

Integration of Agricultural Education and Research — Plant Breeder's View

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A survey of the development and functions of agricultural extension of the various countries of the world including India has been discussed by Brunner, E. et al in the book (1) "Farmers of the world" and this forms a good background for the present discussion on the subject. The fourteen articles compiled in it give a clear picture of the progress made in extension work in both the advanced and the backward areas of the world. It is observed that extension work has been efficiently felt in advanced countries like U. S. and U. K. where literacy and education are high. It has taught the farmer the knowledge to increase his income and has encouraged him to grow his own food, set a good table and live well. Besides this, the extension section has taught him to appreciate the privileges of the country life, to know something of the world he lives in and to improve his natural talents. The younger generation is also tackled to promote social, cultural recreational, intellectual and spiritual life, to mature them into good citizens. The ambition of extension is to improve the life of villagers of whom a farmer plays the most important part. In the backward countries, unlike the advanced one, extension ideas are thrust on the farmers. The extension work is handicapped due to lack of education and want of research on local problems. The quality of the extension worker is also poor as he is neither a practical farmer nor a scientific worker.

What is the position of our extension? We can place it midway between those of advanced and the backward areas. The agricultural extension worker is usually a product of an agricultural college who has gone out in the district with a fairly good knowledge of theoretical agricultural science. His practical knowledge is not extensive but he widens it by his personal initiative and by moving with cultivators. His touch with latest trends in research however remains inadequate as his movement with the research workers has not been frequent. Because of this bottle-neck he is neither able to bring the problems of the cultivator efficiently to the research worker nor is he able to carry back to the cultivator the achievements of scientific research.

Thanks to the food self sufficiency drive which became imperative to the working of the Five Year Plans successfully, agricultural research and extension have taken up a new phase of life and have been modified on the lines of the advanced countries. The agricultural education also is being re-orientated by conducting seminars by the teaching staff of the various Agricultural colleges of this country to bring about the integration of agricultural education, research and extension. (2) From the plant breeders' angle also this integration is necessary. A few years back improved seeds were mostly of pureline selection. They have now been replaced by seeds evolved by hybridisation involving single or multiple crosses, later purified for economic characters. The recent developments in the use of hybrid strains also have come to stay. In Madras State for instance, hybrid strains in Bajra (Pearl Millet) have been evolved but their spread is rather slow due to want of efficient private organisations for seed multiplication and distribution. In advanced countries like U. S. A., special seedsmen have taken up to the production of hybrid seeds in crops like Sorghum, corn, etc. through special techniques like cytoplasmic male sterility. The cultivator who is educated knows that these seeds are to be obtained only from reliable seedsmen. He is also well informed that the grains he produces from the hybrids are not to be used as seeds as they have the potential danger of reducing the yields if grown in subsequent generations. The value of synthetic hybrid and its possible utilisation through two to three generations is known to him. All these technical details have been brought home to him easily because of his education and the operation of the efficient extension workers and private organisations for seed multiplication who have developed high scientific skill. Similarly every respect of Agricultural Science has some intricate systems which can be learnt only through education and powerful extension.

The literacy in India is getting steadily increased. Hence it is the duty of the Agricultural Ministry to organise agricultural education which is fundamental for the research and extension. The rural universities which combine research, education and extension together, would be the ideal answer to it.

The extension will be a failure unless the American definition of extension "Extension is what extension does" is followed and its success is in the hands of efficient, well paid and contented extension workers who work with altruistic zeal.

REFERENCES

1. Burnner, E. et al Farmer of the world. 1954 Columbia University Press. pp. 1 to 208.
2. This refers to the recent Seminar of the Principals and teaching staff of the Agricultural Colleges of the southern states held at Trivandrum in May 1957.