

with the
adequate

us pray
seasonal
s efforts
Nature'
in trust

Possible Methods of Maximising Agricultural Production and Development of Improved Strains and Plant Materials

By

K. SANJIVA SHETTY, B. Sc., Ag.,
District Agricultural Officer, Tellicherry, North Malabar

Introduction: Referring in appreciative terms to the valuable work done by the Madras Agricultural Department, Sir John Russel the eminent Scientist has said that "the work that is going on here offers the prospect of solving to a great extent India's food difficulty. The practical difficulty is to get better materials over to the peasant to enable him to adopt the methods suggested by Agricultural experts. There remains always the practical difficulty of getting these methods adopted and properly carried out."

This valuable remark pertaining to the practical application of the results of researches carried out and their wide adoption by the peasants is a matter that has to be thought out and planned in a manner suiting the genius of our people. Our attention must therefore be focussed on this most vital point as to how to make the majority of our peasants freely adopt the various improvements that are advocated.

Impracticability of engaging Honorary workers: We have very few men who can be relied upon to devote sufficient time and attention to honorary work as a result of their own economic conditions nor people with the necessary bias and spirit of service for this kind of work can be found in adequate numbers. Hence it is out of consideration of utilizing the services of honorary workers for any scheme of extension service intended to aim at increased agricultural production.

It is necessary that if we are to maximise production in a big way we have to think and plan out also in a big way and no useful purpose will be served by aiming at a big objective without the necessary facilities and means, e. g. if we are to cover the entire area under a particular crop in the state with improved strain within a period of five years, this cannot be done by calculating the quantity of seed required from year to year and aiming at distribution by the addition to staff of a few maistries and fieldmen or even without that. What is meant is that such colossal schemes should be conceived in a big way by taking into consideration all the factors necessary as to make all the growers take to these improved strains. Adequate staff and facilities to supply the seeds to every nook

and corner at the right time and correct and continuous propaganda to steer the scheme successfully will be necessary. All this means finance on a big scale and it is well to remember that nothing substantial can be achieved without providing adequate funds for intensification of extension service to achieve the desired results. After all the amount of money spent in the administration and organisation of the Agricultural Department in a country which is predominantly agricultural, is hardly commensurate with the gigantic task it is called upon to perform.

It seems clear that the best way by which we can quicken the pace of increasing production is to :

(1) Take the knowledge of scientific agriculture in an understandable and attractive form to the ryot.

(2) To follow it up by supplying the needs of the ryot at his very door by providing necessary facilities.

Increased staff for Demonstration plots: Successful demonstration plots in ones own holding have been very effective so far as that particular grower is concerned, but the dissemination of the results of such successful demonstration has been rather slow for want of facilities. It is therefore worth the while to conduct Demonstration plots in as large a number of holdings by the appointment of adequate special staff for each taluk.

But, by far the greatest need appears to be, in the direction of educating every ryot, majority of whom are illiterate, in the art of increasing production by an attractive method. Nothing can be more attractive and effective than to educate the ryot by talkie films edited in regional languages.

Propaganda by Talkie films: It is necessary to provide each district as a preliminary step with a van equipped with a projector and talkie films relating to every item of improvement advocated in the District. The films must be edited in the regional language. This van must tour in each taluk, in as many villages as possible in accordance with a set programme. Particular care must be taken to prepare the films for each District with reference to local importance only. There must be films relating to all improvements advocated for each of the main crops of the locality. These vans must be in charge of a special officer of the grade of an Upper Subordinate. It is felt that education of ryots by this method will be more effective than by other means of leaflets, posters and personal propaganda etc.

Having thus educated the ryot in the methods of increasing production the next thing to see is that all the requirements of the ryot are made available as close to him as possible.

Depots and staff at Firka Head-quarters: The minimum that must be aimed in this direction is to have a Departmental depot with an Agricultural Demonstrator at each firka headquarters with the necessary requirements for supply to ryots.

Important role of manures in maximising production: Crop cutting experiments conducted during the last two years have definitely proved that the greatest single factor that has contributed to increased and phenomenal production is manuring. It is therefore necessary not only to educate the ryot in the supreme importance of proper manuring, but also to make the manures available at village level. Distribution of chemical manures is at present controlled through co-operative institutions and Tender firms. This system has not worked satisfactorily, particularly in Malabar District where the cry from Co-operative societies is that there is no demand from the ryots and the complaint from ryots is that there is no manure in the depots of Co-operatives. This vicious circle must be broken. While price control, as long as the commodity is in short supply is desirable, it is found desirable to abolish the license system and permit every one to deal in it and wants to sell the manure. It is very difficult to get merchant or dealer to exclusively deal with this at village level and necessarily it will be only an adjunct to their normal trade and business. I would therefore suggest that the licensing of manure dealers should be abolished and free trade allowed in the business of manures. This will make available required kinds of manures at all times and at all places and this will certainly result in remarkable increase in production.

It is hoped that with the necessary knowledge of increasing production made available to ryots in intelligent, catchy and attractive form through the medium of talkie films in regional languages, provision of expert aid and assistance at each firka with adequate staff and supply of manures at village level will greatly help in maximising production.

Utilization of trained Rural School Teachers for extension service: In this connection I wish also to repeat what I have said in my contribution to the conference held last year by utilising the services of Teachers in rural schools by a scheme of giving them adequate training and then employing them part time for extension work. This proposal was made with a view to economise expenditure on the appointment of field staff and at the same time make available a body of men like rural school teachers who have a better hold and influence on ryots than a fieldman or a demonstration maistry. According to this proposal a teacher with necessary agricultural bias is to be selected at the rate of one for about 5 villages and these men are to be trained at state expense for a period of 6 months in an agricultural Research Station and then employed in the schools from where they were originally drawn. They will only work for half a day each in that school and the other half is utilized for

agricultural propaganda work. The school Management will pay them only 50% of their pay and allowances whereas the Government will pay not only the other 50% but an additional emolument of 50% on the pay to make the job attractive. It is presumed that such a body of trained rural school teachers drawn from schools at convenient centres will provide a batch of very useful extension service workers as compared with the usual fieldmen and Demonstration maistries. This requires trial at least in one taluk of each of the regions—particularly in the west coast districts where the difficulties are great in propaganda.

Development of improved strains and plant materials: In regard to the developmental work on the evolution of improved strains, I wish particularly to draw attention to the evolution of strains of some major varieties particularly in North Malabar district. Sufficient attention has not yet been paid to the evolution of strains in some major varieties which occupy thousands of acres like Mundon and Kuttadan for low lying single crop lands, Bali and Orkayama in Saline lands and again in varieties like North Malabar Kayama, Kunhi Kayama, Alli Kannan, Thavvan etc.

Evolution of these strains must be done under North Malabar conditions and not at Agricultural Research Station, Pattambi where the conditions are not similar to that in North Malabar. South Kanara climatic conditions appear to be more allied to North Malabar than South Malabar (Pattambi) and hence the work on evolution of these strains may be better done at Paddy Breeding Station, Kankanadi.

Increasing the Production of Improved Strains of Seed

By

SRI V. T. SUBBIAH MUDALIAR, L. A.

The use of improved strains of seeds has been one of the chief methods of increasing the production of crops. Improved strains of seeds are evolved at the Research Stations by various methods. There are many difficulties encountered at the several stages of building up a strain. With knowledge of the behaviour of the genes and transmission of characters and improved plant breeding technique, various characters are