

## What Next in Agricultural Extension

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**Introduction:** The Agricultural department has been ceaselessly putting forth its efforts on the research and extension sides to better the lot of agriculturists who form the backbone of India's economy. Beginning with a handful of staff early in the century for the work of surveying the local agricultural practices and chalking out improvements, the department has gained much importance especially during the Second World War and shouldered the responsibilities of meeting the demands of farmers during the operation of the "Grow More Food" Schemes in respect of improved seeds, chemical fertilizers, iron and steel for fabricating agricultural tools and implements and supply of engines and pumps for irrigation purposes. The darkest days of food shortage have been tackled and now, though the food problem has considerably improved, the efforts of the department have not slackened and a closer network of field staff has been organised during this year.

In this paper, it is proposed to deal with the achievements so far gained, the needs of the farming population, and the future lines of work to be followed towards their economic uplift.

**Recent achievements of the agricultural department in extension work:** The residuary Madras State has 62% of its population engaged in farming. The agricultural policy and achievements in recent years are briefly as follows:—

**Grow More Food Campaign and Five Year Plan.** The G. M. F. Campaign was in operation from 1942 to 1949-50. The department distributed seeds of improved crop strains, manures and fertilizers, iron and steel for implements etc. at controlled rates, when due to inflation of prices they went beyond the purchasing capacity of the farmer and mostly disappeared from the open market.

In the meantime the Five-year Plan was launched from 1951 to 1955, with provision for 9 crores under agricultural improvements and 31 crores under irrigation schemes. The irrigation schemes included 'short-term' programmes of tank restoration,

'medium-term' projects like Malampuzha, Manimuthar and Amaravathi and the 'long-term' programme of Lower Bhavani calculated to benefit 3,83,000 acres on the whole.

*Well-subsidy scheme:* As a direct help to agriculturists, advances were given up to 50% of the cost of sinking a well and a farmer could receive the help to a limit of five wells. This was in operation from 1944 to 1951-52.

*Filter-point tube-well scheme:* The latest irrigation aid advocated since 1951, is the 'Filter-point tube-well' Scheme. This is designed to help the delta regions to grow a remunerative crop of groundnut or cotton in the fallow period, besides the paddy crop raised in the normal season. In addition, the paddy nurseries can be grown in advance of the receipt of channel water to enable early planting and getting higher yields. 1,060 filter points have been installed till 1954 and 600 more are expected to be completed during 1955.

**Manures and Fertilizers:** (a) *Green Manures:* The campaign on green manures and trial of different types like daincha, sunbemp, wild indigo, pillipesara and *Sesbania speciosa*, for the wetlands resulted in recommending the cosmopolitan variety viz., *Sesbania speciosa*. This is very easy and cheap to grow, stands water-logging, yields seeds while growing along the bunds with the paddy crop and is the heaviest yielder of leaf per acre.

Among other leaf-yielding shrubs, *Gliricidia maculata* is the best, though *Indigofera teysmanni* is better suited for the West Coast.

(b) *Composts:* The municipalities are increasingly taking to production of nightsoil compost, as it is very remunerative. The individual farmers have also become compost-minded; they prepare composts in their own holdings and buy large quantities from municipalities also.

(c) *Chemical fertilisers:* The drive for increased production has made farmers go in for chemical fertilisers like ammonium sulphate and fertiliser mixtures. The annual sales in the residuary Madras State through the Agricultural Department is about 50,000 tons.

(d) *Oil-cakes:* Since a decade groundnut cake is so very extensively used as manure that cattle could not be fed with this cake in sufficient quantity. Out of a total production of three lakhs of tons, nearly two lakhs are applied to the land.

(e) *Other organic manures:* (i) Cattle dung—Only 50% of the estimated production of 20 million tons of cattle dung in the composite State is applied to the land and the rest is used partly as fuel and partly not collected at all.

(ii) Bones of Cattle: 1.5 lakhs of bones are estimated annually in the composite State; out of this, nearly 20% is collected, powdered and used as manure. The rest is going to waste.

**Improved Seeds:** As improved seeds contribute to nearly 15% increase in yields of food crops, seed farms are being run in the State for paddy and millets, seeds procured and distributed to a tune of nearly 4,000 tons of seed paddy and 38 tons of millet seeds in 1953-54 (residuary Madras State). A quick method of multiplying and distributing departmental strains of paddy seeds has recently been launched in the State known as 'Village Seed farm Scheme'. Village Agricultural Associations are formed, a few reliable farmers are selected from them and better strains of seeds are distributed to them at the rate of one pound for every acre under the crop in the village. An undertaking is given by the ryots who receive the pure seeds from the department that they would distribute the multiplied seeds to other farmers of the village in exchange for their local seeds raised by them. This system obliges the department to supply seeds only for the village seed farm areas and not to the entire village population.

**Mechanised Cultivation:** Farmers take recourse to mechanised farming to reclaim new areas and to carry out timely operations over extensive areas. To assist them in this direction, the department owns 159 tractors, of which 85 are fitted with bulldozer attachment and hires them out to farmers on request.

In respect of irrigation aids to replace human and animal power, oil engines and electric motors are being increasingly put to use. Here also the department comes to their help by offering on hire 1,726 oil engines and 411 electric motors which can command an area of 16,600 acres.

**Agricultural Loans:** Loans were advanced to farmers by the Revenue, Co-operative, and agricultural department for specific purposes, to the extent indicated below, in 1953-54.

Co-operative department	...	422 lakhs
Revenue department	...	18 lakhs
Agricultural department	...	14.28 lakhs

For the year 1954-55 provision was made for the agricultural department for disbursement of loans up to 70 lakhs for manures, 5 lakhs for tractor purchase, and 14 lakhs for pumping equipment.

**VI. Soil Conservation:** The Soil Conservation Board was constituted in 1951. It is tackling soil erosion problems in the Nilgiris and Malabar districts and portions of Coimbatore district. In Ketti valley (in the Nilgiris) 300 acres have been taken on hand under Soil Conservation programme.

Loans are also disbursed at Rs. 300/- per acre up to a maximum of Rs. 1,500/- per individual for carrying out Soil Conservation works.

As a famine relief work 5,752 acres have been contour-bunded in Coimbatore district.

**Plant Protection:** The plant protection work of the department was initiated in 1949. The chemicals used viz., B.H.C., D.D.T. and fungicides are sold at 50% of the cost price in areas declared as pest-infected for application to food grains, vegetables, chillies and betelvine. The area covered by the plant protection staff was 2.9 lakhs of acres in 1951-52 and expanded to 9.4 lakhs of acres, saving 48,000 tons of food grains valued at 1.3 crores of rupees.

The quantity of the various chemicals used by farmers increased from 500 tons in 1951-52 to 3,117 tons in 1953-54.

The increase in the yield of rice as a result of executing various schemes by the agricultural department amounted to 2,31,420 tons in 1953-54, by adopting the following improvements:

Ammonium sulphate & Superphosphate application	...	1,37,476 tons
Green manures	...	80,818 "
Improved seeds	...	6,455 "
Use of Tractors & Bull dozers	...	3,455 "
Filter point tube wells	...	2,915 "
Oil Engines and Electric motors	...	318 "
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	Total	2,31,420 tons

**The requirements:** After listing out the achievements by the department, we may now indicate the requirements by farmers.

The present policy of an all-out aid deserves to be continued in respect of distribution of pure seeds, manures, filter-point scheme, hiring out tractors and pumpsets, plant protection, regulated markets for commercial crops etc.

The most essential need of the hour besides the availability of the facilities enumerated above is easy credit for several items of farming. Loans are already being granted by different departments but it takes time for disbursement. An additional facility would be the institution of an organisation which can advance loans on pledging produce, exchange pure seeds for local seeds, distribute the agricultural needs of the farmer in the village. This will totally rid the cultivators of the necessity of obtaining credit at very high rates of interest ranging from 12% to 36% and playing into the clutches of merciless money lenders who are now standing in the way of the economic advancement of farmers.

**Future Line of Work in Agricultural Extension:** 1. The items of extension work now pursued must be organised as a network covering a wider area, enabling them to be within the easy reach of agriculturists from their villages.

2. The needs of the farmer have to be met by a multi-purpose device set up in each village to distribute finance for timely field operations, seeds, manures etc. for cash or in exchange for his commodities and also arrange to stock the produce and dispose it off when prices are favourable. The organisation is to be entirely managed by village leaders under the guidance of the Government; the initial financial outlay being advanced by the Government for equipping the Society with godowns etc., on long-term repayment basis.

3. The agricultural department on receipt of indents to will supply the godowns with stocks of seeds, manures, agricultural machinery etc. and transport them through mobile units to the village godowns on 'no loss, no profit' basis.

4. In projects like distribution of manures, plant protection, chemicals and equipment, essential farm implements and pumping units, the Government can enlist the co-operation of approved dealers in the above articles in stocking, carrying on propaganda and sales by sharing the cost involved in running the scheme i. e. cost of stocking, staff engaged in distribution etc.

At present each organisation is establishing a separate unit for the same item of work. By pooling the different organisations and sharing equally the cost of running the project, better work can be executed at lesser cost. Pooling comes in only at the ex-production stage.

5. Reviving the mobile vans with agricultural exhibits and running exhibition trains will greatly assist in impressing the population with agricultural progress.

6. Intensifying the community projects work and setting up a permanent exhibition of agricultural improvements in important towns and villages.

7. Running State farms or colonising new stretches of reclaimed land on Gezira model, which is briefly as follows:

The Gezira Scheme of Anglo-Egyptian Sudan, functioning on the triangle of land lying between the Blue and the White Nile over 5 million acres is a thought-provoking experiment representing a compromise between nationalisation of land and communal farming and individual ownership by small peasant proprietors. It is nationalisation diluted by being subject to a fixed period. There is a tinge of socialism in that land improvement necessary in individual cases is carried out at the cost of all, but not socialised to the extent of pooling the profits.

The financial burden is borne by the Government and two private companies. The Government is responsible for provision of land, construction, maintenance and operation of the dam, maintenance of main canals and payment of rent for the land. The companies maintain the subsidiary canals, supervise cultivation, collect and store cotton crop, advance loans to tenants, work the ginning factories and market the crop. The tenants grow the crop under supervision by providing labour (water and land are free for cotton as well as other food and fodder crops) for which loans are given on easy terms.

The profits are shared as follows:

Government 40%, Companies 20% and Tenants 40%.

Extensive lands now lying fallow and which are contemplated to be brought under cultivation as in Athur of Salem district deserve a trial on the above lines.

**Summary:** The subject is dealt with under three main heads viz., what has been done so far with the resultant achievements, what is the need for the hour and how best requirements can be met for the benefit of the farmers. The achievements in Grow More Food Scheme, manure distribution, irrigation facilities, seed supply, mechanised cultivation agricultural loans, soil conservation and plant protection are described. Among the needs of the farmers easy credit for cultivation, storing and marketing facilities are stressed. As a future line of work, intensification of extension branch, institution of an agency for not only meeting the financial needs of the farmer but for stocking produce, advancing loans on pledged commodities, supply of agricultural needs and marketing is mentioned. A fruitful way of enlisting the co-operation of trade in items that are common to both, utilising vast areas of newly reclaimed land on the model of Gezira is suggested.

#### REFERENCES

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