

**STUDY OF THE MULTIPLICATION AND DISTRIBUTION
PROGRAMME FOR IMPROVED SEED - 1961**

1. The Study

The study was undertaken by the Programme Evaluation Organisation (PEO) at the instance of the Planning Commission to assess the operation of this programme and the difficulties and hindrances faced in its implementation. The distinctive feature of this study was also to analyse the impact of the improved seed programme on the basis of field data collected at different levels.

2. Objectives

- i) To assess the progress achieved in the release, multiplication, distribution and extension of improved varieties of seed;
- ii) To analyse the problems faced and the hindrances encountered in the implementation of the programme for the multiplication and distribution of improved seed; and
- iii) To crystallize issues and suggestions bearing on directions of improvement on the programme.

3. Sample Size/Criteria for selection of Sample

The method of sampling was purposive at the district or equivalent level and stratified random below it 32 districts were selected from the 14 States in consultation with concerned State Authorities in each State.. 21 of these were selected so as to represent the typical areas in each state in respect of the most important source of minor irrigation in it, at the rate of one district each in 8 States, two each in 5 States and three in one State. The other 11 districts represented areas under the command of 9 of the recently completed major irrigation works. In each of these district two blocks were included in the sample, except for one district in Gujarat and two in Maharashtra. 61 blocks were selected-from these 32 districts on a random basis. 3 villages were randomly selected from ' the restricted universe of villages having at least some

irrigation facility in each block to give a total village sample of 183. The final household sample in each village included a random sub-sample of 10 cultivators plus a purposive one of six knowledgeable persons to give a total of 1830 cultivator households in the random sample and about 969 persons in the knowledgeable group.

4. Reference Period

The study was conducted in 1960-61 and the data were collected for the years 1952-53 to 1959-60.

5. Major Findings

1. In neither of the two plans, the stages of seed multiplication concerned with the production of nucleus seed and breeders, stock seemed to have received much attention even though this aspect was considerably emphasized by the Royal Commission On **Agriculture**. Improved varieties, specially of paddy introduced during 1951-60 did not generally show as high a performance in respect of yield as those released earlier.

2. A fairly large number of varieties had been released and recommended; only a few of the old ones had been withdrawn. In 1959-60 about 900 varieties of paddy were on the recommended list in 12 States. In 9 States 69 varieties of paddy were released during the period 1951-61.

3. of the 61 selected blocks, 74% reported that they had made an assessment of their seed requirements. Fifty two per cent of the total blocks in the sample reported that the assessment was reviewed every year.

4. About 59% of the sample farms were above 30 acres in size, - 31% in the size group of 21 to 30 acres and the balance 10% below 20 acres. In spite of the general policy of setting up 25 acre farms at the block level (with some exceptions), the majority of the farms actually set up had been of larger size.

5. 82 per cent of the seed farms had storage facilities. Nearly 64 per cent of these stores were constructed by the Government while 36 per cent were rented from private agencies for storing the produce of the farm.

6. By and large the supervision, even where it was stated to have been exercised, had generally been of a routine type. Besides, it had not always been at the times when it was most needed.

7. It was observed that only in 5 per cent of the farms all the precautions necessary to maintain the purity of the seed produced had been taken.

8. of the personnel in position on the seed farms, only 32% were agricultural graduates. As regards the other staff of the farms, like field-men, demonstrators and others, only about 22% were diploma holders in agriculture.

9. An overwhelming majority of the farms (90%) were running at a loss in all size groups, the loss per acre being highest on farms below 20 acres. The farms had not yet proved themselves to be economically viable units. The production of foundation seed by the State had so far been an expensive proposition.

10. Majority of the farms on leased land (about 71%) were running at a loss. The loss per farm seemed, however, to have come down in 1959-60 from the level in the previous year.

11. Of the gross cropped area of the seed farms, 66 per cent were utilised for the multiplication of seed in 1959-60. Paddy and wheat crops accounted for 41 per cent of the gross cropped area of the farms in 1959-60..

12. The two most important characteristics of the wheat varieties being multiplied were high yield and resistance to pests and diseases. For paddy, the important characteristics were high yield, period of maturity and quality.

13. The average yield in 1959-60 of paddy and wheat on the seed farms was lower than on the farms of registered growers. The over all performance of the seed farms was not satisfactory and there had been a considerable scope for improvement.

14. About 51% of the registered growers in our sample were multiplying paddy seed, and 40% wheat seed in 1959-60 as against 35% and 30% respectively in 1958-59.

15. only 42 per Cent of the growers in our sample reported that they had signed an agreement for producing improved seed and for carrying out the operations necessary for maintaining the purity of seed produced in these farms. Nearly 61 per **cent Stated that**. The V.L.W. or the A.E.O. had supervised one or the other operation on their fields; but only 10 per cent stated that their seed samples were officially tested.

16. Of the total quantity of paddy seed used by the sample respondents, only 3.4% were obtained from the institutional agencies. About three fourth of the improved seed (74%) were reported to have been retained by the cultivators out of farm grown produce. in the **previous year, while** 21% were obtained by them from other Cultivators on credit, barter or cash payment.

17. About 61% of the sample of all **cultivators and** 43% of the knowledgeable ones had not used improved seed of paddy till the end of 1959-60. 74% of the cultivators who had not adopted improved seeds of paddy were prepared to use them, if some facilities or conditions were provided.

18. About 67% of the cultivators in the sample in the wheat growing states had grown wheat on 21% of their gross cropped area in 1959-60. 50% of the wheat area of the sample cultivators and 62% of knowledgeable ones were under improved seed in 1959-60. Of the area sown with such seed by the two groups, 56% and 57% respectively were irrigated.

6. Major Suggestions

1. The procedure being followed by the State Governments for drawing up their plans for seed multiplication and distribution needs to be strengthened in many respects. Firstly, such plans should be drawn up every year, and take account of the quantity required from year to year not only for the purpose of saturation of crop areas with improved seed but also for its periodical replacement. Secondly, it is desirable to include in the plan for extension of improved seed not only crops like paddy and wheat but also other foodgrain crops.

2. There is an urgent need for giving more attention to the operation and management of the seed farms and, in particular, to the exercise of proper supervision by technically competent officers at the district and higher levels. The need for imparting adequate training to the farm managers on the technical aspects of seed production can hardly be over emphasized. The quality and purity of seed produced on the seed farms can be guaranteed when the farm managers are properly trained in this direction.

3. The distribution arrangements of seed need to be strengthened in a number of respects, if the objective of making improved seed available to the cultivators in time and close to their door is to be achieved in the Third-Five-Year Plan. Firstly, the number of outlets for

the distribution of improved seed should be increased, so that the institutional sources of supply can ' cover a **larger number** of villages and cultivators. Secondly, periodical replacement of seed is necessary for maintaining its purity.

4. There is need for expanding the acreage under production of breeder's stock seed. The supply of breeder's stock seed is not only a matter of quantity but also of quality.

5. The objectives of seed farms should be to produce foundation seed of technically superior and pure quality in adequate quantity and at an economic level of cost.

6. There is need for increasing the strength of the staff having necessary agricultural training and background at the block level for effective inspection and supervision to the farms of registered growers.