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Economic analysis of potato marketing in Prayagraj, Uttar Pradesh

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Abstract

This research paper aims to provide a comprehensive economic analysis of potato marketing in Prayagraj, Uttar Pradesh, focusing on the period from 2020 to 2024. The study examines various aspects of potato cultivation and marketing, including cost analysis, pricing dynamics, and the socio-economic profile of farmers. The primary objective is to explore the challenges and opportunities in the potato sector, offering insights into the financial constraints faced by farmers, price spread, and market efficiency. By analyzing the current economic conditions, this paper aims to offer recommendations for enhancing the economic well-being of potato farmers and improving the potato marketing system in Prayagraj.

Keywords: Potato marketing, economic analysis, Prayagraj, cost of cultivation, marketing channels, farmers' socio-economic profile, price spread, marketing efficiency, crop cultivation, agricultural economics

Introduction

Potato farming is a significant agricultural activity in Prayagraj, Uttar Pradesh, yet the potato marketing system faces challenges that hinder economic progress for farmers. Issues such as inefficient price discovery, limited access to market information, poor infrastructure, and dependence on intermediaries have led to substantial disparities between farm-gate prices and retail prices. These inefficiencies undermine farmers' profits, limit their capacity for reinvestment, and inhibit market development. The lack of robust post-harvest management systems further exacerbates losses and reduces marketable surpluses, limiting farmers' market participation and profitability. The study aims to provide a comprehensive economic analysis to identify these challenges and suggest practical solutions for improving the potato marketing system in Prayagraj.

Research Problem

The central research problem of this study is to analyze the economic challenges within the potato marketing system in Prayagraj, Uttar Pradesh. Specifically, the study aims to:

- Examine the cost structure of potato cultivation and marketing.
- Evaluate price discovery mechanisms and market efficiency.
- Investigate socio-economic factors influencing farmers' participation and profitability in the potato value chain.
- Identify inefficiencies in marketing channels and suggest strategies for improving farmers' returns.

Justification of the Study

The increasing demand for potatoes and the persistent economic vulnerabilities faced by farmers highlight the urgency of this study. Understanding the economic dynamics of potato marketing is crucial for enhancing the livelihoods of farmers in Prayagraj. Previous research on market inefficiencies and price disparities in agriculture underlines the need for targeted interventions. The findings from this study will contribute to enhancing market efficiency, improving farmer incomes, and providing insights into agricultural policy interventions that can strengthen the potato value chain (Ali, 2019) ^[1].

Hypothesis

The study hypothesizes that the existing potato marketing system in Prayagraj is inefficient, leading to significant disparities between farm-gate and consumer prices. These inefficiencies, exacerbated by limited access to credit, inadequate market information, and reliance on intermediaries, result in reduced economic returns for potato farmers. The socio-economic characteristics of farmers, along with their access to formal market channels, play a significant role in their market participation and profitability. Improvements in market access, financial services, and market intelligence dissemination are expected to mitigate these inefficiencies and enhance farmers' economic stability.

Research Objectives

The primary objectives of this research are:

1. To analyze the cost of potato cultivation and marketing, including the breakdown of variable and fixed costs, and assess profitability.
2. To evaluate the efficiency of potato marketing channels, identify price spreads, and suggest improvements.
3. To investigate the socio-economic factors influencing farmers' participation in the potato value chain.
4. To provide evidence-based recommendations to enhance market access, reduce inefficiencies, and improve profitability for farmers.

Literature Review

Existing literature on agricultural marketing and price dynamics offers insights into the challenges faced by farmers in developing economies. Studies on crop price prediction (Bhardwaj *et al.*, 2023) ^[2], market efficiency (Gayathri *et al.*, 2020) ^[3], and the role of intermediaries (Venumuddala, 2020) ^[4] are highly relevant to the study of potato marketing in Prayagraj. Additionally, research on the socio-economic impacts of agricultural practices digital market integration suggests that improving market information systems and farmer access to credit could significantly enhance market outcomes.

Socio-Economic Profile of Farmers

This section examines the demographic characteristics of potato farmers in Prayagraj, including age, education, landholding size, and experience. It will explore how these factors influence farming practices, access to market information, and overall profitability. Additionally, the availability of agricultural credit, adoption of modern farming practices, and awareness of market trends will be analyzed.

Marketing Economics

This section will delve into the economics of potato marketing in Prayagraj, focusing on the cost structure of cultivation, price discovery mechanisms, and marketing efficiency. The study will assess the role of intermediaries and the price spread between farm-gate and consumer prices. By analyzing different marketing channels, the research will identify the inefficiencies within the supply chain and propose measures for improvement.

Potato Production

An overview of potato cultivation practices in Prayagraj, including common cropping patterns, land preparation techniques, and the types of potato varieties grown, will be presented. The impact of various agronomic practices such as irrigation scheduling, pest control, and nutrient management on yield and quality will be evaluated. Furthermore, the adoption of new technologies and practices, such as precision irrigation and improved seed varieties, will be assessed in terms of their effect on productivity and profitability.

Results and Discussion

This section will present the empirical findings from the primary and secondary data analysis, including an assessment of cultivation costs, price spreads, and market efficiency. The discussion will compare the results with

existing literature and theoretical frameworks, highlighting key determinants of profitability and identifying potential solutions for market inefficiencies. It will also explore the role of intermediaries and the impact of technological and policy interventions on farmer income.

Conclusion

This research concludes that while potato farming remains a crucial source of income in Prayagraj, various factors such as high input costs, poor infrastructure, and reliance on intermediaries hinder its economic potential. Policy interventions aimed at improving market access, enhancing price realization, and empowering farmers through better resource management are essential for improving the economic well-being of potato farmers in the region. The study recommends fostering cooperative marketing models, leveraging digital marketing tools, and improving post-harvest technologies to enhance the efficiency of the potato marketing system.

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