



International Journal of Research in Agronomy

E-ISSN: 2618-0618
P-ISSN: 2618-060X
© Agronomy
NAAS Rating (2025): 5.20
www.agronomyjournals.com
2025; SP-8(10): 51-52
Received: 11-08-2025
Accepted: 19-09-2025

Ramakant V Phad
M.Sc. (Agri.) Scholar, Department
of Agricultural Extension
Education, College of Agriculture
Parbhani, VNMKV, Parbhani,
Maharashtra, India

Rajesh P Kadam
Head & Professor, Department of
Agricultural Extension Education,
College of Agriculture Parbhani,
VNMKV, Parbhani, Maharashtra,
India

Sunildutt R Jakkawad
Associate Professor, Department of
Agricultural Extension Education,
College of Agriculture Parbhani,
VNMKV, Parbhani, Maharashtra,
India

Anuradha S Lad
Assistant Professor, Department of
Agricultural Extension Education,
College of Agriculture Parbhani,
VNMKV, Parbhani, Maharashtra,
India

Dheeraj T Pathrikar
Assistant Professor, Department of
Agricultural Economics, College of
Agriculture Parbhani, VNMKV,
Parbhani, Maharashtra, India

Corresponding Author:
Ramakant V Phad
M.Sc. (Agri.) Scholar, Department
of Agricultural Extension
Education, College of Agriculture
Parbhani, VNMKV, Parbhani,
Maharashtra, India

Constraints faced by farmers of Marathwada region while adopting cropping pattern and their suggestions to overcome it

**Ramakant V Phad, Rajesh P Kadam, Sunildutt R Jakkawad, Anuradha S
Lad and Dheeraj T Pathrikar**

DOI: <https://www.doi.org/10.33545/2618060X.2025.v8.i10Sa.3966>

Abstract

The study was conducted find out the relationship between the profile of farmers and cropping pattern followed by the farmers of Marathwada region in relation to climate change. Total 120 respondent farmers were selected from 12 villages of four tehsils of two districts. Data were collected by using a well-structured interview schedule. Ex post facto research design was used for the study. Data were analysed by using frequency, percentage.

The constraints faced by the farmers while adopting cropping pattern of Marathwada region in that major constraint faced by farmers were lack of knowledge about how to reduce the impact of changing weather (80.83%), drought problems (77.50%), losses due to unseasonal rainfall (75.83%), and high costs for irrigation systems (74.17%). In addition to this, higher wages (69.17%), unavailability of water resources (65.00%), price fluctuations (64.17%), insect pest attacks (63.33%), unavailability of agricultural inputs on time (60.83%), lack of loan facilities (30.83%).

The suggestions expressed by the farmers such as 71.60 per cent of the respondent farmers suggested that provide information about managements in climate change. While 67.50 per cent of respondent farmers suggested that organizing programs for farmers empowerment programmes, 65.00 per cent of respondent farmers suggested that increase the level of farmers by different communication mediums and 54.17 per cent of them suggested to aware the farmers regarding new technologies.

Keywords: Cropping pattern, climate change, farmers, Marathwada region

1. Introduction

Agriculture sustains nearly half of the country's population and contributes significantly to national GDP. Indian agriculture has made significant progress in the past and currently facing many challenges like stagnating net sown area, plateauing yields levels, deterioration of soil quality, reduction of agricultural land, and adverse effect of climate change. Among them, the Marathwada region in Maharashtra is one of the most climate-sensitive areas, frequently plagued by droughts and water scarcity. Cropping pattern refers to the portion of land under cultivation of different crops at different points of time. This indicates the time arrangement of crops in particular land area or field. Cropping pattern represents a key factor in determining the level of agricultural production.

The Marathwada region located in the central part of Maharashtra. Geographically, it lies in the rain shadow zone of the Western Ghats, making it naturally semi-arid with limited water resources. The region is heavily, reliant on agriculture with traditional and modern crops with focus on rainfed agriculture. Historically, the region's agricultural practices have revolved around rainfed farming, and cropping patterns were adapted to the region's agro-climatic conditions. However, over the past few decades, due to climatic variability, increasing instances of drought, and economic pressures, there has been a significant shift in the cropping pattern. Farmers are increasingly moving away from traditional crops such as millets and pulses toward more water-intensive and high-risk cash crops like cotton and sugarcane. These changes, although driven by market incentives, have resulted in heightened vulnerability to climatic stress and resource depletion.

Understanding the constraints faced by farmers while adopting cropping pattern in response to climate change and suggestions to overcome it. Cropping pattern trends over the years and it is possible to derive meaningful conclusions about the adaptive capacity of farmers and the resilience of the agricultural system in Marathwada.

2. Materials and Methods

Ex-post facto research design was used to conduct the investigation. The study was conducted in two districts of Marathwada region of Maharashtra state i.e. Hingoli and Parbhani districts. Two tehsils were selected from each district. From Hingoli district Basmat and Aundha tehsils selected and from Parbhani district Jintur and Parbhani tehsils were selected.

Three villages were selected from each tehsils selected. Ten farmers selected was selected from each villages total 120 farmers was selected for study. There was one dependent variable namely 'Cropping pattern' and ten independent variables.

To measurement of the dependent appropriate scientific tools were used in the study. The data was collected from the respondents through interview schedule by personal interview technique. They were analysed by using frequency, percentage, mean, standard deviation.

3. Results and Discussion

3.1 Constraints faced by farmers while adopting cropping pattern

Table 1: The various constraints faced by farmers while adopting cropping pattern. N=120

Sr. No.	Constraints/Problems	Frequency	Percentage	Rank
1	Lack of knowledge about how to reduce the impact of changing weather	97	80.83	I
2	Unavailability of water resources.	78	65.00	VI
3	Unavailability of agricultural inputs on time	73	60.83	IX
4	High costs for irrigation systems	89	74.17	IV
5	Lack of loan facilities	37	30.83	X
6	Higher wages	83	69.17	V
7	Price fluctuations	77	64.17	VII
8	Losses due to unseasonal rainfall	91	75.83	III
9	Insect-Pest attacks	76	63.33	VIII
10	Drought problems	93	77.50	II

From the table 1 it was observed that, the constraints faced by the farmers while adopting cropping pattern of Marathwada region. In that major constraint faced by farmers were lack of knowledge about how to reduce the impact of changing weather (80.83%), drought problems (77.50%), losses due to unseasonal rainfall (75.83%), and high costs for irrigation systems (74.17%).

In addition to this, higher wages (69.17%), unavailability of water resources (65.00%), price fluctuations (64.17%), insect pest attacks (63.33%), unavailability of agricultural inputs on time (60.83%), lack of loan facilities (30.83%).

3.2 Suggestions obtained from farmers to overcome the constraints

Table 2: Suggestions obtained to overcome the constraints

Sr. No.	Suggestions	Frequency	Percentage
1	Provide information about managements in climate change.	86	71.67
2	Increase the level of farmers by different communication mediums.	78	65.00
3	Organizing programs for farmers empowerment programmes.	81	67.50
4	Aware the farmers regarding new technologies.	65	54.17

It is revealed from table 2 that, 71.67 per cent of the respondent farmers suggested that Provide information about managements in climate change. While 67.50 per cent of respondent farmers suggested that organizing programs for farmers empowerment programmes, 65.00 per cent of respondent farmers suggested that increase the level of farmers by different communication mediums and 54.17 per cent of them suggested to aware the farmers regarding new technologies.

4. Conclusion

The present study highlights the constraints faced by farmers of Marathwada region while adopting the cropping pattern. The findings revealed that majority of farmers faced to were lack of knowledge about how to reduce the impact of changing weather, drought problems, losses due to unseasonal rainfall, and high costs for irrigation systems. In addition to this, higher wages, unavailability of water resources, price fluctuations, insect pest attacks, unavailability of agricultural inputs on time, lack of loan facilities.

The suggestions expressed by the farmers such as the respondent farmers suggested that provide information about managements in climate change. Farmers suggested that organizing programs for farmers empowerment programmes, farmers suggested that

increase the level of farmers by different communication mediums and suggested to aware the farmers regarding new technologies.

References

1. Bhong M. Farmer's perception about climate change in Marathwada region. Parbhani (M.S.): Vasantao Naik Marathwada Krishi Vidhyapeeth; 2019.
2. Kudale P. Farmer's perception about climate change in Marathwada region. Parbhani (M.S.): Vasantao Naik Marathwada Krishi Vidhyapeeth; 2019.
3. Mundhe S. Farmer's perception about climate change in Marathwada region. Parbhani (M.S.): Vasantao Naik Marathwada Krishi Vidhyapeeth; 2019.
4. Keer R. A study on impact of weather-based agro-advisory services on climate change in cropping pattern in Sehor block of Sehor district of Madhya Pradesh. Gwalior (M.P.): Rajmata Vijayaraje Scindia Krishi Vishwa Vidhyalaya; 2020.
5. Bhosle GB, Kadam RP, Deshmukh PR, Jakkawad SR. Building resilience: Farmers' challenges and solutions to climate change in Marathwada. Int J Agric Ext Soc Dev. 2024;7(12):551-555.