

IMPACT OF SPECIAL RICE PRODUCTION PROGRAMME ON KNOWLEDGE AND ADOPTION OF RECOMMENDED RICE TECHNOLOGY BY FARMERS

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Rice is the world's leading food crop. Among the rice growing countries, India has the largest a crease in the world. But, in production, India comes next to China. To meet the demand of the increasing population, it is the necessity to increase the production of rice in the same ratio. Increasing the productivity per unit area can only do this, as there is not much scope for increasing area under rice. In order to increase the overall productivity of the region, the special efforts are being made to intensify the work on special rice production programme and dry farming programme in the 7th plan in some selected blocks to transfer the available technology by supplying improved seed and other inputs to farmers.

The study was conducted in the Amarpatan block of Satna district of Madhya Pradesh. The special rice production programme was in operation in the Amarpatan block. The project was started with a view to increase agriculture production per hactare under rainfed farming. With this view, the study was conducted to know the constraints in the programme and to measure the extent of the knowledge and adoption of recommended rice production technology among small and marginal farmers.

METHODOLOGY

Area of Study—The study was conducted in the Amarpatan Block of Satna District of Madhya Pradesh. The Amarpatan block was

selected purposively for the study because the special rice production programme was in operation there.

Selection of Sample: In the Amarpatan block, 10 R.A.E.O.'s circle were

Selected on random basis. One village was selected randomly from each R.A.E.O. circle from each village 5 small & 5 marginal farmers were selected randomly. Thus, the sample constitutes 100 rice growers (respondents).

The questionnaire was prepared for the purpose of data collection, keeping in the view the objectives of the survey. The data were collected personally by interviewing the respondents.

Analysis of Data—Simple tabular analysis with arithmetic means and percentages were used. The overall average of different parameters for small and marginal farmers was worked out separately.

RESULTS AND DISCUSSION

1. Extent of Knowledge and Extent of Adoption of Rice Recommended Technology—The data regarding extent of knowledge and extent of adoption of recommended rice production technology for increasing rice production in the project area of special rice production programme were collected from 50 small and 50 marginal farmers and presented in Table 1, 2 & 3.

The data in Table 1 indicate that the majority of the respondents i.e. 48 per cent had partial knowledge, 44 per cent had complete

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knowledge and 8 percent had incomplete knowledge regarding recommended rice production technology under special rice production programme. A low percentage (44%) of complete knowledge may be due to

various constraints faced by the respondents. The X^2 - value (4.05) was found significant at 5% level of significance. It indicates that category of the farmers (small & marginal) were associated with the level of knowledge.

Table 1. Extent of knowledge regarding rice recommended technology among various categories of farmers

| Category | Incomplete | | Partial | | Complete | | Total | |
|------------------|------------|----|-----------|----|-----------|----|------------|-----|
| | No | % | No | % | No | % | No | % |
| Small farmers | 0 | 0 | 23 | 46 | 27 | 54 | 50 | 100 |
| Marginal farmers | 8 | 16 | 25 | 50 | 17 | 34 | 50 | 100 |
| Total | 8 | | 48 | | 44 | | 100 | |

Table 2. Extent of adoption regarding rice recommended technology among various categories of farmers

| Category | Incomplete | | Partial | | Complete | | Total | |
|------------------|------------|----|-----------|----|-----------|----|------------|-----|
| | No | % | No | % | No | % | No | % |
| Small farmers | 5 | 10 | 12 | 24 | 33 | 66 | 50 | 100 |
| Marginal farmers | 5 | 6 | 26 | 52 | 21 | 42 | 50 | 100 |
| Total | 8 | | 38 | | 54 | | 100 | |

The data in Table 2 reveal that 54 per cent of the respondents had complete adoption, followed by 38 percent partial adoption and 8 percent only possessed incomplete adoption of recommended rice production technology

under special rice production programme. The X^2 - value (5.79) was found to be significant at 5% level of significance. This indicates impact of extent of adoption on category of respondent (small and marginal).

Table 3. Association between extent of knowledge and adoption of rice recommended technology among small farmers

| Extent of Category | Extent of Adoption | | | | | | | |
|-----------------------|--------------------|-------|---------|-------|----------|-------|-------|----|
| | Incomplete | | Partial | | Complete | | Total | |
| | No | % | No | % | No | % | No | % |
| Incomplete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Partial | 3 | 13.04 | 9 | 39.13 | 11 | 47.82 | 23 | 46 |
| Complete | 2 | 7.40 | 3 | 11.11 | 22 | 81.48 | 27 | 54 |
| Total | 5 | | 12 | | 33 | | 50 | |

The data in Table 3 indicate that out of total small farmers, a majority of 54 per cent had complete knowledge, 46 per cent had partial knowledge and zero per cent had incomplete knowledge regarding recommended rice production technology under special rice production programme.

As regards level of adoption, 66 per cent had complete adoption, 24 per cent had partial and 10 per cent had incomplete adoption of recommended rice production technology.

The observed X^2 -value (6.26) was found to be significant at 5% level of significance. This conclude that the two trait knowledge and

adoption of recommended rice production technology were associated with each other.

The similar views were supported by Reddy & Reddy (1998) and Singh (1989).

Table 4. Association between extent of knowledge and adoption of rice recommended technology among marginal farmers

| Extent of Category | Extent of Adoption | | | | | | | |
|--------------------|--------------------|----|---------|------|----------|------|-------|----|
| | Incomplete | | Partial | | Complete | | Total | |
| | No | % | No | % | No | % | No | % |
| Incomplete | 2 | 25 | 5 | 62.5 | 1 | 12.5 | 8 | 16 |
| Partial | 1 | 4 | 15 | 60.0 | 9 | 36.0 | 25 | 50 |
| Complete | 0 | 0 | 6 | 35.3 | 11 | 64.7 | 17 | 34 |
| Total | 3 | | 26 | | 21 | | 50 | |

Table 4 exhibits that out of total marginal farmers, majority (50%) had partial knowledge, followed by possessing complete knowledge (34%) and lowest (16%) had incomplete knowledge of recommended rice production technology under special rice production programme. As regards level of adoption, 52 per cent had partial, 42 per cent had complete and 6 per cent had incomplete adoption of recommended rice production technology.

The Table 4 reveals that the partial knowledge among marginal farmers regarding rice production technology resulted in maximum partial adoption (52%). The observed value of X^2 i.e. 5.45 has been found to be significant at 5% level of significance. This referred that the level of knowledge and level of adoption among marginal farmers had association between them. This finding is supported with the work of Dubey and Swarnkar (1992).

2. Constraints Responsible for Low Yield of Rice—A list of main constraints responsible for low yield of rice in the special rice production programme among the small and marginal farmers is depicted in Table 5.

As regards with small farmers the data in Table 5 show that lack of practical training facilities were the important constraints for low yield. This referred that farmers were very keen to have special rice training frequently at village level. Secondly, they felt the need of

more irrigation facilities for rice crop. Das et al. (1998) reported the same results. The other constraints on priority were non-availability of inputs at proper time, lack in adoption of total recommended package of rice cultivation and financial constraints.

Table 5. Constraints responsible for low yield of rice under special rice production programme among small and marginal farmers

| S. No. | Constraints | Small Farmer | | Marginal Farmer | |
|--------|----------------------------------------------------|--------------|------|-----------------|------|
| | | % | Rank | % | Rank |
| 1. | Rice in rainfed crop in this area | 23.33 | II | 33.33 | II |
| 2. | Improved rice technology was not adopted | 20.83 | IV | 12.50 | V |
| 3. | Lack of practical training and training facilities | 31.66 | I | 37.50 | I |
| 4. | Non -availability of inputs at proper time. | 22.50 | III | 25.83 | III |
| 5. | Due to financial constraints | 13.33 | V | 16.66 | IV |

The data in Table 5 regarding marginal farmers indicate that the most serious constraints were lack of practical training and training facilities. Other constraints were lack of irrigation facilities, non-availability of inputs at proper time, lack of financial facilities in time and non-adoption of improved rice

production technology. This finding was supported by Shoam and Rathore (1973).

CONCLUSION

The investigation concluded that there was significant impact of special rice production programme on knowledge and adoption of recommended rice technology by small and marginal farmers in the project area. The extent of knowledge and extent of adoption of recommended rice technology were observed significantly associated among the respondents. This resulted that the complete knowledge leads to complete adoption among the farmers using recommended rice production practices. A low percentage of

complete knowledge and complete adoption were seen during the study. The various constraints faced by the respondents were responsible for this low percentage. The most important constraints reported by the respondents were 'lack of practical training and training facilities'. The other constraints responsible for low yield, as per the respondents' opinions, were lack of irrigation facilities, non-availability of inputs at proper time, lack in adoption of total recommended package of rice cultivation and inadequate financial facilities. Hence, to increase the yield potential of rice in the project area of special rice production programme, solution of problems are required.

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