FACTOR RESPONSIBLE FOR STIMULATING ADOPTION BEHAVIOR OF CULTIVATORS ABOUT PIGEON PEA TECHNOLOGY IN CHHINDWARA DISTRICT OF MADHYA PRADESH

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Pulses play a significant role in Indian agriculture, on account of their multiple qualities and uses in human diet. The pulse crops may be referred as unique jewels of Indian crop husbandry. In dry land agriculture, these occupy a pride place in farming system because of their low water requirement and ability to withstand environmental stress, in addition to the above quality, the pulses have built in ability of fixing atmospheric nitrogen in their root system.

Pigeonpea is the second most important pulse crop of Indian after Chickpea. Pigeonpea is one of the important constituents of our diet in splited cotyledons in the form **Dal** which is consumed in combination with cereals and fulfill the deficiency of lysine in cereals.

It is mainly cultivated in Uttar Pradesh, Madhya Pradesh, Bihar, Maharashtra, Andhra Pradesh and Tamil Nadu states. It occupies about 11 per cent of total area under legume in Indian. In Madhya Pradesh Pigeonpea occupies an area of 3.2 million hectors with 2.9 million tonnes.

In Chhindwara district of M.P. it is being grown in about 29 thousand hectares. The most common varieties sown are Asha and ICPL-87 in the area. During last three years, soybean yield was very low due to rust and insects attack, so, farmers switched over to the cultivation of pigeonpea in Kharif season.

Besides it was also recorded that in general the productivity of pulse crops was low as compare to the yield potential observed in the experimental area under these crops. In experimental area the average yield was recorded 1507 kg/ha. While the average yield of Chhindwara Pigeonpea was 705 kg/ha. It was planned to determine the impediments and factors responsible for low yield of the crop on farmers' fields.

Low yield of the crop and adoption of traditional practices are major twin problems in the development of area and production of the crop. To analyze empirically the facts, the following objectives are planned for the study.

1. To determine the extent of adoption of improved technologies in cultivation of Pigeonpea
2. To analyze the association between salient personal, social and psychological attributes and adoption behavior of farmers in relation to Pigeonpea.

METHODOLOGY

The study was conducted in Chhindwara block of Chhindwara district. The Krishi Vigyan Kendra, Chhindwara has conducted 60 front line demonstrations on farmers' fields in three villages namely Chniyakalna, Usaria and Thunia Udna during 1996-97 to 1998-99. Subsequently in the follow up the extend of adoption on the technology was empirically analyzed. Data were collected through personal interview. The respondents were categorized as complete, Partially and non-

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adopters the data were analyzed by statistically by mean and percentage.

RESULTS AND DISCUSSION

The data presented in table 1 indicated that all the respondents were applying the recommended doses of fertilizers, as they perceived that fertilizer application was very essential input to obtain good harvest of the crop.

Seed rate, timely sowing, timely harvesting, manure application (FYM), sowing of improved varieties were also adopted by more than 70 per cent respondents as these practices were considered to contribute maximum in the production of Pigeonpea crop. Contrary to this fact only 6 per cent respondents adopted the use of bio-fertilizer, as the respondents were not aware of the use of bio-fertilizers.

The data presented in table 2 revealed the influence of personal characteristics on adoption of improved practices of Pigeonpea it was recorded that education and knowledge of the respondents were found significant so far as adoption of improved practice of pigeonpea cultivation was concerned.

It was also worked out that social- economic status, extension contact and mass-media contact were associated significantly with adoption of Pigeonpea cultivation technology.

Table 1. Analyze to extend of adoption for Pigeon pea technology

Package practices	Complete	Partially	Non-Adoption	Adoption Percentage
Seed treatment	20(33.3)	25(41.6)	15(25)	75.00
Improved varieties	22(36.6)	20(33.3)	18(30.0)	70.00
Seed rate	42(70.00)	14(23.3)	4(6.6)	93.30
Timely sowing	38(63.3)	12(20)	10(16.6)	83.30
Use of Bio-fertilizer	——	4(6.6)	56(93.3)	6.60
Manuring (FYM)	12(20.00)	34(56.60)	14(23.30)	76.00
Fertilizer	24(40.00)	36(60.00)	——	100.00
Plant protection measures	23(38.00)	15(25.00)	22(36.60)	63.30
Timely harvesting	33(55.00)	21(35.00)	6(10.00)	90.00
Improved method of storage	6(10.00)	14(23.30)	40(66.60)	33.30
Mean	**22.00**	**19.50**	**18.50**	

Table 2. Association with adoption behavior of Pigeonpea cultivators between their various characteristics

Characteristics of farmers	D.F.	X 2 Value
A. Personal characteristic		
(a) Education	2	11.35*
(b) Knowledge	2	7.60*
B. Socio-economics characteristics		
(c) Social-participation	2	2.37 NS
(d) Socio-economic status	2	15.99*
C. Psychological characteristics		
(e) Risk preference	2	1.09NS
D. Communication characteristics		
(f) Extension contact	2	6.88*
(g) Mass-media contact	2	10.25*

* Significant at 5 % level; NS Non-significant

The study also showed that social participation and risk were not significant with adoption of pigeonpea cultivation technology.

CONCLUSION

From the above discussion, it can be concluded that most of the farmers were convinced to adopt application of recommended dose of fertilizers and timely harvesting of the crop to avoid shattering effects. The farmers were not adopting use of bio-fertilizers this may be due to unawareness about education, knowledge, socio-economic, extension contact and mass media contact of the respondents were significantly associated with adoption of improved pigeonpea cultivation practices.

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