment, besides being necessary, are likely to prove useful not only to the administrators and technical people working in the programme but also to the planners and the public at large.

In the initial phase of the programme, interest will largely centre on the creation of administrative and social overheads—staff, co-operatives, panchayats, transport and storage facilities, market arrangements, etc. In the intermediate phases, operational problems, efficiency of the personnel, adequacy and timeliness of credit and supplies, prices, etc., the facilities and institutions created (overheads) will demand more of the attention. It is also at this stage that importance will begin to be attached to the results of the programme, particularly as manifested in the use, position of the supplies and facilities and their effect on production. Finally, in the later stages the programme has to be assessed in terms of its ultimate impact on the individuals and the households and their functioning within the village setting. Judgments will have to be made at this stage about the quality and the quantitative adequacy of the impact on social, psychological and economic institutions, on production as well as economic and social costs.

In the first stage, progress assessment will prove more practical and meaningful, since any analysis of result in the initial phase will perforce be based on a certain amount of deductive reasoning. With growth of the programme the latter will gain in importance. But since the objective of the programme is to secure immediate gains in the achievement of the food production potential, result assessment should be started as early as possible.

Administrators, technicians as well as assessors of the programme will, to start with, need not only the bench-mark data but also the results of research in agro-technical problems like effects of different combina-

tions of practices, input-output data, etc., as well as in social engineering like process of communication and acceptance of new ideas and practices. Lack or inadequacy of such data may well turn out to be one of the greatest impediments to the successful implementation of the programme, if it is to operate as conceived and not as an intensification of the present schematic approach.

Even though the district is the unit of organization of the programme, its assessment will have to be based on the block performances. Such assessment will require data very few of which are at present available either at all or to the required degree of reliability, from the regular sources of administrative reporting for collection of data. Apart from data, assessors will have to face another difficulty, *viz.*, the readjustments of the norms of yardsticks. For example, in the context of individual farm planning the quantity of any particular resource (*e.g.*, fertilizer) used is not as meaningful as its combination with other resources and the effect on net income. Hence adoption or use position, if assessed separately in respect of different resources, may not convey the picture that their combined use produces. Finally, there will still be in the assessment of results the difficulty, sometimes even confusion created by natural hazards, in spite of all care that has been taken to minimize this factor by a selection of suitable districts. It is time that statisticians give more thought to finding out easy but suitable methods of analysis that will permit isolation of the effects of the natural forces or hazards from those of resource factors on the output of crops.

Dr. G. R. Seth, Indian Council of Agricultural Research, dealt with the scope and the method of Bench-mark and Assessment Surveys of the Intensive Agricultural District Programme (I.A.D.P). He said that for actual assessment of the programme it would be necessary to collect data on three major items: (1) input, (2) direct output, and (3) indirect effect of the programme. So far as the first item is concerned, the problem may be simpler and it would be possible to obtain data by physical measurement. This may include the problem of studying the use of fertilizer and manures, improved seeds, improved agricultural implements, insecticides and pesticides, irrigation, land improvement measures, marketing and credit facilities, etc. Data on these items can be collected by organising suitable sampling enquiries periodically.

Data on second item may relate to measurement of increased agricultural production particularly that of food crops (which is the main objective of the programme); increase of live-stock products, etc. So far as the measurement of increase of production of food crops is con-

cerned crop-cutting surveys can be organised on intensive scale annually. However, there may be difficulty in obtaining similar data on non-food crops like vegetables, etc. Estimation of live-stock products in these areas may not be the immediate problem as not much emphasis is being given to increase these products.

Data on indirect effect of the programme may relate to increase in the national income, sociological changes in the area due to increased income of the farmers, change in the consumption pattern, capital formation in the agricultural holdings, etc. This aspect of study, if it is to be taken up at all, should be organised independently of the first two studies as the type of data required, the method to be followed, type of field staff required, etc., will be different from those needed for studying the first two aspects.

He then emphasised the need of a "control" area for comparing the achievement in the area under the I.A.D.P. He said that agriculture in this country is to a large extent subject to seasonal hazards and therefore to study the changes free from the influence of these hazards it would be necessary to compare the rate of increase or otherwise in the area under the programme with the similar estimate obtained from other areas which possess similar agricultural characteristics, with regard to agricultural development, cropping pattern, credit and marketing facilities, irrigation development, etc. This type of area may be called as "control". The "control" area should be fairly large to represent all the essential conditions obtaining in the area under the programme. Thus, for the selection of "control" area much detailed data at block levels would be needed.

Lastly, Dr. Seth made a reference to the agency which should be entrusted with the collection of data for assessment purposes and the agency incharge of analysis and interpretation of this type of data. He mentioned that it would be ideal if some suitable agency which is not directly or indirectly influenced by the agency incharge of the execution of the programme is made responsible for the assessment work. But, considering the type of work involved in the collection of data, it would not be economical to appoint whole-time *ad-hoc* staff for this purpose. For example, to conduct large number of crop-cutting experiments of the order of 1,000 to 1,200 in a season which would be needed for estimating the production of crops with a reasonable precision, a team of 100 to 120 investigators would be needed during the harvesting period. Therefore, there is no other alternative except employing the available development agencies in the area on part-time basis. However, to

ensure that the development agency which is incharge of the programme does the work in proper perspective, their work should be adequately supervised by agency which is not directly involved in the execution of the programme. There is another aspect on the choice of the field agency. The field agency should be fully conversant with the farming practices and rural conditions. For this purpose it would be desirable to entrust the collection of basic data to the village level workers (V.L.W.) and their work should be supervised by competent statistical staff who are not directly under the control of the officers responsible for the execution of the programme. There is another advantage in this arrangement. The accuracy of the data depends upon the co-operation of the local people. This can be better obtained by employing staff who enjoy the trust of the people from whom data are to be collected.

Shri V. M. Jakhade of the Reserve Bank of India, Bombay, made observations on the credit aspects and its evaluation.

Evaluation is making judgment in a scientific manner about the value of achievements of a project or a programme. Whenever a project for economic or social development is undertaken by Government or an inter-governmental organisation, involving expenditure of large amounts of public funds, there is a growing demand from the intelligent public for better information about the results obtained by it. Evaluation studies, in addition to meeting this demand, have twofold usefulness. The art of guiding and inducing social and economic change has not yet highly developed. Data that show how things are going can be immensely helpful in improving project operations in mid-stream. Evaluation of a project when completed, particularly of a pilot one, provides lessons which prove very valuable in planning in a systematic manner the future programme of expansion of the project.

The first step in evaluation is definition of objectives and operations of the project in very clear terms. This is very essential for determination of indicators for measuring the accomplishments of objectives. As the achievements can be measured in relation to the conditions prevailing in the pre-project period, it is always desirable to conduct a bench-mark survey. The definition of objectives and operations and the determination of indicators of accomplishments facilitate the decision making regarding the content of the base-line survey.

Evaluation may be undertaken at two stages: In early state of the project implementation (Means) and when it is completed (Ends). Evaluation can be thought of in terms of pure fact-finding or measurement or as a basis for interpretation. In the first is involved matters

of assembling measurable data on changes presumed to result from the project. In the second, we make considered judgments about the data collected by means of the measuring techniques. The second stage must always be for purpose of evaluation.

In order to secure objectivity in interpretation of results, it is desirable to delegate the task of evaluation to an independent body of technical experts. The decisions regarding indicators of progress, sources of data, design method and other technical matters relating to investigation would be taken up by this body in a scientific manner by using appropriate statistical methods and survey techniques.

The objective of the I.A.D.P. is to concentrate efforts on increasing food production in the selected project areas best suited for the purpose, by providing the cultivators with adequate and timely supplies of chemical fertilizers, improved seeds, pesticides, etc., adequate extension facilities and timely and adequate credit. The main basis of the programme is the preparation of farm production plans in respect of each of the cultivators covered by the project with the assistance of technical extension personnel. This would help to determine his requirements for farm supplies and for production credit, short term and medium term, and to assess his repaying capacity. It is also proposed to provide adequate trained staff to carry out the various operations of the programme.

Before launching the projects, the State Governments are expected to satisfy certain important conditions in regard to preliminary arrangements which include, among others, (i) conducting a resource and production bench-mark survey, (ii) appointment of additional staff, (iii) provision of adequate credit facilities, (iv) procuring adequate supplies of fertilizers, etc., (v) training of staff in preparation and execution of individual farm production plans, (vi) provision of adequate godown facilities and (vii) the actual preparation of farm production plans for the next season. Only after these preliminary arrangements are made, the apex banks concerned are expected to approach the Reserve Bank of India for short-term credit.

The main purpose of a pre-project survey should be to find out whether these preparatory arrangements have been made, so that the project gets a clean start. Some preliminary enquiries made have pointed out inadequacies in some important respects and attempts at compromises on fundamental issues which need to be avoided. Hence the greater importance of the preliminary survey of preparatory arrangements.

On the assumption that individual farm production plans are prepared, arrangements regarding supplies of chemical fertilizers, etc., are made and administrative and extension personnel put on duty after adequate training, a credit programme of the order of Rs. 29 crores (Rs. 20 crores short term and Rs. 9 crores medium term) is envisaged in the seven selected districts. It has been decided that the sole agency for supply of production and marketing credit would be co-operatives. It is proposed to provide production credit to all cultivators in adequate amounts and at proper times to meet all their credit requirements under the farm production plans. It is also proposed that recoveries of production loans will be made from the proceeds of sale of agricultural commodities effected by the borrowers through marketing co-operatives. It is necessary, therefore, to find out as a preparatory step, whether in the project areas, the co-operative structure has developed enough to undertake various aspects of the programme and whether the organisation is strong and efficient enough to shoulder a sharp increase in its responsibilities. Some preliminary studies made in two-three districts have pointed out inadequacies and weakness in important respects. It is very essential, therefore, to undertake a preliminary survey in all the selected areas to examine the existing structure relating to organisation of co-operative credit and marketing institutions and their working in its various aspects. This should also cover the arrangements for supervision and inspection of primaries and the guidance given and control exercised by the co-operative departments over the co-operative societies. Such an examination will bring out the inadequacies in the co-operative structure, weaknesses in the organisation, defects in its working, etc. It would then be possible to prepare in a systematic and comprehensive manner, a phased programme of development of co-operatives, with a view to meeting the requirements arising out of the I.A.D.P.

As the I.A.D.P. and the credit programme get going, it is very essential to carry out a concurrent evaluation. This would be primarily concerned with the measurement of progress of co-operative credit institutions with the help of indicators such as proportion of villages and of cultivators covered, trend in membership, growth in financial position and credit operations, trend in average volume of advances to borrowers, etc. It should not stop at measuring progress in terms of some stated indicators, but should help the project authorities to form some judgments, draw some conclusions or take some decisions with regard to the trend and pace of progress towards the objectives. Thus, it would be necessary to study the working of a sample of

co-operative credit institutions in its various aspects such as growth of resources, loan policy and procedure, management, inspection and supervision, etc. The concurrent evaluation should, therefore, enable the project authorities and the co-operative banks concerned to take necessary measures for rectifying defects, removing weakness and/or accelerating progress. An essential feature of the credit programme is interlinking of credit with marketing. Thus it is necessary that progress-evaluation should also cover the organisation and working of marketing co-operatives in their various aspects.

It must be borne in mind that it is most important to find out whether the credit programme is carried out in the spirit in which it is conceived. An expansion in the number and the volume of loans and advances given by co-operative credit institutions is not the real criterion of progress. It is its actual utilization for production purposes for purchase of inputs considered desirable under the farm production plans that is really important. The evaluation of credit programme should, therefore, not confine itself to measurement of volume of loans and advances, or the proportion of villages or cultivators covered, or the outstandings and overdues, or the quality of produce marketed through marketing co-operatives, but it must attempt to probe into the utilisation of credit for the purposes for which it is given. It must try to find out whether the cultivators have prepared farm production plans in a systematic manner, whether they have got technical assistance for this purpose, whether the farm supplies and credit requirements are estimated in a proper way, whether the chemical fertilizers, seeds are available at proper times, and whether all the cultivators who have production plans get credit in adequate amounts and at proper times? It is equally important to know whether the farm output grown with the use of added inputs is sold through the marketing co-operatives and the short-term production loans of credit co-operatives are recovered from out of sale proceeds. To examine the progress from this angle, would require in addition to the study of a sample of co-operative institutions, a study into a sample of cultivators covered by the projects.

It is envisaged to liberalise credit to a certain extent, in the initial stages. But ultimately the institutions concerned must stand on their legs, and work in a normal way. Thus the study must also look into the efforts at collection of share capital from and mobilisation of savings through deposits of members, the genuineness of repayments as also suggest any measures which may bring the various aspects of the loan policy and procedure in alignment with the actual needs of agriculture

within each project area and inculcate the spirit of co-operation among the cultivators.

Dr. H. R. Capener, Rural Sociology Technician at Government Agricultural College, Ludhiana, remarked on the economic and social impact of the Package Programme on the life of the people. According to him the major contributions which the concept of the Intensive Agricultural District Programme promises to make are as follows:

Placement in the hands of the cultivators, the optimum requirements and the conditions which they need for increasing levels of food production.

Establishment of a revised administrative system designed to provide the optimum conditions required by cultivators.

Re-establishment of the directional flow of incentive and motivation for production from a top-down procedure to one from the bottom-up direction.

Development and strengthening the potential of local self-help responsibility and leadership on the part of cultivators and village leaders for their own destiny and welfare. Providing a positive programme to help counteract the influences of social disorganisation in the villages such as: factionalism, disputes, lack of co-operation and trust. Providing a stronger economic base for individual families to meet their living requirements and thereby developing the potential of improved village conditions and living. Strengthening the resources of departmental and district facilities such as: co-operatives, irrigation and drainage, animal husbandry, electricity, agricultural engineering, marketing, system of supplies, dissemination of research findings, and extension education, improved training of personnel and more efficient service.

From the standpoint of research and measurement, the Package Programme will provide some unique opportunities to carry out research undertakings. A design for a base-line survey to be made in the beginning and a post-survey at the end using a control sample will provide a basic means of measuring overall results of the programme. Regarding the development of tools for measuring increases in food production, expanded and intensified techniques will be employed. The problems of measuring the overall costs of such a programme from the standpoint of total outputs over inputs is significant for the administrators to determine the worth of the programme. Research work needed to get at socio-economic factors of production, particularly regarding returns

from various combinations of production resources in different agricultural enterprises will be developed. Intensive case-studies of villages will result in a depth analysis of important factors of personal, social, economic and cultural influences which come to play on the willingness and ability of the cultivators to effectively participate in the programme. A system of periodic feed-back will be provided in regard to certain of the research findings which will benefit administrators and assist them in carrying out a more successful programme.

Finally, careful analysis will be made of the functioning of the whole administrative system, particularly with respect to its ability to adjust and respond to the needed changes proposed and desired for the programme to be successful.

Dr. H. P. Srivastava (Shahabad, Bihar) emphasised on the execution part of the programme. He mentioned that local politicians play a great part in making the programme a success or failure. They are mostly interested in seeing that the area of their influence gets the maximum benefit from such programme and that directly conflicts with the normal work of the programme. This aspect is generally not given sufficient attention while evaluating the achievement of such a programme.

Shri P. S. Sahota (Statistician, Department of Agriculture, Punjab) also participated in the discussion. He doubted the competence of the V.L.W.'s in advising the farmers.

The Chairman, Shri V. Shankar, said in his concluding remarks that the contents of the programme are fully known. Every single item that constitutes the programme is something that has been tried before. Whether you take the problem of seeds or the problem of improved cultivation practices or the problem of improved implements or the problem of use of fertilizer or even that of credit, something has been done on the lines in the rural sector all along. But what this programme means is an entirely new approach and it is that the factors that have failed to achieve quick results individually, may achieve collectively provided the timing and the contents are such as to satisfy the needs of the farming population. It is really in this approach that lies something new about the programme and not in its contents.

Regarding the evaluation, various phases and difficulties in the collection of data have already been described by the different speakers earlier. He is quite sure that the statisticians of the I.A.R.S. or of the Planning Commission are quite used to unusual demands for collection of statistics and for their interpretation and that in meeting this new

unusual demand they would not be found wanting. Moreover it is still some time before they have to evaluate the programme finally. As the scheme progresses, human ingenuity is bound to evolve techniques which would get over the disadvantages and difficulties to which a reference has been made and which undoubtedly exist. He mentioned that the programme is based on certain assumptions. The greatest assumption is that notwithstanding centuries of history, traditions and practices, the individual farmer can be made to change for the better under a programme of education and training. This is a basic assumption. If this assumption is falsified no progress can be made in this country and it is there the rightness of the approach of the trainer, the educator, the technician and the administrator in the field lies. If this programme fails to achieve the targets set before it, it will be not because of any shortcomings of the programme, but because of the failure of the administrator or the technician or the farmer himself. Now, it would have to be our endeavour during the time the programme is being implemented to get over these and to ensure the maximum degree of success, firstly, in the education of the farmer, secondly, in the education and effectiveness of the administrative machinery and thirdly, in the accomplishment of the technician himself in the field of applied sciences. It is after we have assured ourselves all these that we can hope to implement this programme with the success that we are hoping for.

Now, there are many matters connected with this that need be referred to. One thing may be mentioned that it is a programme not so much of planning as of action though planning of the right type must undoubtedly be the basis of that action. However much one may decry the V.L.W. or question his competence to advise the farmers, the fact remains that the farmer's failure is writ large in the very fact that despite having been left to himself he has failed to do what today's requirements want him to do. No amount of casuistry or ridicule can get over this simple fact. That if there are some people to advise him or to educate him it is because of his own proven defect rather than because of any imposition from outside. This is the one basic fact which those who claim that the farmer has nothing to learn from others must bear in mind.

Another fact he referred to was that Dr. Weber pointed out was the need of an integrated approach. Now an integrated approach calls for something much more than individualistic approach does. In a programme like this what is most important is that one should never lose control over momentum. It is amazing how man puts forth

superhuman efforts under the stress of momentum and what one normally expect of him is just a fraction of what he achieves under a proper stress of that kind. We are quite familiar with some of the basic needs of this programme. They have been as fully provided for in the programme as is possible under any human effort. In any human life or in any human agency there is a field for learning by trial and error. One cannot exclude that field from this programme either. Nobody can claim for this programme perfection. In this programme as also in other programmes one will learn by one's mistakes. However, he expressed the view that it would be easier to evaluate results of this programme than the results of the Panchayat Raj.

He then mentioned about the part which the politicians can play in executing this programme. The administrators will have to see that they get proper response and good co-operation from the politicians. Politicians are definitely interested in the prosperity of the people and once they are convinced about the utility of this programme they would definitely give all co-operation to make this programme a success. He felt sure that one could get over obstacles if two things were borne in mind, firstly, that the programme was the right one and secondly, the methods were the correct ones.

Finally, he remarked that as one who is incharge of this programme he has appreciated and also profited from the discussions of this afternoon and would like all persons attending the Conference after hearing two hours of stimulating talks to turn over the contents of this programme, the approach that it lays bare and the results that are expected in their minds.