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Constraints faced by onion growers and suggestions offered by them to overcome Adoption gap in Akola district of Vidarbha region

[1]Vikrant V Nigade, [2]YB Shambharkar, [3]NR Koshti, [4]SP Lambe, [5]SM Ghawade and [6]RD Vaidkar

[1]PG Scholar, Department of Agricultural Extension Education, Post Graduate Institute, Dr. PDKV, Akola, Maharashtra, India
[2]Associate Professor (CAS), Department of Agricultural Extension Education, Post Graduate Institute, Dr. PDKV, Akola, Maharashtra, India
[3]Professor and Head, Department of Agricultural Extension Education, Post Graduate Institute, Dr. PDKV, Akola, Maharashtra, India
[4]Professor (CAS), Department of Agricultural Extension Education, Post Graduate Institute, Dr. PDKV, Akola, Maharashtra, India
[5]Junior Breeder cum Horticulturist, Chilli and Vegetable Research Unit, Dr. PDKV, Akola, Maharashtra, India
[6]Assistant Professor, Department of Agricultural Economics and Statistics, Post Graduate Institute, Dr. PDKV, Akola, Maharashtra, India

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Corresponding Author: Vikrant V Nigade

Abstract
The present study was carried out in Patur tehsil of Akola district of Maharashtra, employing an exploratory research design. The primary objective was to identify the major constraints encountered and gather suggestions from the growers to minimize this gap. Respondents were selected randomly to constitute sample size of 120 respondents. The results indicated that key challenges reported by the respondents included unavailability of quality inputs (seeds, fertilizers, pesticides) (37.50%), labour scarcity during peak operations (36.66%), limited access to organic manures (35.00%), climate variability (35.00%), inadequate knowledge of pest and disease management (32.50%), and high costs of agrochemicals (30.00%). Recommendations provided by onion farmers to address these issues and reduce the adoption gap included provision of input subsidies through institutional channels (42.50%), timely access to certified inputs (35.83%), and mechanization support to address labour shortages (32.50%). They emphasized the need for capacity-building through training on improved cultivation techniques (39.16%), pest and disease management (32.50%), and the dissemination of timely weather forecasts along with promotion of climate-resilient varieties (35.00%).

Keywords: Adoption gap, onion, constraints, suggestions

Introduction

Onion (*Allium cepa* L.) is a vital horticultural crop in India, both economically and nutritionally. Maharashtra, particularly the Vidarbha region, plays a significant role in national onion production, with cultivation spanning across all three major seasons. Despite advancements in research and the availability of improved varieties and practices, a considerable adoption gap persists among farmers limiting yield potential and profitability. This study focuses on identifying the key factors contributing to this adoption gap in Vidarbha, including limited access to technology, inadequate knowledge dissemination, and poor pest and disease management. Bridging this gap is essential to enhance productivity, stabilize farmer incomes, and ensure the sustainable growth of the onion sector in the region.

The present study was framed with objective

1. To study the constraints faced and invite the suggestions from onion growers to overcome the adoption gap

Methodology

The study followed an exploratory research design within the social science framework. The sample was selected purposively from the Patur tehsil of Akola district on the basis of the more area under onion cultivation during rabi season 2024-25. Total 10 villages were selected from the Patur tehsil and 12 onion growers were randomly selected from each village resulting in a total sample size of 120 onion growers. Data was collected through personal interviews using a pretested, structured schedule. The collected data was analyzed using appropriate statistical tools such as mean, percentage, standard deviation, and correlation coefficient to derive meaningful interpretations.

Results and Discussion

I. Constraints faced in adoption of recommended practices of onion production

Identifying the constraints faced by the onion growers in adoption of recommended cultivation practices of onion crop was one of the key objectives of the present study. Constraints refer to the factors or circumstances that impede or limit the growers from implementing scientifically recommended practices of onion production. The data

pertaining to these constraints, as experienced by the respondents, are presented practice-wise in Table 1.

Table 1: Distribution of respondents according to the constraints faced by onion growers

Sr. No.	Constraints	Frequency	Percentage	Rank
1.	Non-availability of quality seeds, fertilizers, and pesticides	45	37.50	I
2.	Scarcity of labour during critical cultivation and harvesting periods	44	36.66	II
3.	Non-availability of organic manures (FYM)	42	35.00	III
4.	Unpredictable weather and climatic conditions	42	35.00	IV
5.	Lack of awareness and knowledge about pests and disease control	39	32.50	V
6.	High cost of chemical fertilizers and plant protection products	36	30.00	VI

It is observed from the Table 1, relatively higher proportion (37.50%) of the onion growers reported that there was non-availability of quality seeds, fertilizers, and pesticides, followed by 36.66 per cent onion growers which reported that there is scarcity of labour during critical cultivation and harvesting periods, equal proportion of (35.00%) of onion growers had non-availability of organic manures(FYM) and face unpredictable weather and climatic conditions, 32.50 per cent of onion growers reported about lack of awareness and knowledge about pest and disease control, 30.00 per cent onion growers had reported about high cost of chemical fertilizers and plant protection products.

II. Suggestions of onion growers to overcome the constraints and adoption gap in onion production

Onion growers were asked to provide suggestions for addressing the constraints hindering the adoption of recommended cultivation practices. The responses are summarized in Table 2.

Table 2: Suggestions provided by the onion growers to overcome the adoption gap

Sr. No.	Suggestions	Frequency	Percentage	Rank
1.	Fertilizers and pesticides at subsidized rates through cooperatives or government schemes should be provided.	51	42.50	I
2.	Various training programs for acquiring adoption of improved onion cultivation practices should be facilitated.	47	39.16	II
3.	Timely availability of certified seeds, fertilizers, and pesticides before the season should be made.	43	35.83	III
4.	Timely weather forecasts and promote climate-resilient onion varieties should be provided.	42	35.00	IV
5.	Subsidy or assistance for small farm machinery to reduce labour dependency should be provided.	39	32.50	V
6.	Village-level training on pest and disease management should be organized.	39	32.50	VI

Table 2 highlights the suggestions given for improving the onion production. It was observed that 42.50 per cent of growers suggested about supply of fertilizers and pesticides at subsidized rates through cooperatives or government schemes followed by 39.16 per cent of growers suggested about facilizing the various training programmes for acquiring adoption of improved onion cultivation practices, 35.83 per cent about ensuring timely availability of certified seeds, fertilizers, and pesticides before the season. In addition to this, 35.00 per cent of growers suggested about providing timely weather forecasts and promote climate-resilient onion varieties, 32.50 per cent of growers suggested about providing subsidy or assistance for small farm machinery to reduce labour dependency and 32.50 per cent of growers suggested about organizing village-level training on pest and disease management.

Conclusion

The study reveals a significant adoption gap in onion production practices among farmers in the Vidarbha region of Maharashtra. Key constraints identified include the non-availability of quality seeds, fertilizers, and pesticides, labour scarcity during peak periods, limited access to organic manures and unpredictable weather, inadequate knowledge of pest and disease control, and the high cost of chemical inputs. These challenges collectively hinder productivity, profitability, and the sustainability of onion farming in the region.

To address these issues, farmers suggested several pragmatic interventions. The most prominent among them include subsidized input supply through cooperatives or government channels, organization of regular training programs on improved cultivation techniques, and ensuring timely availability of certified inputs. Additionally, farmers emphasized the need for accurate weather forecasting, promotion of climate-resilient varieties, access to small farm machinery, and village-level pest and disease management training.

Bridging the adoption gap requires a multi-pronged approach that integrates timely resource availability, farmer education, institutional support, and climate-smart agricultural strategies. Strengthening extension services, enhancing input accessibility, and supporting infrastructure development will be crucial in empowering onion growers in Vidarbha. These efforts will not only improve onion productivity and farm incomes but also contribute to regional economic development and national food security.

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