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A Study of Training Preferences in Rice Cultivation in Jammu District of J&K State

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ABSTRACT

Ever increasing population poses production needs of 140 million tonnes of rice per year by 2025 requiring higher management practices. This demands increased emphasis on need based training of farmers in rice production technology. The present study was undertaken in Jammu district of J&K state to delineate the farmers' training need in rice production. The study was conducted on 80 randomly selected farmers of R.S. Pura block with a pre-structured interview schedule. The findings revealed that the farmers were requiring training in almost all the subject matter areas of rice production specially use of insecticides, pesticides, use of manures and fertilizers, seed and seed technology and water management.

Key words: Rice production technology, training needs

INTRODUCTION

The present level of rice production in India needs to be increased in order to meet the ever increasing demand. It is estimated that India will require 291million tonnes of food grain, of which 109 million tonnes of rice per year by 2025 against the present production of 89.13 million tonnes (2009-10). This required level of production can be achieved through the increase in productivity, which in turn requires high level of management practices, efficient input supply system, quality genetic material and above all the understanding and knowledge of the practicing farmers need to be strengthened to respond the challenges. Not knowing farmers' priorities and not putting farmers' agendas first mean that professionals are likely to address the wrong problems in their research**.** Most professionals assume they know what farmers want and need but are often wrong. Conversely, identifying farmers' priorities and helping farmers meet them leads to innovations which are adopted. The potential of the training in imparting knowledge, skill and understanding is well established and stands good in case of rice also. R. S. Pura block of J&K state is well known for its scented rice over the world but the potential are still unharnessed and much scanted research and extension efforts have been made to enhance the production in rice and more specifically the scented rice. This clamoured the attention and a study of rice growers had been conducted to assess their training needs in various subject matter areas of rice production.

METHODOLOGY

The study was conducted in R.S.Pura block of Jammu district. Multistage sampling technique was followed to select the rice growers. At first stage four villages namely Abdal, Deblehar, Badyal Brahmna and Chauhala were selected and at second stage 20 farmers from each village were selected randomly making a total of 80 respondents. The data were collected on pre-structured schedule.

The rice growers were asked to indicate their training needs for various practices of cultivation of rice crop on three point continuum, ranging from most important, important and less important with a score of 3,2and1 respectively. The scores obtained by the rice growers were summed up and cumulative scores were calculated to reflect the training need of a respondent as a whole as well as in each of the specific subject matter area.

The extent of training need had been calculated in three categories *viz;* low, medium and high. Lowest mean training need score of any subject matter was worked out as 1.16 and highest as 2.95, in order to classify in three categories the obtained range was divided by three and accordingly categories had been formed as; low training need with mean training need score range of 1.16 to 1.75, medium training need with mean training need score range of 1.76 to 2.35 and high training need with mean training need score range of 2.36 to 2.95.

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RESULTS AND DISCUSSION

The findings have been presented according to the package and practices of the rice crop. The major practices in rice cultivation have been divided in six subject matter areas *viz;* soil management, seed technology, manures and fertilizers, water management, plant protection, harvesting and handling of produce. Accordingly the perceived training needs are presented below;

Soil Management: The data in table 1 depicts that soil sampling and testing was ranked as most important subject area of training by almost all the farmers with a mean score of 2.95 followed by soil reclamation (1.97), other subject areas were ranked as less important .This may be due to the reason that soil sampling its testing and soil reclamation are perceived as technical aspects and also require an in depth understanding of the process and its consequences on the yield whereas other practices have been internalized in farmers routine from age old and did not feel that these aspects need more understanding. The researches have contributed many new vistas in techniques of field preparation and also in nursery raising but the farmers may be ignorant of the facts.

Seed Technology: It was studied in terms of four sub parts namely selection of seeds for nursery, seed rate and seed sowing method, seed treatment and germination testing of seed. The large number of farmers needed training in seed treatment with a mean score of 2.77 followed by germination testing of seeds (1.65). The other sub areas like selection of seed for nursery, seed rate and method of sowing were ranked as least needed areas. This may be due to the fact that the farmers were having very few choices, either to grow their own seed or remain dependent on the quality and quantity supplied by the State Department of Agriculture, Government of J&K.

Manures and fertilizers: The farmers expressed high training need in time and doses of bio-fertilizers with a mean score of 2.77 whereas, time and doses of chemical fertilizers was rated next (1.61). This may be due to the fact that the cost of chemical fertilizers is increasing day by day, as an alternate the farmers may be interested in adopting the bio-fertilizers for rice cultivation to reduce the cost of cultivation and dependence on State Department of Agriculture, Government of J&K for supply of chemical fertilizers.

Water management: The farmers' training need in water management both for nursery and main crop was rated as less important in both terms of time and method of irrigation. It may be due to the reason that the farmers use flooding method of irrigation and keep the field almost submerged during the whole crop period of rice and may be ignorant regarding upcoming methods of preparing nursery in raised nursery bed and system of rice intensification (SRI).

Plant protection: The training needs in relation to plant protection were measured in three sub areas viz; knowledge of weed and their control measures, awareness of the common diseases and insects, time of doses and method of using insecticides and pesticides. Majority of the farmers expressed their training need in time, doses and method of using insecticides and pesticides with a mean score of 2.25 followed by awareness of the common diseases and insects(1.93). The findings are in line with Roy and Parsad (1974), Tantray (1989), Manjunath *et. al.* (1999) and Bhagat and Nain (2005).

Harvesting and handling of produce: The farmers expressed their training need in marketing and storage of the produce with score of 1.98 followed by threshing and winnowing. However, the farmers expressed least need in time and method of harvesting. The findings support the study by Parsad and Mrutyajam (1992).

Table 1: Farmers' perceived training needs in various subject areas of rice cultivation

Subject Matter Areas	Percentage of rice growers			Mean	Extent of
	Most Important	Important	Less Important	Training need score	training need
Management of soil					
Nursery bed preparation	18.75	21.25	60.00	1.58	Low
Selection of land for rice transplanting	5.00	16.25	78.75	1.25	Low
Soil Sampling and testing	92.50	5.00	2.50	2.95	High
Soil reclamation	16.25	65.00	18.75	1.97	Medium
Techniques of field preparation	3.75	28.75	65.50	1.96	Low
Seed technology					
Selection of seed for nursery	8.75	38.75	52.5	1.56	Low
Seed treatment	83.75	10.00	6.25	2.77	High
Seed rate and method of sowing	6.25	32.50	61.25	1.45	Low
Germination testing of seeds	6.25	52.50	41.25	1.65	Low
Manures and fertilizers					
Time and doses of manures	3.75	20.00	76.25	1.27	Low
Time and doses of chemical fertilizers	11.25	38.75	50.00	1.61	Low
Time and doses of bio fertilizers	80.00	17.50	2.50	2.77	High
Water management					
Water requirements for nursery and main crop	5.00	21.25	73.75	1.31	Low
Time and method of irrigation	2.50	23.75	73.75	1.28	Low
Plant protection					
Knowledge of weed and their control measures	10.00	52.50	37.50	1.72	Low
Awareness of the common diseases and insects	13.75	66.25	20.00	1.93	Medium
Time, doses and method of using insecticides and pesticides	41.25	42.50	16.25	2.25	Medium
Harvesting and handling of produce					
Time and method of harvesting	1.25	13.75	85.00	1.16	Low
Threshing and winnowing	7.50	53.75	38.75	1.68	Low
Marketing and storage	18.75	56.25	25.00	1.98	Medium

Overall training needs in rice cultivation were calculated and are presented in Table 2. In all the six cultivation practices of rice crop the average of mean training need score were calculated separately. It is clear from the table that it ranged from 1.29 to 1.96 which was further categories in low, medium and high on the basis of arithmetic mean .The rice growers felt utmost need for the training in plant protection (1.96), manures and fertilizers (1.88) and seed technology (1.85). 'Water management was altogether rated as least preferred subject area for training with a score of 1.29.

Table 2: Overall farmers' training needs in relation to rice production technology

Training Areas	Average of Mean Training need score	Rank	Extent of Training Need
Management of Soil	1.82	IV	High
Seed Technology	1.85	III	High
Manures and fertilizers	1.88	II	High
Water management	1.29	VI	Low
Plant Protection	1.96	I	High
Harvesting and handling of produce	1.59	V	Medium

CONCLUSION

It can be concluded that the rice growers need training in almost all the subject matter areas of rice cultivation. The findings are sufficient indications towards the grey areas such as plant protection, use of manures, fertilizers and seed technology need immediate attention. If the dream of 140 million ton of rice by 2025 has to be achieved then the premier farmers training institutions have to rethink before planning their programmes of human resource development. The bottom up approach and the participatory development are the emerging methodologies. Researchers and development practitioners need to break the stereotype of deciding on the issue themselves and use of the information generated for the purposes of the research or development project itself, rather than for the purposes of a community-owned initiative. Improving farmer expertise requires hands-on education, such as provided by the Farmer Field School, for which there is no shortcut alternative. In addition, some qualitative follow up work is also urgently needed to meet the challenges.

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