

## Some Suggestions for Intensifying Plant Protection Work

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Seven years ago, when the Plant Protection Service was inaugurated in South India in 1949, there was a feeling of pessimism in the minds of the public with regard to its success. It was a time when the ryots were already fed up with methods of control like hand-picking, netting, pruning and the slow-acting pesticides like tobacco-decoction fish-oil soap etc. The introduction of quick-acting chemicals like, BHC, DDT, Zinc phosphide and the intensive propaganda and demonstration of pest control operations organised by the Plant Protection staff, dispelled this idea and the ryots are now convinced that Plant Protection service is quite indispensable for stepping up crop-production. Indeed, we have now reached a stage when our services are largely sought after and appreciated instead of our services being reluctantly accepted as before. The ryots have now become pesticide-minded and they are very particular in preventing the incidence of pests, rather than controlling them after their appearance.

The progress we have achieved in the field of plant protection can be easily gauged from the demand for pesticide everywhere. The annual sale of pesticides in departmental depots in 1948 which was only a few hundred pounds, has progressively increased to hundreds of tons. Now a situation has arisen when the departmental depots alone cannot handle the entire supply of pesticides to the public. The merchants were quick in cashing in the good work done by the department in the popularisation of pesticides. A large number of private dealers have entered the field and they are now almost competing with our department. Of course, it is a welcome feature and it should be encouraged, provided no malpractices are tolerated. Instances have been however reported where 10% BHC has been substituted for 50% BHC, and Zinc phosphide adulterated with charcoal powder and sold at a cheaper rate. If such a state of affairs is allowed to continue, the public will lose confidence in the efficacy of all pesticides. Such fraudulent practices should be put an end to and the pesticide trade so regulated as to provide maximum benefit to the ryots.

Formerly, we had only a few reputed manufacturers of pesticides and fungicides catering to our needs. But with the large-scale use of pesticides, new concerns have been started to meet the growing demand.

As usual, unhealthy competition has resulted in price cuts and consequently degeneration of quality and efficacy of the drugs may soon follow. If the pesticide industry is to serve the cause of agriculturists, it is imperative that the Government should have strict control over the manufacturers. Rigid standards and specifications should be fixed for each type of pesticide and packed according to prescribed standards. In order to regulate the pesticides trade, the following suggestions are given ;—

(1) All the manufacturers should be licensed and their products tested for active ingredients they are said to contain.

(2) As far as possible, pesticides should be packed in air-tight containers, which will remain unaffected during transit and storage. The name of pesticide, percentage of active ingredients, date of manufacture and directions for use should be noted on the containers. The manufacturers should also market small packings of 5-10 lb. to facilitate retail sale and prevent adulteration.

(3) The merchants who deal in pesticides should also be licensed. Periodical analysis of samples drawn from their stock should be done to prevent malpractices. The plant protection assistants should be invested with powers to draw samples and check malpractices.

(4) Dangerous pesticides like Folidol, Zinc phosphide, Agrosan, GN, etc., should be issued only on the authority of the plant protection assistants.

The present set-up and organisation of Plant Protection service is inadequate to meet the problem of pest outbreaks in a comprehensive scheme of intensive agriculture. The complexity of the pest control problem is fast increasing, with the introduction of numerous potent and dangerous pesticides like Chlordane, Toxaphene, H. E. T. P., Parathion, Schraden, Folidol, Endrin, Aldrin, etc. These require careful handling, systematic trials and assessment of results, before they are recommended to the ryots at large. There may come a time when some of our present-day popular pesticides like, BHC, and DDT will become obsolete and ineffective. Already reports are being received about the tainting quality of BHC and cumulative effect of DDT. Furthermore, insects develop resistant strains of their species against these insecticides. They respond to every new scientific offensive of man with a strong defence. Thus our search for newer and more effective drugs, along with useful parasites and predators should proceed unceasingly, until we are free from the ravages of pests (and diseases. All these call for an elaborate organisation of highly-trained personnel to combat effectively pest and disease outbreaks. The following suggestions are offered in this regard,—

The Plant Protection staff should be organised into a separate section, with a network of specially trained field staff for each district. There need not be separate assistants or officers for Entomology and Mycology. Instead of stationing two assistants at the district headquarters as at present, each revenue division of three taluks must have an assistant, who should be in charge of both pest and disease control work. There should be a responsible officer for each division of three districts to supervise the work of the assistants in the division against large-scale pest or disease outbreaks. These divisional plant protection officers should be guided and controlled by the Government Mycologist and Government Entomologist as far as the technical side is concerned. For quick transport of men and materials, there should be a mobile unit attached to each divisional officer. Each unit should be fully equipped with power dusters and sprayers, hand-operated dusters and sprayers, spare parts, adequate stock of pesticides and fungicides, field equipments, etc.

In view of the backwardness of our ryots, who cannot take initiative themselves and carry out our instructions, it is imperative that the department itself should take control measures in all pest-affected areas. Suitable amendments should be made in the Pest Acts to enforce this provision. The cost of control measures can be collected along with land tax on acre basis.

In fine, plant protection service has got before it a wide field of useful work and with due encouragement from the government and the public, it is bound to play its rightful role in safeguarding crops from the onslaught of pests and diseases. It is very encouraging to note that provision has been made in the Second Five Year Plan to open more plant protection centres in the near future. This will certainly help a great deal in increasing not only the production of food crops, but also commercial crops that contribute to the prosperity of the nation.

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