RESEARCH ARTICLE

# IMPACT OF KRISHI VIGYAN KENDRA'S TRAINING ON ADOPTION OF IMPROVED RICE PRODUCTION TECHNOLOGY IN REWA DISTRICT. (M.P.)

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*Received-09.12.2017, Revised-26.12.2017*

**Abstract:** In rural india by raising the level of farm productivity, income and employment with application of agricultural innovations, an innovative extension education institution Krishi Vigyan Kendra (KVK) was introduced by ICAR. In context with Rewa district of M.P. rice is the most prominent crop of the district as occupying 115.7 thousand ha. area with the productivity of 1416 kg/ha (Source – District Land Record Rewa). Krishi Vigyan Kendra Rewa has been conducting a number of training programmes on location specific technological aspects of rice crop. The main purpose of the training programme is to accelerate the adoption and diffusion rate of improved rice production technologies. The study was carried out to assess the adoption of improved rice production technology of paddy growers. It was found that the majority of the respondent (45.84%) had medium adoption. of improved rice production technologies. Mean adoption score was highest in improved variety (1.65) followed by seed rate (1.61), seed treatment (1.60), management of organic manure (0.69).and lowest mean score was application of manure (0.62). The study also revealed that the major constraints faced by farmers required technological inputs were not available at local level (71.66% ) followed by lack of trials and demonstration related to low cost technology (66.66), no planning of the out side exposure visit (63.33), low market price of agricultural product(58.33) and lack of infrastructural facilities for using the technological skill on occupational basis at the village level (57.50),

**Keywords:** Agricultural innovation, Krishi Vigyan Kendra, Rice

## INTRODUCTION

In rural india to raise the level of farm productivity, income and employment with application of agricultural innovations, an innovative extension education institution Krishi Vigyan Kendra (KVK) was introduced by ICAR. In rural india by raising the level of farm productivity, income and employment with application of agricultural innovations, an innovative extension education institution Krishi Vigyan Kendra (KVK) was introduced by ICAR. In context with Rewa district of M.P. rice is the most prominent crop of the district as occupying 115.7 thousand ha. area with the productivity of 1416 kg/ha (Source – District Land Record Rewa). Krishi Vigyan Kendra Rewa has been conducting a number of training programmes on location specific technological aspects of rice crop. The main purpose of the training programme is to accelerate the adoption and diffusion rate of improved rice production technologies.

**Objective**

To assess the impact of training in terms of adoption of improved rice production technology.

To identify the constraints perceived by the respondents concerned with the training programmes and suggest measures to overcome them.

## METHODOLOGY

The present study was conducted in Rewa district of M.P. The district has nine blocks namely Rewa, Raipur, Sirmour, Teohthar, Jawa, Gangeo, Mauganj, Hanumana and Naigardi. Rewa block was selected purposively because in this block the number of trained farmers under KVK trainings is maximum during the last 5 years. Five villages on the basis of large number of trainees under rice training programme was selected for the present study, A village wise list of traniees who attended rice training programmes on rice crop was prepared. From this list the trainees was selected from each village through proportionate random sampling method to make a sample of 120 respondents. Finaly the sample were consisted of 120 respondents.

**Table 1.** List of selected villages and number of respondents selected from each village

| S. No. | Name of village | Number of trainees farmer | No. of selected respondents | |
|---|---|---|---|---|
| | | | Trained farmers | Untrained farmers |
| 1. | Rithi | 90 | 26 | 26 |

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| | | | | |
|---|---|---|---|---|
| 2. | Johri | 85 | 24 | 24 |
| 3. | Kothi | 82 | 23 | 23 |
| 4. | Khokam | 80 | 23 | 23 |
| 5. | Devra | 85 | 24 | 24 |
| | Total | 422 | 120 | 120 |

## RESULT AND DISCUSSION

### 1. Impact of training in term of adoption of improved rice production technology

**Table 2.** Mean score of the selected trained farmers and their adoption of improved rice production technology.

| S. No. | Technological practices | Extent of Adoption | | | Total score | Mean score | Rank |
|---|---|---|---|---|---|---|---|
| | | complete | Partial | Not | | | |
| 1 | Improved varieties | 88 | 22 | 10 | 198 | 1.65 | I |
| 2 | Nursery management | 75 | 29 | 18 | 179 | 1.49 | VI |
| 3 | Sowing methods | 78 | 25 | 17 | 181 | 1.50 | V |
| 4 | Seed rate | 85 | 24 | 11 | 194 | 1.61 | II |
| 5 | Seed treatment | 82 | 28 | 10 | 192 | 1.60 | III |
| 6 | Spacing | 60 | 48 | 12 | 168 | 1.40 | VIII |
| 7. | Weed management | 80 | 26 | 14 | 186 | 1.55 | IV |
| 8. | Water management | 73 | 30 | 17 | 176 | 1.46 | VII |
| 9 | Management of organic manures | 23 | 37 | 60 | 83 | 0.69 | XIV |
| 10 | Bio fertilizer management | 43 | 49 | 28 | 135 | 1.12 | X |
| 11 | Chemical fertilizer management | 38 | 44 | 38 | 120 | 1.00 | XI |
| 12 | Insect & pest management | 32 | 38 | 50 | 102 | 0.85 | XII |
| 13 | Disease management | 27 | 32 | 61 | 86 | 0.71 | XIII |
| 14 | Grain storage | 46 | 51 | 23 | 143 | 1.19 | IX |
| 15 | Application of manure | 20 | 35 | 65 | 75 | 0.62 | XV |

Table 2 it was observed that the mean adoption score was highest in improved variety (1.65) followed by seed rate (1.61), seed treatment (1.60), weed management (1.55), sowing method (1.50), nursery management (1.49), water management (1.46), spacing (1.40), grain storage (1.19), bio fertilizer management (1.12), fertilizer management (1.0), insect and pest management (0.85), disease management (0.71), management of organic manure (0.69).and lowest mean score was application of manure (0.62).

**Table 3.** (a) Distribution of the respondents according to level of adoption in regards to recommended practices of rice

| **S. No.** | **Level of Adoption** | **Trained farmers** | | **Untrained farmers** | |
|---|---|---|---|---|---|
| | | **No.** | **%** | **No.** | **%** |
| 1 | **Low** | 39 | 32.50 | 69 | 57.50 |
| 2. | **Medium** | 55 | 45.84 | 34 | 28.34 |
| 3 | **High** | 26 | 21.67 | 17 | 14.16 |
| **Total** | | **120** | 100 | **120** | 100 |

The data in the Table 3 show that out of 120 respondents 45.84 percent had medium adoption level followed by 32.50 percent low adoption level and only 21.67 percent had high adoption level regarding recommended practices of rice. The table also revealed that out of 120 untrained farmers, higher percentage of the respondents majority of i.e., 57.50 percent belonged to low adoption level category.

**(b) t ratio for the mean adoption scores of the trainees and non trainees**

| S. No. | N | Mean | Standard Deviation | t | P |
|---|---|---|---|---|---|
| Non trainees | 120 | 11.5 | 1.1 | | |
| Trainees | 120 | 20.8 | 1.4 | 11.3 | 0.01 |

The value of the t ratio in the above table is significant. On the basis of this result it may be inferred that the mean adoption scores of trainees and non trainees exhibited significant difference. The mean adoption score obtained by trainees is higher than the mean adoption score obtained by the non trainees. This improvement in adoption may be attributed to the training imparted by the KVKs.

**2. Distribution of respondents according to the constraints perceived by them in adoption of improved rice production technology**

With a view to locate the reasons for non adoption of recommended package of practices of rice, the respondents were asked to express the major constraints faced by them in adoption of improved rice production technologies disseminated through farmers training programmes. Out of many constraints faced by them the major constraints on the basis of rank order have been presented in the table 4.

**Table 4.** Constraints faced by the farmers in relation to adoption of technologies disseminated through farmers training programmes

| S.N. | Constraints | No. of Respondents | Percentage | Rank |
|---|---|---|---|---|
| 1. | Lack of good quality product (Bio-fertilizer, Bio-pesticide, Bio-agent) | 56 | 46.66 | 8 |
| 2. | Lack of close contact of the trainees with the trainers / scientists after completion of the training. | 25 | 20.83 | 14 |
| 3 | Non avability of appropriate hybrid varieties | 27 | 22.5 | 13 |
| 4 | Lack of trials and demonstration related to low cost technology | 80 | 66.66 | 2 |
| 5 | Lack of infrastructural facilities for using the technological skill on occupational basis at the village level. | 69 | 57.5 | 5 |
| 6 | The required technological inputs were not available at local level. | 86 | 71.66 | 1 |
| 7 | Information about resource availability, marketing and credit orientation were not given. | 29 | 24.16 | 12 |
| 8 | Small size of land holding and low socio-economic status. | 31 | 25.83 | 11 |
| 9 | Lack of coordination with allied departments | 51 | 42.50 | 9 |
| 10 | Unavailability of skilled labour for SRI | 61 | 50.83 | 7 |
| 11 | Low market price of agricultural product | 70 | 58.33 | 4 |
| 12 | Improved higher cost of seed of varieties | 48 | 40.00 | 10 |
| 13 | Lack of incentives and recognition to the scientists and farmers | 68 | 56.66 | 6 |
| 14 | No planning of the out side exposure visit | 76 | 63.33 | 3 |

The major constraints experienced by the trained farmers in knowledge and skill acquisition were arranged in descending order on the basis of rank order as the required technological inputs were not available at local level (71.66% ) followed by lack of trials and demonstration related to low cost

technology (66.66), no planning of the out side exposure visit (63.33), low market price of agricultural product(58.33), lack of infrastructural facilities for using the technological skill on occupational basis at the village level (57.50), lack of incentives and recognition to the scientists and farmers (56.66), unavailability of skilled labour for SRI (50.83), lack of good quality product (Bio-fertilizer, Bio-pesticide, Bio-agent) (46.66), lack of coordination with allied departments (42.5), Improved higher cost of seed of varieties (40.00), small size of land holding and low socio-economic status(25.83), information about resource availability, marketing and credit orientation were not given (24.16), non arability of hybrid seed (22.5) and lack of close contact of the trainees with the trainers / scientists after completion of the training (20.83) relation to adoption of technologies disseminated through farmers training programme

**Table 5.** Suggestions for enhancement of the adoption of improved rice production technology.

| S.No. | Suggestions | No. Of respondents | Percentage | Rank |
|---|---|---|---|---|
| 1 | Availability of good quality seed at seasonable rate. | 84 | 70.00 | III |
| 2 | Trials and demonstration should be organized on adoption of low cost technologies. | 89 | 74.15 | II |
| 3 | Knowledge & skill oriented training should be imparted at village level | 78 | 65.00 | VI |
| 4 | Procurement of produce should be made at reasonable price by society | 94 | 78.33 | I |
| 5 | Implementation of effective crop insurance policies | 54 | 45.00 | X |
| 6 | Improved farm machineries should be available at reasonable rate | 79 | 65.83 | V |
| 7 | Conducting research and seed programme on crop varieties suitable in conditions | 55 | 45.83 | IX |
| 8 | Agricultural scientist/extension personal should visit one in week at village level | 66 | 55.50 | VII |
| 9 | The price of hybrid rice seeds should be reduced | 64 | 53.33 | VIII |
| 10 | Demontration & trails on IPM &organic farming | 82 | 68.33 | IV |

The results in Table 5 indicated that the majority of the respondents suggested as creating the people towards rice production technology procurement of produce should be made at reasonable price by society (78.33%), trials and demonstration should be organized on adoption of low cost technologies. (74.15%), availability of good quality seed at seasonable rate (70.00%), demontration & trails on

IPM &organic farming (68.33) improved farm machineries should be available at reasonable rate (65.83%), knowledge & skill oriented training should be imparted at village level (65.00%), agricultural scientist/extension personal should visit one in week at village level (55.50%) , the price of hybrid rice seeds should be reduced (53.33%), conducting research and seed programme on crop varieties suitable in conditions (45.83%), and Implementation of effective crop insurance policies (45.00%) respectively.

## CONCLUSION

Majority of the respondent (45.84%) had medium adoption. of improved rice production technologies. Mean adoption score was highest in improved variety (1.65) followed by seed rate (1.61), seed treatment (1.60), management of organic manure (0.69).and lowest mean score was application of manure (0.62). The study also revealed that the major constraints faced by farmers required technological inputs were not available at local level (71.66% ) followed by lack of trials and demonstration related to low cost technology (66.66), no planning of the out side exposure visit (63.33), low market price of agricultural product(58.33) and lack of infrastructural facilities for using the technological skill on occupational basis at the village level (57.50), adoption of improved rice production technologies.

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