



A STUDY ON CONSUMER BUYING BEHAVIOUR TOWARDS INORGANIC FERTILIZERS IN JAUNPUR DISTRICT, UTTAR PRADESH

Vaibhav Singh¹ and Imtirenla L Imsong²

¹MBA (Agribusiness) Scholar and ²Ph.D. Scholar

Department of Agricultural Economics, Naini Agricultural Institute (NAI)

Sam Higginbottom University of Agriculture, Technology and Sciences

Prayagraj, Uttar Pradesh, India

Corresponding Author Email: 24mbaab042@shiats.edu.in

ABSTRACT

The present study titled 'Study on Consumer Buying Behaviour Towards Inorganic Fertilizers in Jaunpur District, Uttar Pradesh' was conducted to analyze farmers' awareness and preferences towards different inorganic fertilizer brands and to evaluate the distribution channels, price spread, marketing efficiency, and major constraints in fertilizer marketing. Primary data were collected from 120 randomly selected respondents across five villages in Badlapur and Machhli Shahr blocks of Jaunpur district during the agricultural year 2025-26. Three major distribution channels for urea fertilizer were identified: Channel I (Manufacturer→Farmer), Channel II (Manufacturer→Dealer→Farmer), and Channel III (Manufacturer→Wholesaler→Retailer→Farmer). Channel III was preferred by the majority of respondents (43.34%) due to wider availability, despite having the lowest marketing efficiency (14.5%) and highest price spread (₹840/quintal). Channel I registered the highest efficiency (21.5%) and lowest price spread (₹200/quintal) but was adopted by only 23.33% of respondents. Brand awareness analysis revealed moderate familiarity among farmers, with Urea and DAP being the most recognized products. Constraints analysis using Garrett's Ranking Technique identified irregular supply and shortage as the most critical constraint (Garrett score 72.5), followed by hoarding and price fluctuation (68.3), and delayed delivery (64.1). The study recommends strengthening direct supply channels, improving storage and transportation infrastructure, enhancing farmer awareness, and regulating dealer practices to improve fertilizer marketing efficiency in Jaunpur district.

Keywords: Inorganic Fertilizers, Consumer Buying Behaviour, Brand Awareness, Marketing Channels, Price Spread, Marketing Efficiency, Garrett's Ranking, Jaunpur

INTRODUCTION

India's farms feed the nation, and fertilizers make that possible. Nearly 54% of India's workforce depends on agriculture, which contributes close to 18% of the country's GDP. Since the Green Revolution, inorganic fertilizers such as Urea, Di-Ammonium Phosphate (DAP), and Muriate of Potash (MOP) have driven this growth. Together, these three account for over 80% of total

fertilizer use, placing India among the world's largest fertilizer consumers. Uttar Pradesh alone accounts for nearly 18-20% of this national demand, thanks to its vast wheat, rice, sugarcane, and pulse fields. Yet the system that carries fertilizer from factory to farm is far from smooth. Farmers often know little about different brands and simply buy what their local dealer offers. Multiple middlemen push up prices, while irregular



supply, hoarding, and poor storage add to the trouble. Fixing these bottlenecks matters not just for farmers' pockets but for the country's food security.

Significance of the Study

Most policy conversations on fertilizers focus on subsidy bills and national consumption figures. Far fewer ask a simpler question: once a bag of Urea leaves the factory gate, how does it actually reach a farmer's field, and what does that journey cost him? This study answers that question for Jaunpur district, examining how farmers there buy inorganic fertilizers, which supply routes they trust the most and why, and what each route actually costs them. The findings can help policymakers, fertilizer companies, extension agencies, and farmer groups design interventions that actually reach the people who need them most.

Study Area: Jaunpur District

Jaunpur lies between the Gomti and Sai rivers in eastern Uttar Pradesh, spread across roughly 4,040 square kilometres of fertile, alluvial Gangetic plain soil ideal for wheat, paddy, sugarcane, and pulses. The district is home to about 6.39 million people, with a literacy rate of 73%, and more than 70% of its population depends on farming. Its climate swings between a hot, dry summer (March-June, above 40°C), a monsoon bringing about 1,100 mm of rain (July-September), and a cool winter (November-February, dropping to around 5°C). These seasonal shifts strongly shape when farmers need fertilizer and how it must be moved and stored, since demand spikes sharply just before sowing and eases off once it is applied.

Objectives of the Study

This paper addresses two specific objectives: first, to examine respondents' preferences for different inorganic fertilizer brands and distribution channels; and second, to evaluate price spread, marketing margins, and

marketing efficiency across these distribution channels.

METHODOLOGY

Primary data for this study were collected from farmers and market functionaries in Jaunpur district during the 2025-26 agricultural year using structured personal interview schedules, supplemented with secondary data from government publications, block development office records, district statistics, and journals. Jaunpur district was purposively selected for its heavy reliance on inorganic fertilizers and its representative mix of small, marginal, semi-medium, medium, and large farmers. A multi-stage sampling procedure was followed: among the district's 16 blocks, Badlapur and MachhliShahr were purposively selected for their higher fertilizer consumption and intensive cropping patterns, five villages (Rampur and Kheda in Badlapur block, and Chhata, Mirzapur, and Devgaon in MachhliShahr block) were picked at random from Block Development Office records arranged by cultivated area, farmers were drawn through a 10% random sample from each landholding category in every village, and market functionaries, including wholesalers, retailers, and dealers, were selected purposively from the primary market at Badlapur Mandi and the secondary market at MachhliShahr Mandi. The final sample comprised 120 farmer-respondents, drawn in proportion to landholding category across the five villages, and 20 market functionaries, all interviewed through structured personal interviews during the 2025-26 agricultural year. Frequency and percentage analysis was used to describe respondents' awareness levels, brand preferences, and channel preferences; marketing efficiency (ME) was worked out using Shepherd's formula, as the value of the commodity sold divided by the total marketing cost, multiplied by 100, i.e., $ME (\%) = [\text{Value of Commodity Sold} / \text{Total Marketing Cost}] \times 100$; and Garrett's Ranking



Technique was used to rank the constraints faced by market functionaries, wherein respondents ranked each constraint from most important to least important, these ranks were converted into percentage position

scores, and the scores were read off Garrett's table to arrive at a comparable score for each constraint, with a higher Garrett score indicating a more serious, more widely felt constraint.

RESULTS AND DISCUSSION

Preferred Distribution Channel for Inorganic Fertilizers

Farmers in Jaunpur reach fertilizer through three main channels: a direct route from manufacturer to farmer (Channel I), a shorter

dealer-based route from manufacturer to dealer to farmer (Channel II), and a longer route from manufacturer to wholesaler to retailer to farmer (Channel III). Table 1 shows how respondents split across these three options.

Table 1: Distribution of Respondents by Preferred Fertilizer Distribution Channel (n=120)

S. No.	Channel Type	No. of Respondents	Percentage (%)	Rank
1	Channel I: Manufacturer to Farmer (Direct Supply)	28	23.33	III
2	Channel II: Manufacturer to Dealer to Farmer	40	33.33	II
3	Channel III: Manufacturer to Wholesaler to Retailer to Farmer	52	43.34	I
	Total	120	100.00	

Source: Primary survey data, 2025-26.

Channel III, despite passing through the most hands, was the clear favorite, chosen by 43.34% of respondents because it is simply easier to reach, thanks to the dense network of local retail shops. Channel II followed at 33.33%, offering a middle ground between

convenience and cost. Only 23.33% of farmers used the direct Channel I, largely because manufacturers rarely supply small quantities straight to individual farmers, and doing so usually means travelling further and buying in bulk.

Price Spread and Marketing Efficiency Analysis

Preference and efficiency, however, do not move together. Using Urea priced at Rs 4,500

per quintal at the manufacturer's gate as the reference point, the study worked out the marketing cost, margin, and efficiency for Channel I and Channel III. Table 2 lays out the comparison.

Table 2: Comparative Price Spread and Marketing Efficiency for Urea, Channel I vs Channel III

Particulars	Channel I (Rs/Quintal)	Channel III (Rs/Quintal)
Manufacturer's price	4,500	4,500
Total marketing cost	200	490
Total marketing margin	Nil	350
Farmer's purchase price	4,500	5,140
Price spread	200	840
Marketing efficiency (%)	21.5	14.5

Source: Primary survey data from manufacturer, wholesaler and retailer interviews, Jaunpur district, 2025-26.

Channel I keeps the fertilizer moving almost straight from factory to field. Its only real cost is Rs 200 per quintal in packaging and transport, so the farmer pays Rs 4,500 per quintal, the same as the manufacturer's own

selling price, and the channel delivers the highest marketing efficiency of the three, at 21.5%. Channel III tells a different story: the wholesaler adds handling and storage costs plus a margin, selling on to the retailer, who



adds further costs and margin before selling to the farmer. Altogether, the total marketing cost comes to Rs 490 per quintal with a combined wholesaler-retailer margin of Rs 350, giving a price spread of Rs 840 per quintal and a marketing efficiency of just 14.5%, the lowest of the three channels. In practical terms, a farmer buying through Channel III pays Rs 5,140 per quintal against Rs 4,500 in Channel I, a premium of Rs 640 per quintal, or about 14.2% more, simply for the convenience of a nearby retailer. Spread over an average holding, that gap works out to an extra Rs 1,920 to Rs 3,200 per hectare in fertilizer costs alone.

Brand awareness followed a similar pattern of convenience over information. Almost every farmer surveyed recognized Urea (98.33%) and DAP (91.67%), but awareness of private fertilizer brands was much thinner, ranging from just 6.67% to 35%. Government-subsidized Urea remained the clear favorite, preferred by 60% of respondents mainly for its subsidized price, while 13.33% of farmers had no particular brand preference at all, a sign that many are simply buying whatever is available rather than making an informed choice. On the trade side, when market functionaries were asked to rank their biggest problems using Garrett's technique, irregular supply and shortages topped the list with a Garrett score of 72.5. Hoarding and price fluctuation followed close behind at 68.3, and delayed delivery came third at 64.1. Corruption in the allocation of fertilizer stocks also emerged as a serious concern, scoring 48.2, pointing to a governance gap alongside the purely logistical ones.

CONCLUSION

The picture that emerges from Jaunpur is what can be called an efficiency-accessibility paradox. The channel that costs farmers the least, direct supply from the manufacturer, is also the hardest for most farmers to reach. The easiest-to-reach channel, through

wholesalers and retailers, is the most expensive. Layered on top of this is an awareness gap: farmers overwhelmingly stick to familiar, subsidized products like Urea and DAP simply because they know little about the alternatives, which keeps fertilizer use skewed and limits opportunities for balanced, need-based application.

Turning this around calls for action on three fronts. In the short term, buffer stocks and digital monitoring of supply can ease the shortages and hoarding that farmers report most often. In the medium term, investment in rural warehousing and last-mile transport can narrow the cost gap between direct and multi-tier channels. And in the long run, expanding farmer cooperative procurement, Aadhaar-linked distribution, and direct-supply models through Village Level Entrepreneurs and e-Choupal networks can gradually shift more farmers towards the cheaper, more efficient Channel I, without asking them to trade away convenience. Alongside these supply-side fixes, closing the awareness gap and regulating dealer practices deserve equal attention, since they can address both the information deficit and the governance concerns flagged by market functionaries themselves. Taken together, these steps can narrow the price burden on farmers, tighten up the fertilizer supply chain, and support the wider goal of raising farm incomes in eastern Uttar Pradesh.

Major Findings

Urea and DAP enjoy near-universal awareness among farmers, while private brand awareness stays low, reflecting weak market information reach. Channel III is the most preferred route despite being the least efficient, confirming that accessibility, not efficiency, drives rural input purchase decisions. Channel I is the most efficient and cheapest route but the least used, due to structural barriers in reaching individual farmers directly. The price gap between Channel I and Channel III adds Rs 1,920 to



Rs 3,200 per hectare to a farmer's costs. Irregular supply and shortage are the most critical marketing constraints, followed by hoarding, price fluctuation, and delayed delivery, with corruption in allocation flagged as a further governance concern.

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