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Analysis of marketing patterns and price spread of maize among tribal area in Balrampur district, Chhattisgarh

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Abstract

Maize (*Zea mays* L.), often referred to as the "queen of cereals," occupies a prominent global position owing to its outstanding genetic yield potential and adaptability across diverse ecologies and seasons. In India, it holds the rank of third among food crops, following rice and wheat, with the country ranking fourth in global maize cultivation area and seventh in production. Indian maize cultivation durations, two primary seasons: the rainfed kharif and the winter rabi, with recent increases in spring maize cultivation observed in northwestern states. Madhya Pradesh and Karnataka are the foremost states in maize cultivation in India, each contributing 15% to the total maize area, followed by Maharashtra, Rajasthan, and Uttar Pradesh. Bihar leads in maize production, while Andhra Pradesh showcases the maximum productivity. In Chhattisgarh, significant tribal populations lead maize cultivation regions like Surguja and Bastar. This study focuses on the marketing dynamics of maize in the tribal areas of Chhattisgarh, specifically Balrampur district, utilizing a multistage purposive random sampling approach. The analysis finds three prevalent marketing channels: Producer-Consumer, Producer-FPO-Feed Company, and Producer-Village Merchant-Wholesaler-Consumer. Results indicate that Channel 1 yields the highest net price for producers, followed by Channels 2 and 3, revealing an inverse relationship between producer net prices and intermediary involvement. Detailed tabular analyses illustrate the maize marketing patterns, showcasing high efficiency in Channel 1 compared to Channels 2 and 3. Producers' share in consumer rupees is notably highest in Channel 1 (92.4%), followed by Channel 2 (83.54%) and Channel 3 (82.28%). These findings underscore Channel 1 as the most efficient for both producers and consumers in the study area. In conclusion, maize cultivation proves beneficial for intensifying agricultural productivity and offers substantial income opportunities for farmers in tribal Chhattisgarh. Effective marketing infrastructure and supportive policies are crucial for enhancing farmers' incomes and promoting sustainable agricultural practices in the region.

Keywords: Prices spread, marketing margin, marketing cost

Introduction

Maize (*Zea mays* L.), the world's leading crop, is a versatile cereal grain domesticated in Central America. Known as the "queen of cereals" for its highest genetic yield potential, maize can be cultivated in diverse seasons, ecologies, and for various uses. It includes types like yellow/white grain, sweet corn, baby corn, popcorn, waxy corn, high amylase corn, high oil corn, and quality protein maize. Additionally, maize serves as a crucial industrial raw material, offering significant value addition opportunities. In India, maize is the third most significant food crop, coming after rice and wheat. The country ranks 4th in maize area and 7th in production globally, contributing 4% of the world's maize area and 2% of total production. Indian maize cultivation occurs in two main seasons: rainy (kharif) and winter (rabi). Kharif maize covers 83% of the total maize area, primarily grown under rainfed conditions, which subject it to various stresses. Recently, spring maize cultivation has gained momentum in northwestern India, particularly in Punjab, Haryana, and Western Uttar Pradesh, covering an estimated 150 thousand hectares. Maize has shown the highest growth rates among cereals in both area and productivity. Madhya Pradesh and Karnataka are the leading states in maize cultivation, each accounting for 15% of

India's maize area, followed by Maharashtra (10%), Rajasthan (9%), and Uttar Pradesh (8%). Bihar ranks highest in maize production, while Andhra Pradesh boasts the highest productivity, with districts like Krishna and West Godavari achieving up to 12 tons per hectare. In Chhattisgarh, the tribal population is significant, with 17,43,277 individuals out of a total population of 2,55,45,198 (census 2011). The Surguja division has the largest tribal population (30.56%), followed by the Bastar division (23.28%). Surguja covers 45.65% of the state's maize area, and Bastar covers 34.37%. Among the districts, Balrampur has the largest maize area (19.71%), followed by Kondagaon (13.43%). For the study of marketing aspects, commission agents were randomly selected from the market. Three marketing channels were prevalent for disposal of maize in the study area viz; 1-Producer-Consumer, 2- producer-FPO- feed company (last consumer), 3- Producer- village merchant- whole seller- consumer. Producers received the highest net price in channel 1, followed by channel 2 and channel 3. Considering these facts, the study is titled "Comparative study of resource use efficiency and marketing of maize in tribal area of Chhattisgarh" The objective of the study was to examine the marketing pattern of maize in the study area.

Research Methodology

A multistage stratified purposive random sampling procedure was employed to select the district, block, village, and respondents. In Chhattisgarh Balrampur district was purposively chosen due to its significant maize acreage. Balrampur, Rajpur, and Kusmi blocks, were selected which have the highest maize cultivation areas. Specifically, the research will focus on selected villages: Krishnagar, Ranhat, and Amdanda in Balrampur block; Basantpur, Sagri, and Sadgoli in Rajpur block; and Jaljali, Chando, and Samari in Kusmi block. The local market, serving as the primary outlet for maize disposal, was included in the study of marketing aspects. Commission agents from this market were randomly selected. Three marketing channels were identified for maize disposal: 1) Producer-Consumer, 2) Producer-FPO-Feed Company (final consumer), and 3) Producer-Village Merchant-Wholesaler-Consumer. Producers received the highest net price through channel 1, followed by channels 2 and 3. To study the disposal patterns and price spread of maize, an appropriate number of commission agents were interviewed to gather relevant marketing information. Simple tabular analysis was applied to examine various aspects of maize marketing in the study area. The study pertains to the agricultural year 2022-23.

Results and Discussion

In the study area, three distinct marketing channels were identified for maize: Channel 1 (Producer-Consumer), Channel 2 (Producer-FPO-Feed Company), and Channel 3 (Producer-Village Merchant-Wholesaler-Consumer). Table 1 presents the marketable surplus of maize across Balrampur, Rajpur, and Kusmi markets. The overall marketing surplus amounted to 26.28 quintals, representing 97.94% of the total production. Marginal, small, medium, and large farms contributed 97.05%, 97.98%, 98.95%, and 99.46% to the total marketed produce, respectively. Table 2 illustrates the disposal patterns of maize through various channels in the Balrampur, Rajpur, and Kusmi markets. The disposal pattern varied significantly among farm size categories and across different channels. Analysis revealed that Channel 2 facilitated the highest quantity of maize sales,

followed by Channel 3 and Channel 1 in the study area.

Table 1: Marketable surplus of maize in Balrampur district (qt./farm)

Farm Size	Total production	Home consumption	Marketable surplus
Marginal	9.84 (100)	0.29 (2.95)	9.55 (97.05)
Small	20.35 (100)	0.41 (2.02)	19.94 (97.98)
Medium	36.07 (100)	0.38 (1.05)	35.69 (98.95)
Large	98.47 (100)	0.53 (0.54)	97.94 (99.46)
Overall	26.65 (100)	0.36 (2.06)	26.28 (97.94)

Sample farmers in Balrampur district sell their produce through three channels such as

Channel-I = Producer → Consumer

Channel-II = Producer → FPO → Feed Company (Last Consumer)

Channel-III = Producer → Village merchant → Whole seller → Consumer

Table 2: Disposal pattern of maize in Balrampur district (qt. /farm)

Farm Size	Marketing Channel		
	I	II	III
Marginal	1.99 (20.84)	3.71 (38.85)	3.85 (40.32)
Small	5.07 (25.43)	9.47 (47.50)	5.4 (27.08)
Medium	5.26 (14.74)	16.8 (47.07)	13.63 (38.18)
Large	0.34 (0.35)	29.27 (29.89)	68.33 (69.76)
Overall	3.39 (18.91)	10.5 (42.18)	12.39 (38.91)

Price Spread, Marketing Costs, Margins, and Producer's Share in Consumer's Rupee

Table 2 presents the price spread of maize across Channel 1, Channel 2, and Channel 3 in the study area's markets. The data indicate that the producer's share in consumer's rupee is 92.4%, 83.54%, and 82.28% through Channel 1, Channel 2, and Channel 3, respectively. This reflects an indirect relationship between the producer's share in consumer's rupee and the number of intermediaries involved. The net price received by producers was estimated at Rs. 1848.00, Rs. 1838.00, and Rs. 1728.00 through Channel 1, Channel 2, and Channel 3, respectively, indicating a similar inverse relationship with the number of intermediaries. Consumers paid Rs. 1848, Rs. 2200, and Rs. 2100 per quintal via Channel 1, Channel 2, and Channel 3, respectively. Comparative analysis shows that both gross price and net price received by producers were higher in Channel 1, followed by Channel 2 and Channel 3. The increase in marketing costs incurred by producers corresponds to the number of intermediaries involved. The findings underscore maize's potential as a valuable and economically viable grain crop. Enhancing marketing infrastructure and implementing appropriate policies can significantly bolster farmer incomes. Maize cultivation holds promise for doubling farmers' income in the study area.

Table 3: Cost and margins of various agencies in the marketing of maize in channel- I in Balrampur district.

S. No.	Particulars/ Market functionaries	Amount (₹/qt.)
A	Marketing costs at producer level	
1.	Loading, unloading, weighing	12
2.	Packaging	40
3.	Transportation charge	100
4.	Sub total	152
5.	Producers' sale price	2000
6.	Marketing cost	152
7.	Net price received	1848
8.	Producers share in consumer rupees (%)	92.4

Channel-I = Producer → Consumer

Table 4: Cost and margins of various agencies in the marketing of maize in channel-II in Balrampur district.

S. No.	Particulars/ Market functionaries	Amount (₹/qt.)
A Marketing costs at producer level		
1.	Loading, unloading, weighing	12
2.	Packaging	40
3.	Transportation charge	0
4.	Commission charge	10
5.	Sub total	62
6.	Producers' sale price	1900
7.	Net price received	1838
B Cost incurred by FPO		
1.	Loading, unloading, weighing	14
2.	Transportation charge	110
3.	Commission charge	5
4.	Others	30
5.	Sub total	159
6.	FPO purchase price	1900
7.	FPO sell price	2200
8.	FPO margin	141
9.	Producers share in consumer rupees (%)	83.54
10.	Price Spread	300

Channel-II = Producer → FPO → Feed Company (Last Consumer)

Table 5: Costs and margins of various agencies in the marketing of maize in channel- III in Balrampur district.

S. No.	Particulars/ Market functionaries	Amount (₹/qt.)
A Marketing costs at producer level		
1.	Loading, unloading, weighing	12
2.	Packaging	40
3.	Transportation charge	0
4.	Commission charge	20
5.	Sub total	72
6.	Producers' sale price	1800
7.	Net price received	1728
B Cost incurred by village merchant		
1.	Loading, unloading, weighing	12
2.	Transportation charge	40
3.	Others including mandi fees	10
4.	Subtotal	62
5.	Village merchant Purchase price	1800
6.	Village merchant sell price	1900
7.	Village merchant margin	38
C Cost incurred by Whole sellers		
1.	Loading, unloading, weighing	12
2.	Transportation charge	160
3.	Others including mandi fees	10
4.	Subtotal	82
5.	Whole sellers purchase price	1900
6.	Whole sellers sell price	2100
7.	Whole sellers' margin	118
8.	Producers share in consumer rupees (%)	82.28
9.	Price Spread	300

Channel-III = Producer → Village merchant → Whole seller → Consumer

Summary and Conclusion

This study highlights maize cultivation as a viable option for intensive agricultural practices, offering substantial employment opportunities. The research involved 150 maize growers from various farm size categories: marginal, small, medium, and large. A multistage stratified purposive proportionate random sampling method was employed to select respondents, and tabular analysis was conducted to derive the study's findings. The primary objective of the research was to examine the marketing pattern of maize in the study area. Three distinct

marketing channels were identified for maize disposal: (1) Producer-Consumer, (2) Producer-FPO-Feed Company (final consumer), and (3) Producer-Village Merchant-Wholesaler-Consumer. Producers achieved the highest net price through Channel 1, followed by Channels 2 and 3, indicating an inverse relationship between the number of intermediaries involved and the net price received by producers. Furthermore, the study revealed that producers' share in consumer rupees was highest in Channel 1 (92.4%), followed by Channel 2 (83.54%) and Channel 3 (82.28%). Channel 1 demonstrated greater efficiency for both producers and consumers compared to Channels 2 and 3 in the study area. Maize emerged as a suitable cereal crop for farmers in the study area, presenting an opportunity to potentially double their income. This underscores the significance of maize cultivation in enhancing rural livelihoods and economic development through efficient marketing strategies.

References

- Kumar G, Sangode PK, Digambar BM. Analyses the consumption and marketing pattern of maize among tribal families in Surguja district. *Journal of Pharmacognosy and Phytochemistry*. 2020;9(2S):160-161.
- Singh KK, Sisodia B, Sengar VS, Ahmad R, Singh RA, Singh GP, *et al.* Maize: A study on marketing aspects in Auraiya district of western U.P. *Journal of Pharmacognosy and Phytochemistry*. 2018;7(6):626-628.
- Naveen B, Jayaram MS, Swamy PS, Dhananjaya R, Ramesh GB, Raghavendra DV, *et al.* Marketing channels and price spread of banana in Chikkaballapur district of Karnataka. *International Research Journal of Agricultural Economics and Statistics*. 2015;6(1):18-22.
- Minithra R, Ashok KR, Vidiyavathi A. Economic Analysis of Production and Marketing of Maize in Perambalur District; c2019. DOI: 10.13140/RG.2.2.19198.20808.
- Venkannanvara MM, Gaddi GM, Gracy CP. Growth Performance and Marketing of Maize in Karnataka, India. *International Journal of Current Microbiology and Applied Sciences*. 2019;8(10):380-387.
- Thombare R, Tawale J, Shelke R, Kamble S. Marketing cost, margin and price spread of maize in Aurangabad district of Maharashtra, India. *The Pharma Innovation Journal*. 2022;11:2814-2816.