

**STUDY OF EXTENSION OF PLANT PROTECTION
MEASURES IN AGRICULTURAL PRODUCTION, 1968**

1. The Study

The Programme Evaluation Organisation carried out a comprehensive study of extension of plant protection measures to assess the impact on the adoption of plant protection measures over the years, the relative success of plant protection measures in package vis-a-vis non-package areas and the support provided by the local institutions in the implementation of the programme.

2. Objectives

- i) To analyse reasons for the slow progress made by the programme of plant protection measures;
- ii) To assess in the context of the Third Plan, the factors and facilities available and needed in respect of organisational arrangements, supplies and extension measures for achieving the plan target; and
- iii) To investigate how and to what extent plant protection measures have been taken up by cultivators, individually and collectively as one of their improved agricultural practices.

3. Sample Size/Criteria for Selection of Sample

15 states and Himachal Pradesh were selected. In each State two to three districts were selected, one of which was an Intensive Agricultural Programme District (package). out of the other districts in the States, one or the other district having more than the average irrigated area but having low average yield of principal crop among all such districts, were selected.

In each district two blocks were selected for further investigation. In each of the blocks five villages were selected. One of these was the head quarter village of V.L.W. 10 households per village were selected. The total number of households selected was 3,749 of whom 3,084 were owner cultivators, 320 tenant cultivators and 345 others who had also some cultivation holdings.

4. Reference Period

The study was completed in 1968 and the data were collected for the years 1956-57 to 1961-62.

5. Main Findings

1. During the plan periods there was considerable progress in respect of the crop area covered by the plant protection measures as well as in the consumption of pesticides. Though the legislation existed in most of the states to control the outbreak of pests/diseases but the States had not enforced the Act.

2. Planning for plant protection in many cases was mainly in terms of coverage of area and supply of material. These targets were mainly worked out on the basis of availability of funds, staff and the previous achievements rather than on the basis of the requirements of the area.

3. Extension staff exclusively for plant protection was available in many states upto district level while at the block level and below, this work was looked after mainly by the regular extension workers.

4. Research on plant protection had been mainly problem oriented according to the felt needs of the areas and mainly carried out in the general agriculture research stations. The intensity of research widely differed from State to State and considerable time lag was reported for the results to reach the cultivators.

5. The supply arrangements for plant protection material were reported to be far from satisfactory at the village level.

6. Of the various plant protection measures, the chemical control measures were better known and adopted by the cultivators compared to cultural measures and mechanical measures. The chemical measures for preventive and curative treatment were known to about 30% and 41 per cent of the sample cultivators respectively while the actual adoption was limited to less than a tenth and less than a fifth of the cultivators for the two types of treatment.

7. The level of knowledge and adoption was higher in the package areas among the bigger cultivators while in the non-package areas the reverse trend was discernible to some extent. This approach of the extension **agency** although might lead to larger coverage in terms of area, would not extend the benefits of the programme to a larger number of cultivators.

6. **Main Suggestions**

1. **Many of the plant** protection measures by their very **nature** require community adoption for effectiveness, therefore, the legislation should be simplified and extended in scope to be of any use.

2. With greater emphasis on plant protection under the present-programme of intensive cultivation a more scientific approach is necessary in planning Plant Protection Programme The prophylactic plant protection measures including seed treatment, eradication of rodents, predatory birds, weeds, etc. are quite amenable for advance planning .

3. A well directed and coordinated approach to research is needed and should be tackled on regional basis. The time lag reported for the results reaching the extension staff and the actual adoption in the fields should be substantially reduced.

4. Inadequate extension efforts were reported from the field in many states. Organisation of special campaigns, particularly for prophylactic measures and organisation of demonstration on an increasing scale are suggested. The extension efforts should be more systematic in approach. It is necessary to prepare a control chart for various pests/diseases crop-wise before each season and wide publicity should be given with efforts to cover the area under required measures.

5. There was need for a more rational and firm basis for subsidised supply of plant protection material. These facilities should be extended not only for the supplies made by the institutional agencies but also for the private retail agencies in the shape of rebate on sales. Hire-purchase system for supply of equipment was not yet popular and this may be tried on experiment basis in selected areas.