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Research Article

Constraints faced by soybean growers in recommended seed production technology

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SUMMARY : The present study was conducted in Parbhani district of the Marathwada Region of Maharashtra state. Three talukas were selected randomly. From each taluka four villages were selected on the basis of list of the soybean seed growers in Parbhani district obtained from Mahabeej Office Parbhani. Thus, 12 villages were selected for present study .Ten soybean seed production growers from each village were selected randomly thus, 120 respondents were selected by following lottery method from selected villages. They were interviewed, personally to collect the data with the help of structured interview schedule. The collected data were processed and statistically analyzed.

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BACKGROUND AND OBJECTIVES

Seed is a vital input and a dynamic component for increasing agricultural production. The development of seed enterprise is necessary in the context of modern agriculture. In Parbhani district seed is grown on large scale. It is assumed that the adoption behaviour of the farmers is influenced by various factors which affect the crop yield to great extent. It is known that certain factors play important role in damaging the crop after. It is presumed that incidence of low yields and high losses may be due to lack of knowledge of the recommended practices resulting in the adoption behaviour of the seed growers. Much of our success in increasing food production has been due to the development of seed enterprise over the past decade. Demand at present is strong and expected to continue expanding. India is now embarked on the development of first class seed industry, which the country needs to the farmer all the scientific research, would be a little value unless he gets seeds which are genetically pure and possess other desired qualities *viz.*, high germination percentage, high vigour, high purity and sound health. When the farmer does not get seeds possessing these qualities and values, the yield they obtain may not be as expected. Only seeds with assured quality can be expected to respond to fertilizers and other inputs in the expected manner.

India ranks third after Argentina and Brazil in production of soybean and Maharashtra is the second largest producer after Madhya Pradesh. (Source: The Soybean Processors Association of India (SOPA) 2011-12) and the soybean seed total area sown and registered was 7038.8 ha and total seed production of soybean 83856.58 (q) in 2012-13 of Parbhani. (Source: Regional office, Mahabeej, Parbhani 2012-13).

Objectives :

- To study the profile of soybean seed growers.
- To know the constraints faced by soybean growers in seed production technology.

RESOURCES AND METHODS

The present study was undertaken in Parbhani district of Marathawada region purposively. Parbhani district consists of 9 tahsils, out of these nine tahsils, three tahsils namely Parbhani, Gangakhed and Purna were selected randomly. From each tahsils four villages were selected on the basis of list of the soybean seed growers in Parbhani district obtained from Mahabeej Office Parbhani and ten soybean seed production growers from each village were selected randomly by following lottery method. Thus, the sample comprised of total 120 respondents. "Ex- post facto" research approach of social research was used for the study. The data were collected with the help of pre - tested structured interview schedule consisting of various items concern with the objective of study. The respondents were categorized with the help of mean and standard deviation.

OBSERVATIONS AND ANALYSIS

The finding of the study as well as relevant discussion have been summarized under following heads :

Profile of soybean seed growers :

The data with respect to profile of the respondent have been studied and furnished in Table 1.

The distribution of the respondents in table shows that 70.01 per cent of the respondents were from middle age group,

Table 1 : Distribution of the respondents according to their profile

Sr. No.	Profile of respondents	Category	Respondents (n=120)	
			No	%
1.	Age (Years)	Young (Up to 37 years)	23	19.16
		Middle (38 to 56 years)	84	70.01
		Old (57 years and above)	13	10.83
2.	Farm experience	Low (up to 17)	16	13.33
		Medium (18 to 32)	82	68.33
		High (33 and above)	22	18.34
3.	Education	Illiterate	01	00.83
		Functionally literate (can read and write only)	11	09.17
		Primary school level (1^{st} to 4^{th} std.)	19	15.83
		Middle school level (5^{th} to 7^{th} std.)	22	18.33
		High school level ($8^{th}$to 10^{th} std.)	39	32.50
		College level	28	23.34
4.	Annual income	Low (up to 70000)	00	00
		Medium (70001to 599999)	99	82.5
		High (6,00,000 and above)	21	17.5
5.	Land holding	Marginal land holding (Up to 1.0)	08	06.66
		Small land holding (1.1 to 2.0)	25	20.83
		Semi-medium land holding (2.1 to 4.0)	34	28.33
		Medium land holding (4.1 to 10.0)	46	38.35
		Big land holding (10.1 and above)	07	05.83
6.	Social participation	Low (up to 5)	37	30.83
		Medium (6 to 8)	57	47.5
		High (9 and above)	26	21.67
7.	Source of information	Low (up to 17)	24	20.00
		Medium (18 to 23)	68	56.67
		High (24 and above)	28	23.33
8.	Risk orientation	Low (Up to 18)	31	25.83
		Medium (19 to 23)	57	47.5
		High (24 and above)	32	26.67
9.	Economic motivation	Low (up to 17)	21	17.5
		Medium (18 to 23)	76	63.33
		High (24 and above)	23	19.17
10.	Extension contact	Low (up to 5)	29	24.17
		Medium (6 to 7)	68	56.67
		High (8 and above)	23	19.16

while nearly 19.16 per cent of the respondents were from young age group and only 10.83 per cent of the respondents were of old age group. This observation is similar with findings of Sharnagat (2008). 68.33 per cent of the soybean seed growers had experience of 18 to 32 years, while 18.34 per cent respondents had more than 33 years farming experience and 13.33 per cent had experience of up to 17 years. This observation is similar with findings of Waghmare (2010). 32.5 per cent of the soybean seed growers were educated up to high school level, 23.34 per cent of the soybean seed growers were educated up college level, 18.33 per cent of them had middle school level of education, 15.83 per cent educated up to primary school level, 9.17 per cent of them were can read and write only while, 0.83 per cent of the soybean seed growers were illiterate. This observation is similar with findings of Katke (2011) and Singh *et al.* (2012).

82.5 per cent of soybean seed growers had medium annual income followed by 17.5 per cent of soybean seed growers had high annual income. This finding is similar to that of Nemade (2007). Higher percentage 38.35 per cent of soybean seed growers were found in medium land holding category, 28.33 per cent of soybean seed growers were found in semi medium land holding category and 20.83 per cent of soybean seed growers and 06.66 per cent of soybean seed growers were small and marginal land holding category, respectively. Only, 5.83 per cent of the soybean seed growers were found in big land holding category. This observation is similar with finding of Athwale (2008). Majority 47.5 per cent of the soybean seed growers had medium social participation while, 30.83 per cent of them had low social participation. Only, 21.67 per cent of soybean seed growers were having high level of social participation. Similar types of findings were noticed by Pawar (2008). More than half 56.67 per cent of the soybean seed growers used medium sources of information while, 23.33 per cent of the soybean seed growers used high and 20.00 per cent of the soybean seed growers used low sources of information category. This finding is in conformity with the findings of Pawar (2008), Dalvi (2009) and Badale (2007).

It was observed that majority 47.5 per cent of the respondents were having medium risk orientation**,** while 26.67 per cent of the respondents had high risk orientation. Further it was found that 25.83 per cent of them had low risk orientation. Similar finding were quoted by Dalvi (2009) and Katke (2011). Majority 63.33 per cent of the respondents were having medium

Table 2 : Constraints faced by soybean growers in recommended seed production technology

Sr. No.	Constraints	Frequency	Percentage	Rank
1.	Required seeds of expected varieties are not available in time	8	6.67	XVIII
2.	Improved variety of seeds are costly	12	10.00	XV
3.	Improved seeds varieties are prone to affect by pests and diseases	3	2.5	XXI
4.	Required fertilizers are not made available in time	17	14.17	XII
5.	Fertilizers are costly	90	75.00	VI
6.	Required micronutrients containing fertilizers are not available timely in market	15	12.5	XIV
7.	Insecticides are costly	19	15.83	XI
8.	Use of insecticides is hazardous	27	22.5	X
9.	Non -availability of labour in time	98	81.67	IV
10.	Non- availability of enough quantity of water for irrigation	78	65.00	VIII
11.	Frequent interruption in supply of electricity	82	68.33	VII
12.	Disturbance in harvesting due to unseasonal rains	95	79.17	V
13.	Problem in transport of products	31	25.83	IX
14.	Unavailability of Scientific information for the crop protection measures	16	13.33	XIII
15.	Nearby necessary chemicals are unavailable	7	5.83	XIX
16.	Spraying implements are not affordable	9	7.5	XVII
17.	Protective measures are risky	10	8.33	XVI
18.	Fear of success or failure of seeds	115	95.83	II
19.	Threshing certificate is not made available at proper time from Agriculture Officer	4	3.33	XX
20.	Made available at reasonable price the 50 kg gunny bags from seed company	110	91.67	III
21.	Is made available by the seed company on subsidy basis grain sieving machine (non electric machine)	120	100.00	I

economic motivation, while 17.5 per cent of them had low economic motivation. Further it was found that 19.17 per cent of the respondents had high economic motivation. This finding is similar to those of Chahande (2012) and Jadhav (2013). Majority 56.67 per cent of the respondents were having medium extension contact, while 24.17 per cent of them had low extension contact. Further it was found that 19.16 per cent of the respondents had high extension contact. This finding is in line with the findings of Chahande (2012); Jadhav (2013) and Shinde (2013).

Constraints faced by soybean growers in recommended seed production technology :

It is revealed from Table 2, that the at most all soybean seed growers *i.e.* 100 per cent of them expressed problem regarding grain sieving machine (non electric machine)is not made available by seed company on subsidy, 95.83 per cent of the respondents faced constraints like fear of success or failure of seeds. 91.67 per cent of the respondent expressed problem regarding made available at reasonable price the 50 kg gunny bags from seed company.

It is revealed from Table 2 that 81.67 per cent of the respondent faced problem that non-availability of labour in time, 79.17 per cent of respondents faced problem of disturbance in harvesting due to unseasonal rains. While, 75.00 per cent of respondent faced problem in seed production because of fertilizers are costly, 68.83 per cent respondents revealed that frequent interruption in supply of electricity, 65.00 per cent respondents expressed problem regarding non-availability of enough quantity of water for irrigation.

Whereas 25.83 per cent of respondents faced problem of transport the products and 22.5 per cent respondents expressed that use of insecticide is harmful.

It is revealed from Table 2 that however, 15.83 per cent of the respondent revealed concern over insecticides that are costly and 14.17 per cent respondents expressed that required fertilizers are not available at time .While, 13.33 per cent of the respondent faced problem that unavailability of scientific information for the crop protection measures.

Over and above the various constraints faced by the soybean seed growers were 12.50 per cent respondents expressed that required micronutrients fertilizers are not available timely in market and improved variety seeds are costly statement expressed by 10.00 per cent respondents, 8.33 per cent of the respondent expressed that protective measures were risky, 7.5 per cent of the respondents faced problem that spraying implements are not affordable. 6.67 per cent respondents expressed concern over required seeds of expected varieties are not made available in time.

3.33 per cent respondents faced problem about threshing certificate is not made available at proper time from Agriculture Officer .whereas 2.5 per cent respondents faced problem that improved seeds are prone to be affected by pest and disease. These findings are supported by the study of Dalvi (2009); Mane (2012) and Shinde (2013). Similar work related to the topic have also been done by Jadhav (2008); Shinde (2003); Gawande *et al.* (2007) and Todasam (2009).

Conclusion :

The constraints encountered by the respondents in seed production technology of soybean can be summarized as the at most all soybean seed growers expressed problem regarding grain sieving machine (non-electric machine) is not made available by seed company on subsidy, fear of success or failure of seeds, 50 kg gunny bags from seed company should not be made available at reasonable price, non - availability of labour in time, disturbance in harvesting due to unseasonal rains, fertilizers are costly, frequent interruption in supply of electricity, non - availability of enough quantity of water for irrigation and transport the products. Respondents expressed that use of insecticide is harmful, concern over insecticides that are costly, required fertilizers are not available at time, unavailability of scientific information for the crop protection measures, required micronutrients fertilizers are not available timely in market, improved variety seeds are costly, protective measures were risky, spraying implements are not affordable, expected varieties are not available in time. Threshing certificate is not made available at proper time from Agriculture Officer, improved seeds are prone to affected by pest and disease.

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