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A study on knowledge level and adoption behaviour of improved cultivation practices of pearl millet growers in Bijapur district of Karnataka

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ABSTRACT

Pearl millet is predominantly cultivated as a rainfed crop in diverse soils and climate. It is a drought and heat tolerant crop among cereal crops. It has the highest water use efficiency under drought stress. The features associated with cultivation of this crop are low value status, adoption to poor resource base production and consumption of poorer section of the society. In northern Karnataka, Bijapur district stands for highest area and production. The study revealed that majority of the respondents belonged to the medium level of knowledge as this crop grown with the long experience of farmers and cultivation practices being simple and easy to adopt. Majority of the respondents belonged to the medium level of adoption category followed by high and low adoption category. The practices like harrowing, varieties/hybrids, seed rate, optimum time of sowing and right time of harvesting were fully adopted by majority of farmers. Cent per cent of respondents not adopted spraying to control ergot of bajra.

Key words : Knowledge, Adoption, Resource poor, Pearl millet

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INTRODUCTION

Pearl millet is the most drought and heat tolerant crop among the cereal crops. It is predominantly cultivated as rainfed crop in diverse soils, climates and is an indispensable of semi-arid and arid regions in the country. The features associated with cultivation of this crop are low value status, adoption to poor resource base, production and consumption by poorer sections of society, stagnant demand and price structure.

Karnataka is the 6th major pearl millet growing state in the country both interms of are area and production. Pearl millet is the most important and indispensable *Kharif* cereal crop of shallow to medium black and red soils of the state and is largely cultivated in northern districts. In Northern Karnataka among the *Kharif* cereals, pearl millet is the most important and most assured crop among many other crops. In Karnataka Pearl millet growing districts are Bijapur, Bagalkot, Koppal and parts of Belgaum, Dharwad, Gadag and Raichur. Among the pearl millet growing districts, Bijapur has the largest area. In Bijapur district, Bijapur, Indi, Basavan Bagewadi Talukas stand first, second and third place in area and production, respectively. The present study was undertaken with the specific objectives to know the level or knowledge and adoption of improved cultivation practices of pearl millet by the farmers of Bijapur district.

METHODOLOGY

The present study was conducted in Bijapur district during the year 2009. From Bijapur district, Bijapur and Indi Taluks were purposively selected as they stand first and second in area and production, respectively. In each Taluka six villages were seleclted by random sampling method. A list of pearl millet growing farmers of selected villages was obtained from Department of Agriculture. Ten farmers from each village were randomly selected as respondents for the study. Thus, the sample size constituted 120 respondents. The information was collected by personal interview method with the help of prestructured schedule. The data were analysed with the help of frequency and percentage.

RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads:

Categorisation of respondents according to their knowledge level:

It was observed from the Table 1 that 61 per cent of the respondents had medium level of knowledge followed by 25 per cent of the respondents possessing high level of knowledge and 13.33 per cent of the respondents belonged to low level of knowledge category. This might be due to their long

Table 1 : Categorization of respondents according to their knowledge level (N=120)

Category	No. of respondents	Percentage
Low knowledge category	16	13.33
Medium knowledge category	74	61.67
High knowledge category	30	25.00
Total	120	100.00

Table 2 : Categorization of respondents according to their adoption level (N=120)

Adoption category	No. of respondents	Percentage
Low	20	16.66
Medium	71	59.17
High	29	24.17
Total	120	100.00

experience in growing pearl millet and many of the cultivation practices are simple and easy to adopt. Similar results were also observed by Girase and Kamble (1991) who reported that majority of pearl millet farmers belonged to medium knowledge category and similarly Hanumanaikar (1995) in sunflower crop.

Categorization of respondents according to their adoption level:

The data presented in Table 2 reveal that 59.17 per cent of respondents belonged to medium level of adoption category followed by high level of adoption category (24.17%) and only 16.66 per cent of respondents fell under low level of adoption category. The reasons might be even though the practices are easy to adopt but now a days growing of pearl millet is not remunerative as the market price is very low, hence majority of pearl millet growers belonged to medium level of adoption category. The findings are in conformity with the reports of Halakatti *et al*. (2010) in sunflower crop.

Extent of adoption of improved cultivation practices of Pearl millet:

The data of Table 3 reveal that the improved practices like harrowing (80.00%) use of varieties/hybrids (81.67%), seed rate (92.50%), optimum time of sowing (90.83%) and right time of harvesting (85.83%) were fully adopted by the respondents. This might be due to the awareness of the farmers about importance of these practices for getting higher yield. About 70 per cent of the respondents had partially adopted the fertilizer application. The probable reasons may be costly input, non availability during the season and majority of farmers growing pearl millet under dryland condition as the *Kharif* rains are uncertain in Bijapur district. Thinning and spraying for the control of ergot disease were not adopted by cent per cent farmers. The reasons for this might be due to that cost benefit ratio is very less for these practices and as the incidence of occurrence of ergot disease is very less. Similar results were observed by Hanumanaikar (1995) in sunflower crop.

Table 3 : Extent of adoption of improved cultivation practices of pearl millet (N=120)

Improved cultivation practice	Extent of adoption					
	Full adoption		Partial adoption		Non-adoption	
	Frequency	%	Frequency	%	Frequency	%
Land preparation						
Ploughing	53	44.17	00	00.00	67	55.83
Harrowing (3-4 times)	96	80.00	24	20.00	00	00.00
FYM application	36	30.00	67	55.83	17	14.17
Seed						
Varieties/ hybrids	98	81.67	00	00.00	22	18.33
Seed rate	99	92.50	21	17.50	00	00.00
Seed treatment	92	76.67	20	16.66	08	06.67
Time of sowing	109	90.83	11	9.17	00	00.00
Spacing	83	69.17	00	00.00	37	30.83
Thinning	00	00.00	00	00.00	120	100.00
Fertilizer application (NPK)	25	20.84	85	70.83	10	8.33
Interculturing	90	75.00	21	17.50	09	7.50
Hand weeding	25	20.83	12	10.00	83	69.17

Conclusion:

The results of the study revealed that improved cultivation practices of pearl millet namely ploughing, harrowing, seed rate, use of improved varieties/hybrids, sowing time, intercultivation and weeding were popular practices among pearl millet growers. The practices like spraying of chemical to control ergot disease and thinning practice were not adopted by cent per cent pearl millet growers. It could, therefore be suggested from the findings that organized trainings should be conducted on the foregoing aspects coupled with method demonstration, result demonstration in combination with other extension activities to increase the adoption of improved cultivation practices there by increasing the productivity.

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