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Technological Gap In Adoption Of Improved Onion Cultivation Practices

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Abstract

The present study was conducted in the Beed district of Marathwada region Maharashtra state. In the Beed district out of eleven tehsils, three tehsils were selected purposively namely Ashti, Pathoda and Shirur (Kasar). For the study 4 villages from each selected tehsils, (Total 3 X 4 = 12) were selected purposively for the selection of respondents. Thusa total of 12 villages were selected for the study. From each selected village, 10 farmers were selected purposively. In this way, a total of 120 farmers (Total 12 X 10 = 120) were considered as respondents for the present study. After the analysis of data, it was observed that most (58. 34%) of the onion growers had a medium technological gap. In the case of practice wise technological gap, the highest technological gap was observed in seed and sowing methods (56.04%), followed by nursery practices (37.92%), plant protection measures (36.46%), irrigation management (22.08%), maturity indices (13.75%) and intercultural operations (9.58%).

(Keywords: Onion growers, Knowledge, Marathwada region)

Introduction:

Agriculture plays an important role in the Indian economy. It captures around 15.96% (2019-20) of the total GDP. The performance of the agriculture sector has always had a huge impact on the trend of India's GDP. Indian agriculture is known for its varied functionalities of providing employment, food and nutritional requirements. Agriculture is the backbone of India, which for centuries has shaped throughout outlook, culture and economic

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life of the people of India. Agriculture is the primary source of income for more than 59.70% of the population. Vegetable production is the best way to increase income per unit area, increase employment, and provide a nutritious and protein-rich diet. The primary centre of origin of the onion is central Asia with a secondary centre in the Middle East and the Mediterranean region. From these centres, onion has spread widely to many countries of the world. Area wise India ranks second while production-wise it ranks third among the total onion production in the world. Onion belongs to the family Amaryllidaceae. . Maharashtra ranks first in onion production. Onion producing districts in Maharashtra states are Satara, Nasik, Jalgaon, Pune, Sholapur and Ahmednagar these districts occupy a major part of the area about 94.68 per cent for onion cultivation in Maharashtra state.

Materials and Methods:

The present study was carried out in the Beed district of the Marathwada region of Maharashtra state with an ex-post facto research design. The present investigation was carried out in the Beed district out of eleven tehsils three tehsils were selected purposively namely Ashti, Pathoda and Shirur (Kasar). For the study 4 villages from each selected tehsils, (Total 3 X 4 = 12) were selected purposively for the selection of respondents. Thusa total of 12villages were selected for the study. From each selected village, 10 farmers were selected purposively. In this way, a total of 120 farmers (Total 12 X 10= 120) were considered as respondents for the present study. The collected data were classified, tabulated, analyzed and interpreted to make the findings mean. The statistical measures such as percentage, mean, standard deviation and coefficient of correlation were used in the study.

Technological gap was operationalised as difference between technology adopted and specific technology recommended. The technological gap was calculated and presented in terms of percentage

The formula for Calculating Technological Gap:

$$\text{Technological gap Index} = \frac{R - A}{R} \times 100$$

Where,

R= Recommended score

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A=Adoption score

To ascertain the practice wise technological gap in onion production technology by the respondents, the improved practices were grouped under seven major practices and a practice wise score was assigned. Based on practice wise scores obtained by the respondents in adopting particular practices, the mean score was worked out for all the 7 practices and then the difference between adoption and the recommended score for each practice in percentage was considered as the technological gap of the recommended technology.

Result and discussion:

The data in (Table-1) indicates that more than half (58.34 %) of the onion growers were found in the medium technological gap and 23.33 per cent onion growers belonged to a high technologicalgap and only 18.33 per cent belonged to the low technological gap.

The above result indicates that the technological gap in improved onion cultivation practices is ranging from the medium to high category. This is might be due to unscientific cultivation practices followed by them and less diffusion of improved onion cultivation practices which consecutively affected the adoption of recommended practices by the onion growers.

Table 1: Distribution of onion growers according to their overall technological gap in improved onion cultivation practices.

(n=120)

Sr. No.	Category	Frequency	Percentage
1	Low (up to 23)	22	18.33
2	Medium (24 to 42)	70	58.34
3	High (above 42)	28	23.33
	Total	**120**	**100**
	Mean = 33.02 **S.D.= 9.9**		

Table -2 Practice wise technological gap in adoption of improved onion cultivation practices

Sr. No.	Practices	Onion growers(N=120)
		Average technological gap (percentage)
1.	Seed and Sowing	56.04

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2.	Nursery practices	37.92
3.	Intercultural operations	9.58
4.	Irrigation Management	22.08
5.	Fertilizer Management	32.22
6.	Plant protection measures	36.46
7.	Maturity Indices	13.75
8.	Composite technological gap	33.02

The data presented in (table-2) indicates that the highest technological gap was found in seed and sowing methods (56.04%) might be due to a lack of proper information about improved varieties, seed treatment, spacing and seed rate. The technological gap in respect of nursery practices (37.92%), fertilizer management (32.22%) Technological gap in plant protection was (36.46%). The extent of the technological gap in irrigation management was found (22.08%). The technological gap in maturity indices was found to be (13.75%) and intercultural operation (9.58%). The possible reason for this might be that majority of the onion growers were not aware of many practices. Further, due to many reasons like lack of knowledge and technical guidance, high cost of chemical fertilizer and insecticide and shortage of labour hence they could not adopt many improved onion cultivation practices.

Conclusion

It can be concluded that most (58. 34%) of the onion growers had a medium technological gap. In the case of practice wise technological gap, the highest technological gap was observed in seed and sowing methods (56.04%), followed by nursery practices (37.92%), plant protection measures (36.46%), irrigation management (22.08%), maturity indices (13.75%) and intercultural operations (9.58%).

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