STUDIES ON THE EFFECTIVENESS OF RESULT DEMONSTRATION AS A MEDIUM OF DIFFUSING INFORMATION AMONG THE TILLERS OF THE SOIL*

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OF the various methods followed to convince farmers about the adoption of an improved practice the use of field demonstration is, perhaps, the most common. All through the ages, the agricultural improvement in the country has been so built up. The intelligent farmers themselves, by chance discovery of something good in their fields, have been responsible for its spread in the neighbourhood. The process of village improvement, therefore, is basically the same. This has strongly been recommended by the Royal Commission on Agriculture in India (1921) and the various other committees and teams appointed for agricultural improvement from time to time. With the advance of science and technology, however, a mass of useful information based on empirical data, is available at the research stations to be quickly applied on the fields of the farmers. But the slow pace with which the research findings are taken up by the farmers is most distressing. There may be many reasons for the same but the most obvious one appears to be the lack of enthusiasm among farmers. To overcome this, attention should be focussed on education. The term has been used in its wider sense where an informal, out-of-school, teaching is imparted for bringing about a change in farmers' attitude. There are various ways of doing it and the most effective one under the conditions of Indian farming will be to provide local proof of the superiority of an innovation over the practice followed by them. It should be shown to the farmer in a simple and understandable manner. His mind is swayed more by seeing than by hearing and more by doing than by knowing facts. A demonstration carried out on his own field with work done by him will be a convincing proof about the adoption of a certain practice. The demonstration should be based on the local needs without demanding extraordinary skill and resources from the farmer. It should be technically sound and only those practices which would not be difficult to catch on should be introduced.

Having the above background in view, an investigation to find out 'the effectiveness of result demonstration as a medium of diffusing information among the tillers of the soil' was carried out in certain villages of Kanjhawala block in the Delhi territory. The resultes reported in this paper purport to discuss the first part of the study, that is, the success of demonstration in increasing the yield of wheat by introducing improved practices.

Methodology

The research project was started in the year 1962 on a compact group of five villages namely Naharpur, Mangolpurkalan, Mongolpurkhurd, Puthkalan and Begumpur forming part of the Community Development Block Kanjhawala and situated at a distance of 10 miles from Delhi. The main approach to these villages is through a metalled road running from Delhi to Kanjhawala.

The soils are generally light ranging from sandy loam, loam to clay loam with a climate characterised by hot summers and severe winters. The average annual precipitation is about 759 mm. and most of the rain is recieved during the July to September period. About a third of the entire area is irrigated.

The villages named above were the venue of operation while another group of five neighbouring villages having similar conditions were kept as 'control'. They are Rithala, Karala, Mohammdpur Mazri, Kerari, and Nithari. They also form part of the Kanjhawala Block.

Two groups of matched farmers, ten from each of the five villages under the operational and 'control' groups were selected as respondents. Due to the specific requirements of the project, attention was given to selecting only those farmers having similar conditions in regard to the size of holdings, education, age, resources, fertility condition of land and irrigation facilities available.

From among the farmers in each village of the operational group one, at random, was selected to carry out the actual demonstration of a composite type with wheat which is the main *rabi* crop of the area and comprises 40% of the cultivated land during the season. Along with the demonstration plot the cooperating farmer was allowed to carry on his wheat cultivation on the contiguous plot in the usual way. The rest of the nine farmers from the same village were made to closely watch the demonstration, at its various stages, viz., sowing, application of fertilizer and weedicide, boot-stage, maturing and harvesting of the crop. The farmers from 'control' villages were not brought to the site of the demonstration in order that the diffusion may be studied, it the natural way. Before the commencement of the study however,base-line data regarding knowledge, understanding and attitude of all respondents in both groups were collected.

Treatments & Findings

The improved practices included in the composite demonstration were based on the recommendation of the specialists and consisted of the following:—

(1) Improved seed

(2) Plant protection measures (use of BHC and Agroson GN)

(3) Fertilizers - Ammonium sulphate and super-phosphate @ N20 and P 20 pounds per acre.

(4) Chemical weeding—

spraying of sodium Salt of 2, 4-D @ 1.4 Kg. per hectare.

The demonstration was carried out on an irrigated piece of bigha of land (0.2 ha) and the work was done by the farmer himself under instructions.

Some of the practices such as improved seed and implements were adopted by the cooperating farmers on their other fields also and hence the main difference lay in the application of improved practices other than seed which was common to both.

The results of the composite demonstration held in the five villages with yield obtained by each farmer on both the demonstration and control plots are given in the following table.

The statistical analysis of the data has shown significant difference at 1%level in favour of improved practices.

The highly significant yields obtained with the innovations establish the technical soundness of the recommendations, their adaptabi-

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Name of the Village	Name of the farmer	Yield Q/ha. Demonstration A	Yield Q/ha. Control B	Difference (A—B)
Mangolpur Khurd	Sh. Attar Singh	26.52	19.36	7.16
Mangolpur Kalan	,, Randhir Singh	21.90	19 02	2.88
Begumpur	,, Tek Chand	24.90	20.98	3.92
Poothkalan	,, Mangat Ram	33.02	23.98	9.04
Naharpur	,, Mir Singh	33.43	26.89	6.54
Dif.	5.91 (Av.)			
SEd,	±1.11			
T	5.30			

lity under local conditions and their meeting the needs of farmers. The high yields obtained in the composite demonstration through the use mainly of fertilizers, plant protection measures and weedicide need a further evaluation with regard to their economic soundness as shown in the following table:—

INPUTS/HA

FERTILIZERS

45.4Kg. ammonium sulphate @ Rs. 360/-per ton. Rs.38.68

56.7 Kg. superphosphate @ Rs.220/-per ton Rs.29.53

PLANT PROTECTION MEASURES

Cost of 2, 4-D at 1.4 Kg. and application of weedicide Rs.20.58

Cost of B.H.C. (9kg. 5% dust) Rs. 7.80

Cost of seed treatment with Agrosan G N (1:400 part by weight) Rs. 0.96

Rs.97.55

RETURN/HA

Extra yield of 5.91 Q/ ha of grain was gathered Rs.300.86

It would appear from the above table that the inputs gave a good return. The margin of profit would increase further if the cost of extra straw (bhusa) was taken into consideration.

The above results confirm the earlier finding of Khan (1960) and Khan and Kumar (1961) with demonstrations on wheat in the Delhi villages. Besides wheat similar results with improved practices were obtained on pearl millet (bajra) by Khan and Sharma (1963). The role of agronomic practices to help the germ plasm of seed in giving full expression to its potential has been fully established. Success of wheat demonstrations in Aligarh district was also noted by a team of workers from the University of Delhi (1964). The best achievement of results will largely depend on the competence of the worker in subject matter and the following of correct techniques. This has been emphasized by Dube *et al* (1962), Chakravarti (1960), and Khan (1962) besides others.

Summary

An investigation to find out the Effectiveness of Result Demonstration as a medium of difussing information among the tillers of the soil, was carried out in five villages of Delhi, each having one demonstration. The first part of the study, that is, the quality of innovations applied simultaneously to raise yield of wheat corp has been discussed in this paper. The superiority of technical recommendations over the local practices has been clearly established. It has been shown that the yield can be raised by applying such techniques which the farmer can easily take up on his land. The combined effect of different factors responsible for about 17 per cent was obtained which was sufficient not only to offset the extra expenditure on the inputs but also to give a handsome profit. The selection of practices will, however, depend on the local need, resources, skill of the farmer, supplies available and the net gain in adopting an innovation. The situation should be carefully sized up before recommending the practices to the farmer.

A carefully conducted 'Result Demonstration' is the most convincing proof of the superiority of an innovation and bringing about confidence among the farmers to adopt the new practices in preference to their own. It is a very effective educational tool and should form the basis of agricultural improment in a village.

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