

A study of technological gap and the reasons for existence of technological gap

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ABSTRACT

It has been observed that researches in social science give mainly attention towards the adoption of cultivation practices of different areas. However, studies in the field of technological gap are very rare on this background. Hence, the present study is proposed to survey Sangola and Pandharpur tahsil of Solapur district by giving focus on technological gap. Growth of crop yield production quality and productivity of pomegranate are severely hampered by oily spot disease and pomegranate growers are unable to control the same due to lack of knowledge and they do not adopt recommended practices on large scale which is the main hindrance in increasing the average yield per hectare. It was observed that a majority 68.75 per cent of the respondent pomegranate cultivators were found in medium technological gap level while 19.53 per cent of them were found in high technological gap whereas 11.71 per cent of them were found in low technological gap. The average technological gap of the respondent pomegranate cultivator was 29.46 per cent. The reasons for existence of technological gap were high cost of chemical fertilizers, difficulty in identifying oily spot diseases, lack of availability of drought resistant and disease resistant varieties, irregular supply of electricity lack of availability of guaranteed seedling from disease free nursery.

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Pomegranate is grown on diverse type of soils. It is hardy plant and can survive even under desert conditions. Although, it is highly drought resistant, it responds well to irrigation. In India 2 lakh hectares area under pomegranate crop, which is mainly grown in states of Maharashtra, Gujrat followed by Rajasthan, Uttar Pradesh, Haryana, Andhra Pradesh and Karnataka. At present area under pomegranate is 89.930 ha *i.e.* 85 per cent of India and production was 509475 metric tonnes in 2006-07. The cultivation of pomegranate is mainly confined to districts like, Solapur (33028 ha), Sangli (5550 ha), Nashik (26011 ha), Ahmednagar (7138 ha) and Pune (4914 ha). Area under pomegranate is increasing very rapidly because of its hardy nature, excellent keeping quality of fruits and remunerative prices of export market. It has been observed that researcher in social science give mainly attention towards the adoption of cultivation practices of different areas. However, studies in the field of technological gap are very rare on this background. Hence, the present study proposed to survey Sangola and Pandharpur tahsil of Solapur district by giving focus on technological gap.

Growth of crop, yield, quality and productivity of pomegranate are severely hampered by oily spot disease and pomegranate growers are unable to control the same due to lack of knowledge and they do not adopt recommended practices on large scale which is the main

hindrance in increasing the average yield per hectare. A systematic study in this direction would bring out the extent of technological gap between recommended and actually adopted pomegranate technology by the pomegranate growers, problems faced by them, communication gap among the pomegranate cultivators regarding new technologies.

Objectives:

The objective are as to study the technological gap of adopted pomegranate technologies by the respondent pomegranate cultivators and to study the reasons for existing of technological gap in cultivation practices adopted for pomegranate by the respondent pomegranate cultivators

MATERIALS AND METHODS

The present study was conducted in 16 villages from Sangola and Pandharpur tahsil of Solapur district of Maharashtra State. The data collected from 128 respondents from sampled villages of Sangola and Pandharpur tahsil of Solapur district with the help of well-constructed and pre-tested interview schedule. In view of the objectives of the study, appropriate statistical tests were used for drawing the inferences.

RESULTS AND DISCUSSION

The findings of the present study as well as relevant

discussion have been summarized under following heads

Technological gap between recommended and actually adopted pomegranate technologies by the respondent pomegranate cultivators:

Technological gap is the gap between recommended technology and actual adoption of that recommended technology by the respondents. The distribution by their overall technological gap is given in Table 1.

From Table 1, it was observe that a majority of the respondents were found in medium technological gap *i.e.* 68.75 per cent followed by 19.53 per cent of the respondents in high technological gap and 11.72 per cent of the respondent pomegranate cultivators in low technological gap group. The average technological gap of the pomegranate cultivators was 29.46 per cent in the sampled areas.

Table 1 : Distribution of the respondent pomegranate cultivators by their overall technological gap

Sr. No.	Technological gap	No. of respondents (N=128)	Percentage
1.	Low (up to 42 scores)	15	11.72
2.	Medium (43 to 65scores)	88	68.75
3.	High (66 and above scores)	25	19.53
	Total	128	100.00

Reasons for existence of technological gap in cultivation practices adopted for pomegranate by the respondent pomegranate cultivators:

Reasons refer to the difficulties or causes, which prohibit farmers to adopt improved farm technology. These reasons are given in Table 2.

As regards to availability of seedlings and seedling

Table 2 : Reasons for existence of technological gap in adopted pomegranate cultivation practices

Sr. No.	Reasons for existing technological gap	No. of respondents (N=128)	Percentage
1.	Seedling availability and treatment of seedling		
	i. Lack of availability of guaranteed seedlings from disease free nursery	72	56.25
	ii. Lack of knowledge about seedling treatment	51	39.84
2.	Variety		
	Lack of availability of drought resistant and disease resistant varieties	98	76.56
3.	Spacing		
	Lack of knowledge about recommended spacing	47	36.71
4.	Pruning		
	Lack of technical knowledge and skill about pruning practices	57	44.53
5.	Bahar treatment		
	Lack of knowledge about taking only one bahar during the year	67	52.34
6.	Weed management		
	i. Shortage of labour during weeding operation	57	44.53
	ii. Hand weeding is time and labour consuming as well as expensive	65	50.78
	iii. High cost of weedicides	54	42.18
7.	Fertilizer and micronutrient application		
	i. Lack of technical knowledge about chemical fertilizer dose	106	82.81
	ii. Lack of knowledge about time of application on chemical fertilizer	79	61.71
	iii. High cost of chemical fertilizer	111	86.71
8.	Pest and disease management		
	i. Difficulty in identifying oily spot disease	106	82.81
	ii. Lack of knowledge about control measures of diseases and pest	79	61.71
	iii. Costly insecticides and fungicides	75	58.59
9.	Water management		
	i. Scarcity of water during summer	72	56.25
	ii. Inadequate irrigation facilities	54	42.18
	iii. Irregular supply of electricity	91	71.09
10.	Harvesting of pomegranate fruit		
	i. Lack of knowledge about proper harvesting stage	28	21.88
	ii. Shortage of labour during harvesting	47	36.71

treatment, it was observed that 56.25 per cent of the respondents were expressed lack of availability of guaranteed seedling or planting material from disease free nursery similarly 39.84 per cent of them reported lack of knowledge about seedling treatment. It was observe that about 76.56 per cent of the respondents expressed lack of availability of drought resistant and disease resistant varieties As regards to spacing; it was observed that about 36.71 per cent of the respondents expressed lack of knowledge about the plant population and spacing.

It was observe that 44.53 per cent of the respondents expressed the lack of technical knowledge and skill about pruning practices. It was observe that 52.34 per cent of the respondents expressed the lack of knowledge about taking only one *bahar* during the year for better quality and size of fruits.

The reason regarding, weed management were shortage of labour for weeding (44.53 per cent) hand weeding being time, labour consuming and expensive (50.78 per cent) and costly weedicides (42.18 per cent). The survey explains that 71.09 per cent of the respondents had faced the problem of irregular supply of electricity. In which 56.25 per cent of faced the problem of scarcity of water during summer season. The 42.18 per cent of the respondents faced the problem of inadequate irrigation facilities.

High cost of fertilizer was the major reason faced by 86.71 per cent of the respondents. Lack of knowledge about the recommended fertilizer dose (82.81 per cent) and lack of knowledge about time of application of fertilizer (61.71 per cent) were the other major reasons faced by the respondents. About disease and pest management 82.81 per cent of the respondents were not able to identify oily spot disease at primary stage. The problems faced were lack of knowledge about control measures of disease and pest (61.71 per cent), costly insecticides and fungicides (58.59 per cent). The major problem faced by the respondents was shortage of labour at the time of harvesting and lack of knowledge of proper stage of harvesting (21.88 per cent).

Conclusion:

It was observed that majority 68.75 per cent of the respondent pomegranate cultivators were found in medium technological gap level, while 19.53 per cent of them were found in high technological gap whereas 11.71 per cent of them were found in low technological gap. The average technological gap of the respondent pomegranate cultivator was 29.46 per cent. It was conclude that the

reasons for existence of technological gap were high cost of chemical fertilizers, difficulty in identifying oily spot disease, lack of availability of drought resistant and disease resistant varieties, irregular supply of electricity lack of availability of guaranteed seedlings from disease free nursery.

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