

**RESEARCH ARTICLE :**

Constraints faced by the respondents and their suggestions in adopting pigeonpea production technology

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SUMMARY : The present study was conducted with specific objectives to study technological gap in pigeonpea production technology. For this study Parbhani district was selected and from Parbhani district three talukas viz., Gangakhed, Jintur and Parbhani were selected. From these three talukas twelve village were selected randomly and ten respondents from each village were selected, i.e. 120 respondents from 12 villages constituted the sample for the study. Ex-Post Facto research design was used for the research study. The major constraints faced by respondents in technological gap in pigeonpea production technologies were high cost of FYM, high cost of chemical fertilizer, lack of knowledge about benefits of intercropping operation, non-availability of bio-fertilizer and fungicide for seed treatment in rural area. The majority of the respondents suggested that cost of seed should be reduced, training programme should be organized to improve the knowledge regarding land use, bio-fertilizer and detail package of practices, mechanical threshers should be made available to groups by providing 100 per cent subsidy.

KEY WORDS:

Technological gap,
Constraints,
Suggestions,
Pigeonpea,
Production
technology

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BACKGROUND AND OBJECTIVES

Pigeonpea is an important pulse crop in India. It is also known as red gram, Arhar and Tur. Red gram is mainly cultivated and consumed in developing countries of the world. This crop is widely grown in India. India is the largest producer and consumer of pigeonpea in the world.

Pigeonpea has been very important component of the farming system in India, because of its ability to fix atmospheric nitrogen. Being deep rooted crops it can thrive

well under rainfed condition. Its root open up soil and improve the soil in the form of dried leaves of roots. It produces a significant amount of biomass. It is multipurpose crop. The dry shoots are invariably used as a fuel wood, fencing and thatching. The acid secretion from its root nodules dissolved iron and phosphate and increases the availability of phosphorus in the soil. Thus, it contributes to the sustainability of agriculture besides being used as food, fuel wood and fodder.

The agricultural technology is not

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generally accepted by the farmers completely in all respect as such there always appears to be a gap between recommended technology by the scientist and its modified form at the farmer level.

There are less research studies conducted so far to know the technological gap among the pigeonpea growers. The number of farmers growing pigeonpea is day by day on the increase and also observed to be following some of the recommended package of practices in the cultivation of pigeonpea crop. However, lower productivity is matter of concern for the extension agencies. So present study was undertaken to see the constraints in adoption of recommended technologies with the following objectives to find out the constraints faced by pigeonpea growers in use of recommended production technology of pigeonpea and to know the suggestions to overcome the constraints.

RESOURCES AND METHODS

The present study was conducted in three tahsils of Parbhani district viz., Gangakhed, Jintur and Parbhani. Four villages were selected from each randomly selected tahsil. The data were collected from 10 respondents from each of randomly selected these twelve villages *i.e.* 120 respondents from 12 villages constituted the sample for the study.

The respondents were personally interviewed with interview schedule. The data were tabulated and analyzed by using statistical tools like frequency, percentage and correlation co-efficient.

OBSERVATIONS AND ANALYSIS

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

Constraints faced by the respondents in adopting pigeonpea production technology :

The objectives of the study were to identify the constraints in the adoption of pigeonpea production technologies. The various constraints faced by the respondents in adoption of pigeonpea production technologies are given in Table 1.

It was noticed from Table 1 that, 40.00 per cent of the respondents reported non-availability of sufficient time for preparation of land. Whereas 39.16 per cent of the respondents expressed non-availability of bullock pair. While 30.00 per cent of the respondents reported non-

availability of machinery for preparation of land.

In case of seed and sowing technique, lack of information and knowledge about recommended variety *i.e.* 60.00 per cent and non-availability of quality seed at proper time *i.e.* 57.50 per cent were major constraints expressed by the respondents. Whereas 51.67 per cent respondents mentioned high cost of seed. While 28.33 per cent respondents expressed non-availability of sowing machinery.

In case of seed treatment, it is evident from the data that 61.67 per cent respondents expressed non-availability of bio-fertilizer and fungicide for seed treatment in rural area and 20.00 per cent respondents reported lack of information regarding seed treatment.

Regarding chemical fertilizer, 74.17 per cent and 56.67 per cent respondents perceived the problem of high cost of chemical fertilizer and non-availability of chemical fertilizer at proper time. Whereas lack of information about balance of fertilizer and required dose of NPK for pigeonpea stated by 43.33 per cent respondents.

In case of FYM, 85.83 per cent and 62.50 per cent respondents reported high cost of FYM, respectively and non-availability of good quality FYM, respectively. Whereas 42.50 per cent respondents mentioned lack of knowledge about preparation of various methods of organic manures.

In case of weed control, it is observed that 63.33 per cent of the respondents reported lack of knowledge about weed control. Whereas 46.67 per cent of the respondents reported lack of knowledge about proper time of weed control. While 28.33 per cent respondents reported lack of knowledge about chemical weed control.

In the context of intercultural operation, lack of knowledge about benefits of intercultural operation and lack of knowledge about intercultural operation were the important reasons reported by 65.00 per cent and 45.00 per cent respondents, respectively. While 42.50 per cent respondents reported lack of information about proper time of intercultural operation. As per as plant protection is concern high cost of plant protection measures and non-availability of plant protection measures at required time were the important reason reported by 65.00 per cent and 49.17 per cent respondents, respectively. While 37.50 per cent respondents reported lack of knowledge about scientific method of plant protection.

Further it is revealed from Table 1 that 61.67 per cent of the respondents expressed non-availability of threshing machine at proper time. Whereas 55.83 per

cent of the respondents reported non-availability of labours at the time of harvesting and 41.67 per cent respondents reported higher charges for threshing of pigeonpea. While 35.83 per cent respondents reported high cost of threshing machine. Almost similar results were reported by many workers (Kadam, 2000; Kadam, 2003; Deshmukh, 2006; Bedre, 2009; Kadam *et al.*, 2010; Mane, 2012 and Shinde, 2014).

Suggestions obtained from respondents :

Regarding preparatory tillage, the data from Table 2 revealed that 85.83 per cent of the respondents suggested that training programme should be organized to improve the knowledge regarding land use, bio-fertilizer and detail package of practices. While 80.83 per cent respondents suggested that farm mechanization should be motivated among the farmers in group by providing

Table 1 : Constraints faced by the respondents

Sr. No.	Constraints	(n=120)	
		Frequency	Percentage
1.	Preparatory tillage		
	Non-availability of sufficient time for preparation of land	48	40.00
	Non-availability of bullock pair	47	39.16
	Non-availability of machinery for preparation of land	36	30.00
2.	Seed and sowing		
	Lack of information and knowledge about recommended variety.	72	60.00
	Non-availability of quality seed at proper time	69	57.50
	High cost of seed.	62	51.67
	Non-availability of sowing machinery.	34	28.33
3.	Seed treatment		
	Non-availability of bio-fertilizer and fungicide for seed treatment in rural area	74	61.67
	Lack of information regarding seed treatment	24	20.00
4.	Chemical fertilizer		
	High cost of chemical fertilizer	89	74.17
	Non-availability of chemical fertilizer at proper time	68	56.67
	Lack of information about balance of fertilizer and required dose of NPK for pigeonpea	52	43.33
5.	FYM		
	High cost of FYM	103	85.83
	Non-availability of good quality FYM	75	62.50
	Lack of knowledge about preparation of various method organic manures	51	42.50
6.	Weed control		
	Lack of knowledge about weed control	76	63.33
	Lack of knowledge about proper time of weed control	56	46.67
	Lack of knowledge about chemical weed control	34	28.33
7.	Intercultural operation		
	Lack of knowledge about benefits of intercultural operation	79	65.33
	Lack of knowledge about intercultural operation	54	45.00
	Lack of information about proper time of intercultural operation	51	42.50
8.	Plant protection		
	High cost of plant protection measures	78	65.00
	Non-availability of plant protection measures at required time	59	49.17
	Lack of knowledge about scientific method of plant protection	45	37.50
9.	Harvesting		
	Non-availability of threshing machine at proper time	74	61.67
	Non-availability of labours at the time of harvesting	67	55.83
	Higher charges for threshing of pigeonpea	50	41.67
	High cost of threshing machine	43	35.83

machinery on subsidy bases.

In seed and sowing, cost of seed should be reduced and good quality seed should be supplied to farmers in time suggested by 90.83 per cent and 75.83 per cent respondents, respectively.

Regarding seed treatment, 78.33 per cent respondents suggested that bio-fertilizer and fungicides for seed treatment should be made available in rural area at proper time. In chemical fertilizer, 68.33 per cent suggested that fertilizer should be made available at proper time. While 60.00 per cent respondents suggested that cost of fertilizer should be reduced.

Regarding FYM, 75.83 per cent respondents suggested that government should provide NADEP and vermin-compost unit on subsidy bases. In weed control, 63.33 per cent respondents suggested that information regarding chemical weed control should be given in time by extension agencies. Regarding intercultural operation, 67.50 per cent respondents suggested that information regarding low cost intercultural operation should be given

by extension agencies. In the context of plant protection, 81.67 per cent and 62.50 per cent respondents suggested that pesticide should be provided at low cost and message alerts through SMS should be given to farmers about insect, pest and its control measures in time. Similar results were also reported by Pandey *et al.* (2014) on rice, Karade *et al.* (2014) on potato growers, Chodavadia *et al.* (2013) on groundnut and pigeonpea, Shennewad and Shelke (2013) on papaya, Chourad *et al.* (2014) on rice food and Dhurwey *et al.* (2015).

In harvesting, 71.67 per cent of the respondents suggested that mechanical threshers should be made available to groups by providing 100 per cent subsidy and 36.66 per cent respondents suggested that information regarding proper time of harvesting should be communicated. Kadam (2003) and Mane (2001) reported similar result in his study.

Conclusion:

It is concluded that most of the pigeonpea growers

Table 2: Suggestions obtained from respondents

Sr. No.	Suggestions	(n=120)	
		Frequency	Percentage
1.	Preparatory tillage		
	Training programme should be organized to improve the knowledge regarding land use, bio-fertilizer and detail package of practices.	103	85.83
	Farm mechanization should be motivated among the farmers in group by providing machinery on subsidy bases.	97	80.83
2.	Seed and sowing		
	Cost of seed should be reduced.	109	90.83
	Good quality seed should be supplied to farmers in time.	91	75.83
3.	Seed treatment		
	Bio-fertilizer and fungicides for seed treatment should be made available in rural area at proper time	94	78.33
4.	Chemical fertilizer		
	Fertilizer should be made available at proper time	82	68.33
	Cost of fertilizer should be reduced	72	60.00
5.	FYM		
	Government should provide NADEP and vermicompost unit on subsidy bases.	98	75.83
6.	Weed control		
	Information regarding chemical weed control should be given in time by extension agencies.	76	63.33
7.	Intercultural operation		
	Information regarding low cost intercultural operation should be given by extension agencies.	81	67.50
8.	Plant protection		
	Pesticide should be provided at low cost.	95	81.67
	Message alerts through SMS should be given to farmers about insect, pest and its control measures in time.	75	62.50
9.	Harvesting		
	Mechanical threshers should be made available to groups by providing 100 per cent subsidy.	86	71.67
	Information regarding proper time of harvesting should be communicated.	44	36.66

were having the constraints *viz.*, high cost of FYM (85.83%), high cost of chemical fertilizer (74.17%), lack of knowledge about the benefits of intercropping (65.33%), non-availability of bio-fertilizer and fungicide for seed treatment (61.67%) in rural area were the main constraints.

Some of the suggestions are obtained from the majority of the respondents were cost of seed should be reduced (90.83%), training programme should be organized to improve the knowledge regarding land use, bio-fertilizer and detail package of practices (85.83%), mechanical threshers should be made available to groups by providing 100 per cent subsidy (71.67%), government should provide NADEP and vermicompost unit on subsidy bases (75.83%).

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REFERENCES

- Bedre, V.S.** (2009). Knowledge and adoption of recommended package of practices by okra growers. M.Sc. (Ag.) Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).
- Chodavadia, H.C.**, Bariya, M.K. and Deshmukh, G.P. (2013). Constraints and suggestions in adopting groundnut - pigeonpea relay cropping system in Saurashtra region of Gujarat. *Agric. Update*, **8**(4): 569-572.
- Chourad, Raghavendra**, Kiresur, V.R. and Kondaguri, Raghavendra (2014). Constraints to consuming nutrient rich food in Koppal district of Karnataka. *Internat. Res. J. Agric. Eco. & Stat.*, **5**(2) : 245-248.
- Deshmukh, M.P.** (2006). Knowledge and adoption of pigeonpea variety BSMR 736 by the farmers in Jalna district. M.Sc. (Ag.) Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).
- Dhurwey, Chandresh Kumar**, Choudhry, V.K., Banty, Ropan and Shrey, Ravi (2015). Constraints perceived by farmers in production and marketing of major cole vegetable crops in Bemetara district of Chhattisgarh state. *Internat. Res. J. Agric. Eco. & Stat.*, **6**(1) : 193-196.
- Kadam, P.B.** (2000). A study of adoption improved soybean technology by the farmers. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).
- Kadam, R.P.** (2003). A study on the technological gap in soybean production technology. Ph.D. Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).
- Kadam, S.S.**, Thombare, B.M. and Mande, J.V. (2010). Technological gap in sugarcane production technology. *J. Maharashtra Agric. Univ.*, **35**(3): 424-427.
- Karade, Priya**, Agrawal, S.K., Singh, S.R.K. and Chouhan, Sandeep (2014). Constraints in adoption of integrated pest management practices by the potato growers. *Agric. Update*, **9**(1): 149-150.
- Mane, S.S.** (2001). A study on the problems confronted in greengram cultivation in Parbhani district. M.Sc. (Ag.) Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).
- Mane, S.S.** (2012). Knowledge and adoption of recommended production technology of green gram. M.Sc. (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).
- Pandey, Rakesh**, Chaudhary, R.P., Chaturvedi, A.K. and Prasad, R. (2014). Knowledge level and production constraints of rice in Eastern Uttar Pradesh. *Agric. Update*, **9**(1): 106-110.
- Shennewad, B.A.** and Shelke, R.D. (2013). Constraints and suggestions of papaya growers in Marathwada region of Maharashtra state, *Internat. Res. J. agric. Eco. & Stat.*, **4**(1) : 30-32.
- Shinde, P.B.** (2014). Knowledge and adoption recommended seed production technology by the soybean growers. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).

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