

International Journal of Agriculture Extension and Social Development

Volume 9; Issue 2; February 2026; Page No. 350-353

Received: 07-11-2025
Accepted: 27-12-2025

Indexed Journal
Peer Reviewed Journal

Designing internet marketing approaches for promoting fertilizer products

¹Kommagoni Rashmitha, ²I Shakuntala Devi, ³P Radhika and ⁴K Supriya

¹School of Agribusiness Management, College of Agriculture, Rajendranagar, PJTAU, Telangana, India

²Department of Agricultural Economics, College of Agriculture, Warangal, PJTAU, Telangana, India

³School of Agribusiness Management, College of Agriculture, Rajendranagar, PJTAU, Telangana, India

⁴Department of Statistics & Mathematics, College of Agriculture, Rajendranagar, PJTAU, Telangana, India

DOI: <https://www.doi.org/10.33545/26180723.2026.v9.i2e.3078>

Corresponding Author: Kommagoni Rashmitha

Abstract

The present study titled “A Study on Designing Internet Marketing Approaches for Promoting Fertilizer Products in Mahaboobnagar District of Telangana” examined the awareness, adoption and preferences of farmers and dealers toward internet-based marketing channels, with strategic suggestions for Indus Crop Care Private Limited. The study was conducted in Mahaboobnagar district, Telangana, selecting 120 farmers and 10 dealers through a multi-stage sampling method. Primary data were collected using structured questionnaires and analyzed using descriptive statistics, Henry Garrett Ranking Method and Chi-square test. The findings revealed moderate awareness and positive attitudes toward digital marketing among farmers; however, actual adoption remained low due to limited digital literacy and continued reliance on traditional dealers. Social media platforms, websites and WhatsApp emerged as the most preferred digital tools. A significant relationship was observed between age and social media usage, with younger farmers showing greater inclination toward online platforms. The study concludes that internet marketing for fertilizers holds strong growth potential in the region, provided that awareness initiatives, mobile-friendly platforms, dealer-assisted engagement, and transparent communication strategies are strengthened to enhance farmer adoption and satisfaction.

Keywords: Internet marketing, fertilizer products, digital platforms, social media promotion, farmer awareness, adoption behaviour, purchasing decisions, online information access, dealer support, agricultural marketing

1. Introduction

Fertilizers have played a crucial role in transforming Indian agriculture by enhancing crop productivity and ensuring national food security. Their importance became evident during the mid-1960s food crisis, which led to the adoption of scientific farming practices and the Green Revolution. The introduction of High-Yielding Variety (HYV) seeds, supported by irrigation and chemical fertilizers, significantly increased food grain production and enabled India to achieve self-sufficiency by the 1980s. Since then, fertilizers particularly nitrogen, phosphorus and potassium have remained indispensable inputs in sustaining agricultural growth.

Over the years, fertilizer consumption in India has risen steadily in response to population growth, shrinking cultivable land and increasing food demand. India is currently one of the largest producers and consumers of fertilizers globally, though imbalances in nutrient use and dependence on imports persist. Excessive reliance on nitrogenous fertilizers has raised concerns regarding soil health, nutrient imbalance and environmental sustainability, emphasizing the need for balanced and efficient fertilizer use.

In recent years, the fertilizer sector has experienced structural changes driven by market expansion,

technological advancements and the growing penetration of the internet in rural areas. Farmers increasingly rely on digital platforms for information related to agricultural inputs, crop practices and market trends. Internet marketing has emerged as a powerful tool for agri-input firms to promote fertilizer products, improve farmer awareness and influence purchasing behaviour through cost-effective and interactive channels such as websites, social media and e-commerce platforms.

Against this backdrop, the present study focuses on evaluating the role of internet marketing strategies in promoting fertilizer products, with special reference to Indus Crop Care Private Limited in Telangana. The study aims to assess farmer engagement with online marketing tools, analyze competitors' digital strategies and propose effective internet-based marketing approaches to enhance outreach, adoption and sustainable fertilizer use.

2. Methodology

The study adopted a descriptive research design to assess farmers' and dealers' awareness, adoption and purchasing behaviour regarding fertilizer products promoted through internet marketing channels. The research was conducted in Mahaboobnagar district of Telangana, a major agricultural region characterized by diverse cropping patterns, varied

soil types and substantial demand for agri-inputs. The district was purposively selected due to its strong fertilizer usage and growing exposure to digital technologies in agriculture.

A multi-stage sampling technique was employed for respondent selection. Two mandals, Bhoothpur and Bijinepally, were purposively selected due to their high agricultural activity and fertilizer usage. From these mandals, six villages Madigatla, Pothulamagudu, Kothamolgara (Bhoothpur Mandal) and Latupally, Mundaratanda, Udgalkuntatanda (Bijinepally Mandal) were chosen based on fertilizer demand. From each village, 20 farmers were randomly selected, resulting in a total sample of 120 farmers. In addition, 10 fertilizer dealers (five from each Mandal) were selected using convenience sampling to capture market-level perspectives, ensuring balanced representation of both end-users and intermediaries involved in fertilizer marketing.

Primary data were collected through structured questionnaires administered via personal interviews with farmers and dealers. The questionnaires covered socio-economic characteristics, fertilizer purchasing behaviour, awareness and usage of internet marketing platforms and preferences for online versus offline channels. Secondary data were collected from official agricultural records, journals, reports, company documents of Indus Crop Care Pvt. Ltd., and reliable online sources to support analysis and interpretation.

The collected data were systematically tabulated and analysed using descriptive statistics such as percentages and averages. Henry Garrett Ranking Method was applied to assess farmers preferences for various internet marketing strategies, while the Chi-square test was used to examine the association between socio-economic factors, particularly age and online purchasing behaviour. These analytical tools enabled meaningful interpretation of patterns related to digital engagement and fertilizer marketing effectiveness.

3. Results and Discussion

3.1 Farmer Profile

Among the 120 farmers surveyed in Mahaboobnagar district, the majority (36.7%) belonged to the 40-50 years age group, followed by 30-40 years (30%) and 50-60 years (24.2%), while only 9.2% were above 60 years. This indicates that most respondents were middle-aged farmers who combine farming experience with moderate adaptability to digital tools.

In terms of education, 27.5% had completed intermediate education, 24.2% high school, 17.5% primary schooling, and 10.8% graduation or above, while 20% were illiterate. The majority (82.5%) were male farmers. Paddy (45%) was the dominant crop grown, followed by cotton (25%), maize (17.5%), and red gram (12.5%). Most respondents were small and marginal farmers, with 37.5% owning less than 2.5 acres and 35% owning 2.5-5 acres.

A significant 88% of farmers owned internet-enabled smartphones, indicating strong digital penetration in the study area. However, despite high device ownership, online purchasing of fertilizers remained limited, reflecting a gap between digital access and digital adoption.

3.2 Online Purchasing Behaviour and Influencing Platforms

Although 88% of farmers possessed smartphones, only 40% reported purchasing fertilizers through online platforms, while 50% continued to rely on dealer shops and 10% purchased through Farmer Producer Organizations (FPOs). This indicates continued dependence on traditional distribution channels.

Influence of Online Platforms (Garrett Ranking)

S. No	Platform	Garrett Mean Score	Rank
1	YouTube	65.57	I
2	WhatsApp	61.02	II
3	Facebook	54.07	III
4	Twitter	46.23	IV
5	Instagram	34.67	V
6	Agricultural Apps	31.89	VI

Key Observations

- YouTube ranked first (65.57), indicating that video demonstrations significantly influence fertilizer purchase decisions.
- WhatsApp (61.02) ranked second, highlighting the importance of peer communication and dealer-farmer interaction.
- Facebook (54.07) remains a relevant promotional platform.
- Agricultural apps and Instagram showed lower adoption, indicating limited awareness or technical barriers.
- Farmers' content preference analysis showed that entertainment videos ranked first, followed closely by agriculture-related videos, suggesting that visually engaging content is more effective than text-heavy communication.

3.3 Frequency of Social Media Usage

Usage Frequency	Percentage
Daily	50%
Twice a week	19%
Every 10 days	14.2%
Every 20 days	11.4%
Monthly	5.7%

Half of the respondents accessed social media daily, indicating strong potential for continuous digital engagement. Regular exposure increases the effectiveness of online fertilizer promotions and awareness campaigns.

3.4 Barriers to Online Adoption

S. No.	Drawback	Percentage	Rank
1	Don't trust online sellers	37.1%	I
2	Lack of knowledge	27.1%	II
3	Prefer local markets	20%	III
4	No internet access	11.4%	IV
5	Language barrier	4.4%	V

Key Observations

- Lack of trust in online sellers (37.1%) emerged as the biggest barrier.
- Limited digital knowledge (27.1%) further restricts adoption.
- Preference for traditional dealer markets remains strong (20%).

These findings indicate that trust-building, digital literacy

programs, and dealer-assisted online transactions are essential for increasing adoption.

3.5 Association between Age and Online Purchasing

The Chi-square test revealed a significant association between age and online purchasing behaviour ($\chi^2 = 15.29$, $p = 0.015$). Younger farmers (30-40 years) showed higher adoption of online purchasing compared to older age groups.

Frequencies under different age groups			Usage pattern		
			Farmers online purchasing behaviour	Farmers offline purchasing behaviour	Total no. of farmers
Age	30-40	Observed Frequency	32	16	48
		Expected Frequency	22.4	25.6	48
	40-50	Observed Frequency	12	16	28
		Expected Frequency	13.06	14.93	28
	50-60	Observed Frequency	8	16	24
		Expected Frequency	11.20	12.80	24
	Above 60	Observed Frequency	4	16	20
		Expected Frequency	9.33	10.67	20
	Total				120
	χ^2 Value = 15.29, P value = 0.015				

This confirms that age influences digital adoption, and internet marketing strategies should be age-segmented for better effectiveness.

3.6 Dealer Perception and Platform Preference

All surveyed dealers (100%) were aware of internet marketing practices, indicating readiness at the intermediary level.

Preferred Platforms among Dealers

S. No	Platform	Garrett Score	Rank
1	WhatsApp	65.23	I
2	YouTube	60.25	II
3	Facebook	54.67	III
4	Instagram	47.56	IV
5	Twitter	35.49	V

WhatsApp emerged as the most influential platform among dealers, followed by YouTube. Instant messaging and video-based communication are therefore the most effective channels for fertilizer promotion.

3.7 Competitor Analysis of Internet Marketing Strategies

Major competitors such as Agri Grow Fertilizers Pvt Ltd, Green Harvest Agrochemicals, Nutri Crop Solutions, and Crop Care Bio-Tech actively utilize Facebook, Instagram, YouTube, LinkedIn, and company websites for digital promotion.

Key competitive insights include

- Nutri Crop Solutions shows the highest engagement across platforms, particularly on YouTube and LinkedIn.
- Video content generates the highest average views across all firms.
- Influencer collaborations and promotional offers enhance digital visibility.

- LinkedIn is primarily used for professional outreach, while Facebook and YouTube target farmers directly.

This indicates that video marketing and consistent posting significantly improve engagement.

4. Conclusion

The study reveals that while digital device ownership among farmers is high, actual adoption of online fertilizer purchasing remains moderate. YouTube and WhatsApp are the most influential digital platforms in shaping purchase decisions, while trust deficit and limited digital literacy remain major barriers. Age significantly influences online adoption, with younger farmers more inclined toward digital platforms.

Competitor analysis shows that firms actively leveraging video marketing, influencer collaborations, and multi-platform engagement achieve higher visibility and reach. For Indus Crop Care Pvt. Ltd., integrating dealer-assisted digital marketing, localized language content, trust-building campaigns, and mobile-friendly promotional strategies will enhance farmer adoption and strengthen market presence.

References

1. Agricultural Statistics. Agricultural statistics at a glance. New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India; 2023.
2. Alnaass AM, Ammar EE, El-Naggar AH. Role of biofertilizers in sustainable agriculture and soil health improvement. Journal of Soil Science and Plant Nutrition. 2021;21(3):2103-2115.
3. Bumb BL. Global fertilizer perspective, 1980-2000: The challenge in Asia. Alabama, USA: International Fertilizer Development Center; 1995.
4. Dawan PK, Hegde DM, Srivastava S. Fertilizer use and agricultural growth in India. Indian Journal of Agricultural Economics. 1994;49(2):233-244.
5. FAO. FAOSTAT statistical database. Rome: Food and Agriculture Organization of the United Nations; 2020.

6. Global trends in fertilizer sector. Global fertilizer production and consumption trends. Industry report; 2024.
7. Hopper WD. Indian agriculture and fertilizer: An outsider's observations. *Economic and Political Weekly*. 1993;28(52):A155-A162.
8. India Stat. Agricultural statistics of India; 2024.
9. Patel R, Sharma K, Verma P. Impact of internet marketing on agri-input firms and farmer engagement. *International Journal of Agricultural Marketing*. 2022;9(1):45-53.
10. Ramakrishnan PS. Ecology and sustainable development. India: National Academy of Sciences; 2001.
11. Times of Agriculture. Major fertilizer companies in India. Industry report; 2024.
12. Tomich TP, Kilby P, Johnston BF. Transforming agrarian economies: Opportunities seized, opportunities missed. Ithaca, NY: Cornell University Press; 1995.
13. Viglia G. Exploring internet marketing strategies and performance outcomes. *Journal of Interactive Marketing*. 2014;28(2):113-129.
14. Volume of fertilizers. Consumption of fertilizers in India and states. New Delhi: Department of Fertilizers, Government of India; 2013-2024.