ISSN–2278-5655

AMIERJ Aarhat Multidisciplinary International Education Research Journal

Volume–XIV, Issues– I (a) Jan – Feb, 2025

OPEN ACCESS Original Research Article

STUDY OF CLIMATE CHANGE AND CONTRACT FARMING CHALLENGES IN MARATHWADA REGION

** Mr Ghadling N. S. & Dr. Sangule R. B.*

** PhD Research Student, Ankushrao Tope Arts College, Dist-Jalna.*

***Research Guide, Ankushrao Tope Arts College, Dist Jalna.*

Abstract:

This article addresses the relationship between climate change and contract farming, focusing on its growing prevalence in Marathwada region. The expansion of contract farming in these areas has sparked divided and often ideological discussions in academic literature. A prevailing microeconomic viewpoint suggests that contract farming can be mutually beneficial for both agribusinesses and smallholder farmers. However, this perspective tends to overlook the exploitation experienced by rural households. Existing research fails to adequately consider the broader agricultural landscapes in which contract farming takes place. There is limited understanding of how different households, situated in diverse contexts, participate in contract farming, and how this impacts their future livelihoods. This article challenges conventional perspectives by critically examining contract farming, rural livelihoods, and agricultural transformation in the Marathwada district. The central research question explores: How is contract farming implemented in Marathwada region, and what are its implications for patterns of benefits and disadvantages?

Key word: *Climate Change, Contract Farming, Challenges*

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

Introduction:

Purpose of this article Contract farming in India has a relatively brief history. According to Gulati, Ganguly, and Landes (2008), its roots can be traced back to informal agreements in the sugarcane and dairy cooperative sectors that developed after the Green Revolution in the 1960s. Under these arrangements, farmers received fixed and guaranteed prices for supplying sugarcane to mills or milk to cooperatives. Formal contract farming arrangements with private companies emerged in India in the early 1990s, with PepsiCo initiating tomato contract farming in Punjab (Singh, 2002). Initially, these schemes faced limitations due to the highly regulated nature of India's agricultural sector. However, recent amendments to the Agriculture Produce Market Committee (APMC) Act have created opportunities for increased private sector involvement, including participation by small farmers, across many states.

Contract farming, or contract marketing, is an agreement between agricultural producers (farmers) and agribusiness companies to cultivate a specified quantity and quality of crops at an agreed price and time. This arrangement can range from a basic procurement transaction to one that includes the provision of agricultural inputs and other services. In India, contract farming is becoming increasingly significant as a way for agribusinesses to source raw materials, driven by advancements in agricultural marketing, shifts in consumer food preferences, and technological developments in agriculture. This approach helps reduce transaction costs by fostering direct links between farmers and processors, complementing existing systems that connect farmers to consumers.

ISSN–2278-5655

AMIERJ Aarhat Multidisciplinary International Education Research Journal

Volume–XIV, Issues– I (a) Jan – Feb, 2025

OPEN ACCESS Original Research Article

Today, contract farming has become an important strategy for agribusinesses to access land and expand both domestic and export-oriented agricultural value chains. Supporters of private investment in agriculture view contract farming not only as a means of channeling capital into the sector but also as a way to introduce modern technologies, skills, and inputs. Additionally, it is seen as a vehicle for promoting rural development, particularly in high-value crop areas (Gulati et al., 2008). In the past decade, there has been a growing push for private sector-driven contract farming as a tool for rural development. The Indian government has increasingly recognized contract farming as a means to attract investment into modern agricultural industries, boost farmers' incomes, and address rural poverty. In 2000, the Union Government's first National Agricultural Policy prioritized contract farming, positioning it as a central component of agricultural reforms aimed at encouraging private sector engagement in farming.

Revive of Literature:

Neha Sami, (January 2013) In an increasingly globalized India, an agricultural community in Pune, Maharashtra, faced the threat of losing their farmland to urban expansion. To address this challenge, the farmers came up with an innovative solution. By pooling their land together, they utilized their social and political connections to capitalize on the shifting economic landscape in Pune, creating a mixed-use township on their 400 acres of farmland. They formed partnerships with various stakeholders, both within the agricultural community and with city and state officials.

This case study underscores the importance of temporary alliances in the dynamics of power and politics within urban development in Indian cities. These coalitions have arisen due to a gap in political leadership and authority at the local level, as well as the shifting priorities of national and regional governments, which has contributed to a growing disparity in urban services.

Ashok K. Mishra, (2018), The rising demand for organic basmati rice (OBR) in both domestic and international markets, along with policy changes, has led to an increase in contract farming (CF) in India. However, OBR production remains vulnerable to weather-related and pest-related challenges. This study explores how smallholders' perceptions of production risks affect their decision to adopt CF in OBR farming. Additionally, it evaluates how CF influences yields, prices, and the overall livelihoods of OBR producers. Using farm-level data from smallholder OBR farms in India and applying the endogenous switching regression method to account for variability, we find that although CF led to lower yields, it resulted in higher prices and better livelihoods for producers. The benefits of CF were found to vary based on the farmers' attitudes toward risk. Specifically, risk-loving farmers with CF faced the greatest yield losses, while risk-averse farmers with CF received higher prices. Overall, OBR farmers who did not adopt CF could improve their outcomes, especially in terms of prices and livelihood, by making the switch, regardless of their risk preferences.

Climate change:

Aurangabad the climate of Aurangabad locale is checked by hot summers and a common dryness for most of the year, with the special case of the southwest storm season. The year is regularly partitioned into four unmistakable seasons. The cold season keeps going from December to February, taking after the hot season from Walk to May. The southwest rainstorm happens between June and September, whereas the post-monsoon season ranges October and November. The most elevated most extreme temperature ever recorded at Aurangabad was 45.6o C on 25th May 1905 and the most reduced least temperature ever recorded was 2.2o C on 2nd February 1911. The most elevated most

ISSN–2278-5655

AMIERJ Aarhat Multidisciplinary International Education Research Journal

Volume–XIV, Issues– I (a) Jan – Feb, 2025

OPEN ACCESS Original Research Article

extreme temperature ever recorded at Chikalthana was 43.6o C on 26th April 1958 and 20th May 1984 and the least least ever recorded was 1.2o C on 28th December and 17th January 1968.

Beed the climate in this area is by and large dry, with the exemption of the southwest rainstorm. The year is ordinarily isolated into four particular seasons: a cold season from December to February, a hot season from Walk to May, the southwest storm season from June to September, and a post-monsoon season amid October and November. The most elevated greatest temperature ever recorded in the area at Beed was 48.5o C on 5th May 1983. The least least temperature ever recorded in the locale at Beed was 4.0o C on 17th January 1968.

Hingoli the climate in this locale is regularly dry, but amid the southwest rainstorm season. The year can be categorized into four unmistakable seasons. The cold season endures from December to February, taken after by the hot season from Walk to May. The southwest storm season happens from June to September, whereas October and November are considered the post-monsoon period.

Jalna the climate of this area is stamped by hot summers and by and large dryness all through the year, but amid the southwest rainstorm season. The year can be isolated into four particular seasons. The cold season endures from December to February, taken after by the hot season from Walk to May. The southwest rainstorm season happens from June to September, whereas October and November make up the post-monsoon period.

Latur the climate of this locale is by and large dry, with the exemption of the rainstorm season. The year can be categorized into four unmistakable seasons. The cold season endures from December to mid-February, taken after by the summer season, which expands until the conclusion of May. The southwest storm season happens from June to September, and the post-monsoon or withdrawing storm season ranges October and November.

Nanded the climate in this locale is overwhelmingly dry, with the exemption of the southwest rainstorm season. The year can be categorized into four unmistakable seasons. The cold season keeps going from November to the conclusion of February. This is taken after by the hot season, which proceeds until the to begin with week of June. The southwest storm season at that point starts, enduring until around the to begin with week of October. The leftover portion of October and the to begin with half of November make up the post-monsoon season. The most elevated greatest temperature ever recorded at Nanded was 46.7o C on 4th June 1995 and most reduced least temperature ever recorded was 3.6o C on 28th December 1983.

Osmanabad the climate of this locale is for the most part dry, with the special case of the rainstorm season. The year can be isolated into four unmistakable seasons. The cold season ranges from December to mid-February, taken after by the summer season, which proceeds until the conclusion of May. The southwest storm season happens from June to September, whereas October and November make up the post-monsoon or withdrawing storm period. The most elevated greatest temperature ever recorded at Osmanabad was 45.1o C on 31st May 1994. The least least temperature ever recorded was 8.4o C on 14th November 1983.

Parbhani the climate in this area is regularly dry, with the exemption of the southwest rainstorm period. The year can be categorized into four particular seasons. The cold season keeps going from December to February, taken after by the hot season from Walk to May. The southwest storm season happens between June and September, and the post-monsoon season ranges October and November. The most noteworthy most extreme temperature ever recorded at Parbhani was 46.5o C on 10th May 1988. The most reduced least

ISSN–2278-5655

AMIERJ Aarhat Multidisciplinary International Education Research Journal

Volume–XIV, Issues– I (a) Jan – Feb, 2025

OPEN ACCESS Original Research Article

temperature ever recorded was 4.4o C on 8th January 1945.

Contract farming Contract farming refers to an arrangement where farmers, intermediaries, and processing or marketing companies enter into a formal agreement to supply agricultural products at agreed-upon prices and quality, within a specified timeframe and location. There are three main types of contract farming:

- **Procurement Contract**: This type focuses solely on the purchase conditions and sale terms of the produce.
- **Partial Contract**: In this arrangement, the contracting company provides some of the necessary inputs, and the farmer sells the produce at a predetermined price.
- **Total Contract**: Here, the contracting company supplies and oversees all the inputs required for production, ensuring the entire process is guided from start to finish.

Challenges:

To address the **challenges** posed by climate change in contract farming, several strategies can be implemented:

1. **Risk-sharing mechanisms**: Contracts can be designed with flexible terms that allow adjustments based on climate conditions. For example, price changes or modifications to production targets could be made if adverse weather events occur.
2. **Climate-resilient contracts**: Agribusinesses can incorporate clauses that promote sustainable farming practices and climate adaptation strategies. This may include offering technical support, training, and providing access to climate-resistant inputs.
3. **Insurance schemes**: Introducing crop insurance or weather-based insurance can help protect farmers from the financial losses associated with extreme weather events, reducing risks for both producers and buyers.
4. **Diversification**: Encouraging farmers to diversify their crops or implement agroecological practices can reduce the negative impacts of climate change. Multi-crop contracts, for example, may provide more stability for farmers.
5. **Collaboration and partnership**: Strong collaboration between governments, NGOs, and the private sector is key to building resilience and supporting sustainable farming methods that can endure climate change.

Conclusion:

Climate change presents significant challenges to agriculture, particularly in contract farming, where unpredictable weather patterns can disrupt farmers' ability to meet contract obligations. By implementing better risk management strategies, creating adaptive contract structures, and providing access to climate-resilient practices, it is possible to reduce these risks and make contract farming more sustainable and equitable in the face of climate change.

References:

1. Ashok K. Mishra, (2018), How can organic rice be a boon to smallholders? Evidence from contract farming in India, journal homepage: www.elsevier.com/locate/foodpol
2. Government of Maharashtra meteorological department, climate of Maharashtra, issued by national climate center, pune.
3. Mark R. Vicol, (2014), Potatoes, Peasants and Livelihoods: A Critical Exploration of Contract Farming and Agrarian Change in Maharashtra, India Preliminary Insights from Rural Maharashtra, 145(3), pp.142-147.
4. Mark Vicol, (2015), Land grabbing, conflict and agrarian-environmental transformations: perspectives from East and Southeast Asia, Corporatisation of rural spaces: Contract farming as

ISSN–2278-5655

AMIERJ Aarhat Multidisciplinary International Education Research Journal

Volume–XIV, Issues– I (a) Jan – Feb, 2025

OPEN ACCESS Original Research Article

local scale land grabs in Maharashtra, India, An international academic conference 5-6 June 2015, Chiang Mai University

5. Nagnath Bembde, Pravin Tamgadge, (2019), Impact of Contract Farming on price and quality of Agriculture Produce in selected districts of Maharashtra, International Journal of Advanced Scientific Research and Management, Volume 4 Issue 5, May 2019
6. Neha Sami, (2013), From Farming to Development: Urban Coalitions in Pune, India, International Journal of Urban and Regional Research
7. Ramnath K. Ray, Meera Kumari, Puja Sinha, Ashish Umrao4 and Subhransu Nayak, (2020), Problem and Prospect of contract Farming in India, foodandscientificreports.com, Food and Scientific Reports.

Cite This Article:

Mr Ghadling N. S. & Dr. Sangule R. B. (2025). *Study of climate change and contract farming challenges In Marathwada Region.* **In Aarhat Multidisciplinary International Education Research Journal**: Vol. XIV (Number I, pp. 101–105).