

Constraints faced by the rice growers in adopting recommended summer rice cultivation practices in Raigad (M.S.)

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ABSTRACT

The study was conducted in Karjat, Roha and Mangaon tahsils of Raigad district of Konkan region. The sample was constituted 150 rice growers drawn from 15 villages. The respondents were interviewed with the help of a specially designed schedule. The exploratory survey design was used for the present study. A major constraint faced by the respondents in adopting summer rice cultivation practices were 'lack of knowledge' was the major constraint as reported in 23 practices. The second major constraint was 'do not feel it necessary' observed in 12 practices. Another two important constraints were 'lack of time' and 'requires more labour' as found in 8 and 5 sub practices. The best varieties in order were GPU 28 and GPU 45 which registered the grain yield of 1753 kg ha⁻¹ and 1685 kg ha⁻¹, respectively.

Key words : Constraints, Rice growers,

INTRODUCTION

Rice [*Oryza sativa* (L.)] commanded recognition as a supreme commodity to mankind, because rice is truly life, culture, a tradition and a means of livelihood to millions of people all over the world. It is the staple food of nearly half of the world population. It is not only a cereal crop, but also a way of life in Asian countries. It contributes about 40 to 70 per cent of the population's total calorie intake. Hence, sustained production and increased productivity of rice crop is critical for food and nutritional security in Asia.

Rice production in India in the year 2004-05 was 83.130 million tonnes, which is projected at a record 91.00 million tonnes in the year 2006-07. Summer rice was cultivated on an area of about 205 metric ha with total production of 490 metric tonnes in the year 2004-05 in Maharashtra. Konkan region accounts for summer rice area of about 154 metric ha with total production of 371 metric tonnes in the year 2004-05. (www.agri.mah.nic.in).

Among the four districts of Konkan region, Raigad is the major rice producing district which accounts for 55.19 per cent area and 57.41 per cent production of summer rice in Konkan region. According to 2004-05 estimates, in Raigad district, summer rice occupied about 85 metric ha area with the production of 213 metric tonnes. The data with respect to constraints faced by the summer rice growers are scanty. Hence, the study was undertaken to ascertain constraints perceived by the farmers in adopting recommended summer rice cultivation practices.

MATERIALS AND METHODS

The study was conducted in Raigad district of the Konkan region. Among the four districts of Konkan

region, Raigad is the major summer rice producing district. Three Tehsils were selected based on the maximum area under summer rice cultivation. From each Tehsil, five villages were randomly selected. Thus, a total of 15 villages were selected. From each selected village list of summer rice growers was obtained from Agricultural Assistant of the selected villages. From the list ten summer rice growers were selected randomly, thus, making a sample of 150 rice growers. An interview schedule was prepared, so as to collect the information in line with the objectives of the study. Personal interview technique was used for data collection. Then the data collected were analyzed with suitable statistical

RESULTS AND DISCUSSION

Constraints faced by the rice growers in adopting recommended summer rice cultivation practices:

With the close observation of the above Table 1 it can be concluded that at overall level 'lack of knowledge' was the major constraint as reported in 23 practices. This constraint accounts about 47.33 per cent of them. The second major constraint was 'do not feel it necessary' observed in 12 practices accounting about 43.33 per cent. Another two important constraints were 'lack of time' and 'requires more labour' as found in 8 and 5 sub practices accounting 44.00 per cent and 46.67 per cent, respectively. The analysis indicated that the summer rice growers requires technical knowledge in important practices of summer rice like, 'seed treatment', 'use of weedicides', 'use of pest and disease resistant varieties', 'use of medicines against pests and diseases of rice'. Further, the summer rice growers do not feel the certain practices like, 'fungicidal seed treatment', 'destruction of eggs and

| Table 1: Constraints faced by the rice growers | | | | |
|---|---|--|-------------|------------|
| Sr. No. | Practice | Constraints | Respondents | Percentage |
| 1. Land preparation | | | | |
| | First ploughing after harvest of previous crop (n=2) | a. Lack of time | 2 | 100.00 |
| | Removal and destruction of stubbles (n=94) | a. Lack of time | 29 | 30.85 |
| | Application of FYM@ 10 tons/ha (n=135) | a. Non availability of compost | 56 | 41.48 |
| 2. Seed selection | | | | |
| | Use of improved seeds (n=2) | a. Low yield of straw | 2 | 100.00 |
| | Seed rate (n=47) | a. Impact of tradition | 44 | 93.61 |
| | | b. No knowledge | 28 | 59.57 |
| | | c. Do not feel it necessary | 16 | 34.04 |
| | Seed treatment with 3% brine solution (n=122) | a. No knowledge | 108 | 88.52 |
| | | b. Lack of time | 76 | 62.29 |
| | | c. Do not feel it necessary | 53 | 43.44 |
| | Application of 1% fungicide (n=142) | a. No knowledge | 130 | 91.54 |
| | | b. Lack of time | 101 | 71.13 |
| | | c. Do not feel it necessary | 131 | 92.25 |
| 3. Nursery management | | | | |
| | Preparation of raised beds (n=53) | a. No knowledge | 37 | 69.81 |
| | Sowing of seed in line (n=53) | a. No knowledge | 38 | 71.70 |
| | | b. Laborious work | 29 | 54.72 |
| | Application of 1kg urea/are, 15 days after sowing (n=58) | a. No knowledge | 33 | 56.89 |
| | Application of insecticides for controlling stem borer (n=139) | a. No knowledge | 91 | 65.47 |
| 4. Transplanting | | | | |
| | Transplanting of 30 to 35 days old seedlings (126) | a. No knowledge | 22 | 17.46 |
| | Line transplanting (n=103) | a. Simplicity of traditional practices | 79 | 76.70 |
| | | b. Require more labours | 102 | 99.03 |
| | | c. Complicated practice | 91 | 88.35 |
| | Maintaining proper spacing (n=102) | a. Simplicity of traditional practices | 38 | 37.25 |
| | | b. Require more labours | 47 | 46.08 |
| | Transplanting 2-3 seedlings/hill and for hybrid 1 seedling/hill. (n=16) | a. Simplicity of traditional practices | 16 | 100.00 |
| 5. Nutrient management | | | | |
| | Fertilizer dose 120kg N + 60kg P ₂ O ₅ + 60kg K ₂ O (n=99) | a. No knowledge | 41 | 41.41 |
| | | b. High cost of fertilizers | 81 | 81.82 |
| | Application of 5 t/ha at the time of puddling (n=147) | a. No plantation of green manure crop | 83 | 56.46 |
| | Application of 'N' fertilizers in three split doses (n=137) | a. No knowledge | 16 | 11.68 |
| 6. Weed management | | | | |
| | Keep field free of weed (n=109) | a. Do not feel it necessary | 66 | 60.55 |
| | 2 to 3 weeding after transplanting (n=117) | a. Do not feel it necessary | 64 | 54.70 |
| | Use of weedicides, if necessary (n=145) | a. No knowledge | 134 | 94.41 |
| | | b. Non availability of spraying appliances | 126 | 86.89 |
| 7. Water management | | | | |
| | Frequent drainage and water supply (n=39) | a. No knowledge | 20 | 51.28 |
| | 10 cm water level in field before and after panicle initiation (n=18) | a. No knowledge | 13 | 72.22 |
| | Water level upto 5 cm at grain filling stage (n=31) | a. No knowledge | 10 | 32.26 |
| 8. Plant protection | | | | |
| a. Stem borer | | | | |
| | 1. Removal and destruction of stubbles (n=115) | a. Lack of time | 54 | 46.96 |
| | | b. Require more labours | 46 | 40.00 |
| | | c. Do not feel it necessary | 55 | 47.83 |
| | 2. Use of Vaibhav sickle for harvesting (n=15) | a. Do not feel it necessary | 10 | 66.67 |

Contd. ...

Table 1 Contd.

| | | | |
|--|--|-----|-------|
| 3. Use of pest resistant varieties (n=146) | a. No knowledge | 116 | 79.45 |
| | b. Not suited to local paddy lands | 93 | 63.70 |
| 4. Application of insecticides such as carbufuron, phorate or quinolphos (n=145) | a. No knowledge | 128 | 88.28 |
| | b. Non availability of spraying appliances | 126 | 86.90 |
| b. Army worm | | | |
| Collection and destruction of eggs and larvae (n=142) | a. No knowledge | 131 | 92.25 |
| | b. Lack of time | 118 | 83.09 |
| | c. Require more labours | 116 | 81.69 |
| | d. Do not feel it necessary | 103 | 72.54 |
| Spraying of methyl parathion powder @ 20 kg/ha (n=146) | a. No knowledge | 134 | 91.78 |
| | b. Lack of time | 112 | 76.71 |
| | c. Require more labours | 116 | 79.45 |
| | d. Do not feel it necessary | 110 | 79.34 |
| c. Bacterial leaf blight | | | |
| Removal and destruction of stubbles (n=116) | a. Lack of time | 38 | 32.76 |
| | b. Do not feel it necessary | 66 | 56.90 |
| Repairing of bunds and destruction of weeds on it (n=137) | a. Do not feel it necessary | 91 | 66.42 |
| Use of disease resistant varieties (n=26) | a. No knowledge | 11 | 42.31 |
| d. Blast of paddy | | | |
| Use of disease resistant varieties such as IET-8320, 4140, 4141 (n=150) | a. No knowledge | 139 | 92.67 |
| | b. No taste | 49 | 32.67 |
| Spraying of 1% Edifenphos (Zosan) or 1gm carbendazim per liter of water (n=141) | a. No knowledge | 128 | 90.78 |
| | b. Non availability of spraying appliances | 124 | 87.94 |
| 9. Harvesting and threshing | | | |
| Use of Vaibhav sickle for harvesting (n=10) | a. No knowledge | 8 | 80.00 |
| Drying the crop in the field for 2 days (n=22) | a. Do not feel it necessary | 15 | 68.18 |
| Use of power thresher for threshing (n=139) | a. Non availability of power threshers | 115 | 82.73 |

larvae of army worm', 'spraying against army worm', 'repairing of bunds', 'destruction of stubbles' and 'weeding'. This may be due to none or less incidence of pest and diseases among their fields. Constraints like, 'lack of time and labour' were mostly observed in the practices like, 'removal of stubbles, collection of eggs and larvae of army worm and spraying'. The extension agency should made concerted efforts to remove such constraints to improve extent of adoption of rice cultivation technologies among the summer rice growers.

The findings of the present study are similar to those of the studies conducted by Shrivastwa *et al.* (1990), Dube *et al.* (1992) and Nirmala *et al.* (2002).

Implications:

The study has categorically pointed out that lack of knowledge about the recommended rice cultivation practices was the sever constraint experienced by the farmers in adoption of those practices. This has given birth to some misbeliefs and wrong notions amongst them.

The foremost task, therefore, before the extension organizations will be to impart knowledge in respect of recommended summer rice cultivation technology to the farmers. A systematically planned practical oriented training programme for the farmers needs to be executed to redress this situation. CO 13 and Indaf 8 recorded significantly higher LAI tha.

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