

## The Role and Responsibility of the Agricultural Department in the Solution of the Food Problem

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**Introduction.** The problem of food production in our country must be enunciated and elaborated from the essential premises of a national background and economy, and this background is characterised by the inescapable fact that even under normal conditions, a majority of our population is bordering on starvation level. The acuteness of our food problem is further accentuated by the fact that we have to find sufficient food not only to feed our teeming millions at a standard nutritional level but also for a population that increases at a normal and steady rate of about 10% every decennium. Hence it is necessary to chalk out our line of action *mutatis mutandis* with both short term and long range policies and programmes. For an agricultural country like India "Grow More Food Campaign" has a special significance in that a proper, satisfactory and expeditious solution of this issue is likely to result in its wake with the solution of the many other allied problems on which the very economic structure of rural India is built up.

The scope of planning for the solution of the food problem. It is not sufficient if we aim at self sufficiency or surplus production in a taluk or district or even a region or province. The food problem must therefore be conceived, *inter-alia* with the need of the Indian Dominion as an organic unit and the contribution of our province to the Dominion Food Pool must be the desideratum in formulating comprehensive policies and schemes. I, however, submit at the very outset, that it is not my intention to frame a food programme for the entire Indian Dominion within the frame work and ambit of suggestions made in this paper; at best mine is an attempt to indicate in general terms, the part, our province can play in solving the food crisis with particular reference to the role and responsibility of our department. May I also submit that our department as at present staffed and equipped particularly on extension work can only touch the fringe of the problem.

**Methods of increasing productions.** The methods by which food production can be increased are:— 1. By increasing production per unit areas by the application of all possible improvements-variatal, cultural and manurial and 2. Extending the area under food crops either by encroaching on other crops or on new lands still un-exploited. To tackle the problem on the lines indicated above it requires all the planning and thinking to arrive at any definite conclusions in regard to practical ways of solution. The Department has obviously to reorganise and re-orientate its activities for a satisfactory solution of the problem in

all its details and it must be admitted that this cannot possibly be done by fixing up an ostensible target as per comprehensive scheme now conceived and asked to be worked out with only a few maistries and fieldmen by way of increased staff and personnel. It may be said that this method cannot simply work for obvious reasons. The main burden of my paper is to indicate the possible ways of re-organising our activities with a view to achieve the target of food production efficiently and as quickly as possible.

Drawbacks of the existing methods which call for immediate change. The need for a capable and efficient staff to take the result of research and propaganda to the very door of the ryot must be admitted *prima facie*. This cannot be done with one Demonstrator for a taluk, however much he is assisted by a band of maistries and fieldmen. The very fact that the number of maistries and fieldmen entrusted with definite number of firkas and villages is increased, calls for an immediate increase in the number of Agricultural Demonstrators for each taluk and consequently for a corresponding number of District Agricultural Officers for efficient control and supervision. Whatever may be the organisation that may hereafter be charged with the distribution of manure, iron and other essential agricultural requisites, it is imperative that there is a supply depot in every firka under the effective control of a Governmental organisation and the existing system of one depot for two firkas is inadequate. We have had experience of trading scheme activities from 1943—44 and we are now in the 6th year of progress. Many things have happened which have affected the fair name of our department — perhaps this was not to our credit. But whatever it is, it must be admitted that we had unreservedly given our shoulder to the gigantic wheel of burden without adequate facilities of staff consistent with this great responsibility. But as long as controls remain unremoved and supply of materials is far short of demand, it is necessary to have Governmental control over the distribution of these materials and it matters little whether this department or that does it. Perhaps it is safer to continue an organisation that gained the experience than to hand it over to a new one which is likely to commit the mistake, all over again. What is required is to have separate organisations with better facility under the aegis of the same department.

I therefore submit that while the removal of the trading scheme activities from this Department is a desirable riddance in the interest of legitimate work, how far the ryot stands to benefit by this move, requires further and deeper consideration. It is true that it is not the business of an Agricultural Demonstrator to sell cake and iron and maintain imperfect accounts. The distribution of materials and accounting may be handed over to other organisations entirely under the control of

Agricultural Officers. Alternatively we may have two separate organisations—one for the distribution and accounting of these materials and another for regular scientific agricultural work in each taluk and separate allocation of work must be made for these two organisations under efficient supervision by redistribution work in each district.

It is hoped that by the appointment of Agricultural Demonstrators for each firka with requisite number of trained maistries and fieldmen, bifurcation of districts into convenient units with a view to supervise and check the work efficiently by adequate number of District Officers, opening of sale depots in each and every firka and implementing the five year plan of Grow More Food approved by the Government of India in its entirety, the food problem can be solved to an appreciable extent. Otherwise, most of our targets and schemes will be only on paper without material results. Let us therefore appeal to our Government to pay particular attention to this Department and re-organise its activities in the light of experience gained and results aimed at.

**Need for correct statistics.** To correctly assess the quantum of our requirements or to formulate any scheme or plan of action, it is necessary to base our assumptions and calculations on correct statistics. I dare say that available figures of food consumption or total food requirements may be taken as fairly accurate as this depends on population figures and per capita requirement. But I am afraid that our statistics on the production side needs greater scrutiny as the figures of total acreage of food crops as now recorded, is far from satisfactory. The statistics of crop production are in the hands of village karnams and their imperfections are well known although a better method has not yet been devised. If you take the season and crop report and look into the area of crops on which no special assessment is levied by Government you will hardly find any appreciable change in the acreages for decades together. The season and crop report records that there are about 1,08,000 wells in Coimbatore District and any observer would have noticed paddy having been grown under almost each well to an extent of  $\frac{1}{2}$  to 1 acre if not more, during these years of war and thereafter. This must result in at least an additional acreage of about 50 to 75,000 acres under *unirrigated paddy* for this district, whereas the figures recorded in the season and crop report for 1946—47 is 1,057 acres as against 384 acres recorded in 36—37. Now take again the area under fruits. The area under Mangoes in the Presidency in the year 36—37 is 2,44,945 acres whereas in 46—47 the area is recorded as 2,43,469—a decrease of 1,476 acres. Now, how do we explain this decrease in a decade, whereas normally there should have been a significant increase, in a period of ten years. We know that the total number of mango grafts planted in a year can be estimated in lakhs for the presidency and this should have occupied several thousands of acres in a period of ten years as against which we find a decrease



recorded in the reports. You will find similar anomalies in respect of several other crops. It is true that most of the fruit plants are planted in back yards, house compounds and not on a regular garden scale — but still the plants are there and therefore a drastic change in the system of recording such statistics is called for. It is necessary to calculate and count the number of trees for each village and reduce the total number on an acreage basis by taking 40 to 50 trees equivalent to an acre. I therefore submit that a revised outlook in the recording of primary statistics in respect of all crops which form the basis of all our schemes and plannings is necessary. The village statistician must either be replaced or assisted by an organisation for a better recording of statistics under the effective supervision of Agricultural Officers in respect of both extent and yield. The crop estimation now entrusted to inexperienced Revenue officials must be handed over to the Agricultural Department for a correct recording of production of Agricultural commodities.

**Possible scope and lines of increasing production.** Let us now first consider the possible scope of increasing production and the quantities that can be produced on the existing area under food crops itself. Our experience has shown that by the conjoint application of all varietal, cultural, and manurial improvements to a particular crop, the yield can be increased considerably. It can be increased in many cases by more than 50% but it should never be difficult to increase the production by 25% if we are able to put all the above improvements on to a particular holding. This is not difficult provided there is an efficient organisation of staff and equipment for each taluk.

TABLE.

Estimated increase of production of food crops on the assumption of 25% increase in yield.

Crop	Approximate area in the Presidency.	Average yield per acre lbs.	Increase in yield at 25% per acre.	Total extra yield Tons.
Paddy - Irrigated	80,00000	1787	1/5 ton	16,00000
Paddy - Unirrigated	70,00000	1300	1/7 ..	28,5000
Cholam - Irrigated	40,0000	1465	1/6 ..	66,000
Cholam - Unirrigated	45,00000	575	1/16 ..	28,0000
Cumbu - Irrigated	30,00000	1205	1/7 ..	40,000
Cumbu - Unirrigated	20,00000	546	1/16 ..	12,5000
Ragi - Irrigated	95,0000	1493	1/6 ..	15,8000
Ragi - Unirrigated	70,0000	715	1/12 ..	58,000
Korra	1450000	385	1/22 ..	65,000
Vatagu	92,2000	840	1/10 ..	92,000
Others	50,0000	435	1/20 ..	25,800
				27,94000
Paddy	...	1,88,5000 tons.		
Millets	...	90,9000 tons.		

It is therefore seen that if it were possible to increase the yield of food crops in the existing areas by 25% we would reach an extra production of nearly 2 million tons of paddy and one million tons of millets. It should not be difficult to produce this extra quantity of food by promulgating proper legislation and by the re-organisation of agricultural department for which details have to be worked out.

**Production of food in Cultivable wastes.** There is yet another field as vast if not vaster than the above for the increase of food production. Out of a total area of 80 million acres in the Presidency, about 52 million acres are said to be cultivable of which about 31 millions acres are actually cultivated every year. Thus there are 21 million acres consisting of 12 million acres under cultivable waste and 9 million acres under current fallows and the possibilities of bringing under cultivation of food crops even a portion of this area merits serious and immediate consideration. This is a gigantic task, if it is to be tackled effectively. There was a time when price of food grains was so low and production of food crops was so un-economic, that even extensive areas of fertile arable lands were abandoned in certain areas. These conditions should not exist now. Agriculture is paying under present conditions and the state must see that the price of food crops and agricultural commodities are always maintained at economic levels by proper legislation and crop planning.

**Mechanised farming - the Panacea.** Mechanised farming must largely come to our succour to solve the problem of tackling cultivable wastes. In the future programme of agricultural work mechanised farming must form an integral part and parcel of planning, for food production. Take any district. You have lakhs of acres under fallows and wastes. This cannot be tackled economically and expeditiously with bullock power. Tractors and Bulldozers, not in ones or twos for each district, but in hundreds are required.

It is a problem for the Agricultural Engineers to calculate the number and type of Units required for each district based on the extent of land available in each district. The tractors and Bulldozers in each taluk must be under the control of a District Engineer who will be a technical assistant to the District Agricultural Officer in arranging for programme of field work. It is very necessary to merge the Engineering section with the District Staff to achieve complete collaboration and co-operation. Certain conditions should be specified for the renting of tractors to ryots - viz. priority and concession should be given to ryots who agree to grow food crops for certain number of years. The amount of rent fixed may be collected in cash, or in instalments under sufficient security or partly subsidised by Government to encourage food production. Imagine the possibilities of food production, if even a fraction of 21

million acres is brought under cultivation. The supply of pump sets, oil engines, assistance for well digging, electric power etc., for these areas will greatly augment production.

**Soil conservation Department** - a separate wing to be opened. Colossal loss sustained by soil erosion is well known. Factors contributory to soil erosion are mostly agricultural practices of omission and commission. This problem must be tackled by a separate wing of the department to be called as a *Soil Conservation Department* as is done in countries like America and South Africa. We cannot achieve concrete and appreciable results by entrusting this work as a subsidiary item to the Agricultural Demonstrators engaged on general items of work in the districts.

**Possibilities of Irrigation in respect of crop production.** It is well known that the yield of a crop under irrigation is almost double that under dry conditions. Hence increasing facilities for bringing more area under irrigation must be a most potent single factor in increasing production. Of course there are the great river valley schemes and major irrigation works on hand which are expected to completely change the economy of Indian Agriculture when they are completed. There are long range programmes with immense possibilities for our country - both agriculturally and industrially. But, long before that, we have to think in terms of immediate attention to minor irrigation works. There are hundreds of small wells and tanks in each district which can be renovated and made useful for irrigating more land. Remember that one new well dug-means at least 5 additional acres under irrigated crops.

**Extension of rural electrification scheme.** Simultaneous with the extension of irrigation facilities by way of repairs to minor irrigation works and subsidised well digging, the extension of rural electrification scheme must be speeded up. Electricity has become the handmaid of agriculture as in industry.

**Conclusion.** In conclusion, I submit that our Department has a great and responsible role to play in the development of food production in this province. We appeal to the government and to those in authority to work the comprehensive plan of food programme, already on the anvil and take necessary steps to give practical shape and form to the various suggestions made in this paper.

