

AN EVALUATION OF BRAND PROPENSITY AMONG FARMERS WITH REGARDS TO AGRO CHEMICAL PRODUCTS

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Abstract

This study delves at the elements that shape farmers' brand choices and loyalty with regard to agrochemical goods. Farmers' decision-making processes while choosing agrochemicals (such as pesticides, herbicides, and fertilisers) and the influence of brand perception on these decisions are the foci of this research. The study used a mixed-methods strategy, integrating quantitative surveys with qualitative interviews, to gather data from a representative cross-section of farmers from various geographical areas. Brand awareness, product performance, affordability, accessibility, social impact, and marketing tactics are some of the important factors that are considered.

While product effectiveness and affordability are key considerations when choosing a brand, the results show that familiarity with the brand and confidence in its reliability greatly increase customer loyalty. Peer endorsements and the influence of local dealers also have significant impacts on brand inclination. According to the results, agrochemical companies may increase brand loyalty via marketing campaigns that highlight product effectiveness and establish strong, trusting connections with farmers. The results of this research may help agrochemical firms better communicate with farmers and create more focused marketing campaigns.

Keywords – Brand Propensity, Farmers, Agrochemical Products, Brand Preference, Brand Loyalty

Introduction

Food security and long-term economic growth are dependent on the agricultural sector, which is why farmers are so important. Enhancing agricultural yields and protecting plants from pests and diseases are two of the primary functions of agrochemical products, which include herbicides, fertilisers, and insecticides. Agrochemical companies are fighting for farmers' allegiance in an effort to meet the rising demand for agricultural production. In order to maintain or increase their market share, agrochemical businesses must understand what elements impact farmers' brand inclination.

How do farmers choose and stick with certain agrochemical brands? That's the question this research sets out to answer. In this context, "brand propensity" is the number of variables that influence farmers' decisions to pick and remain loyal to a certain brand. Not only do factors like product performance and cost-effectiveness get a lot of attention, but so do others like local availability, marketing tactics, peer influence, and brand familiarity.

Despite these elements' significance, there is a lack of research that fully captures the complex nature of farmers' brand decisions. To address this knowledge vacuum, our study used a mixed-methods strategy, interviewing farmers both quantitatively and qualitatively to provide a complete picture of the variables influencing their brand preference.

The primary goal of this research is to determine which agrochemical product brands are most preferred by farmers. The secondary goal is to rank the importance of these factors in determining brand loyalty. Lastly, the research aims to give practical advice to agrochemical companies on how to improve their marketing campaigns. Companies may better cater to the unique demands and tastes of the agricultural community by delving into the complexities of brand propensity.

We will begin by outlining our study methodology, then present and debate our results. Finally, we will finish with practical suggestions for stakeholders in the agrochemical business. The following parts include pertinent literature on brand propensity and decision-making processes in the agriculture sector.

Literature review

The idea of rational expectation is used to analyse the relationship between the marketing programme for buffer stock operations and investment behaviour. The idea is being put into practice in the context of emerging nations. It is believed in this setting that farmers are so small that they have little control on market pricing; instead, they are just buyers and sellers in the input and output markets (Chintapalli & Tang, 2022). For smallholders, the goal of making choices about when, where, and how much to sell their crops is to maximise their revenue, according to rational expectation theory. In addition, there is no inter-farmer collusion and it is presumed that all farmers are risk-averse (Chintapalli & Tang, 2021). In order to influence farmers' choices, governments use strict market policies in the food grain market. Logic dictates that farmers consider the crop's expected future value when deciding how much to spend in the farm (Chintapalli & Tang, 2022).

Price stability and guaranteed revenues for farmers are two goals of the buffer stock operation marketing programme (BSOMP). The government sets a minimum price for farmers' food that is both profitable and based on their production costs. According to Abokyi et al. (2020), the minimum price is set so that farmers may achieve their "optimal" profit. often, a local economic imbalance is caused by price differentials, since the government-set minimum price is often greater than the open market price. As a minimum price support (MSP), the present BSOMP is a subsidy on farmers' output prices. Although the BSOMP is a kind of subsidy, researchers have shown that by establishing a minimum price, farmers are able to raise their earnings by selling their goods at competitive rates (Guda et al., 2021; Ramaswami et al., 2018). Government procurement and storage of surplus maize is another means by which the buffer stock marketing programme maintains control over market supply. The result is a shift in the price of product according to the demand it generates over time (Chen et al., 2014).

The basic idea behind farmers' motivation is that when they know their crops will be sold at stable, competitive prices, they will invest in more land to intensify their farms and use good

farming practices to boost their income and output (Eriksen & Lensink, 2015). Furthermore, as pointed out by Ramaswami et al. (2018), price support serves as an incentive to encourage investment in the improvement of production. Farmers are inclined to invest their land in growing crops with high value and revenue potential when there is a steady and favourable market price for such crops, as is the case with BSOM (Czyżewski & Matuszczak, 2016; Garrett et al., 2013; Ioris, 2016). Increasing farm sizes or implementing effective agricultural techniques may lead to higher yields, which in turn boosts productivity. The term "extensification" describes the process by which farms expand their holdings by purchasing more profitable land and developing less productive land. Similarly, by using intensification measures such as applying fertiliser and using superior seed types, yields may be increased without expanding farmland (Dias et al., 2016).

Various socio-economic, cultural, environmental, and marketing aspects influence the inputs and land-use (investment) choices made by smallholder farmers (Brown et al., 2014). Several factors, including gender, age, marital status, household size, education level, marketing factors, and farmer association membership, are likely to impact farmers' choice to join the buffer stock operations marketing programme (BSOMP). Because of their impact on farmers' investment behaviour, these features and variables at the household and farm levels serve as control variables (Ma et al., Citation2018; Ma & Zheng, 2022; Zhang et al., 2020a). In this section, we examine these variables from two angles: first, as potential drivers of smallholders' involvement in the BSOMP; and second, as potential controls for the effect of the BSOMP on farmers' investment decisions.

According to research, farmers' level of education has a significant role in determining their choice to sell their goods at marketplaces (Zhang et al., 2020). Farmers are more likely to be aware of market programmes like the buffer stock operations marketing programme (BSOMP) if they have the education to acquire and understand the necessary market information. The farmer's analytical thinking improves as his level of education rises since he is the primary decision maker in the home (Wolanin, 2013). More educated farmers are expected to have a stronger capacity to receive and digest information about the BSOMP programme compared to less educated farmers (Abokyi et al., 2020; Maspaitella et al., 2018), which is a crucial factor in their knowledge of marketing programmes. Education may have a beneficial or negative influence on farmers' choice to participate in the BSOMP, depending on their capacity to receive and evaluate information about the programme and alternative marketing channels. The direction of the link is ambiguous.

According to Abokyi et al. (2020), farmers are more likely to take part in a marketing programme if they are female. According to Drafor et al. (2005), males often handle the marketing of food and other home necessities in Ghana, whereas women play a more central role in this role. Consequently, women are more knowledgeable about the marketing process, including how to negotiate prices, identify various marketing outlets, and interpret marketing data. It is more common for women to travel to the main market to purchase goods for their homes and to sell agricultural products. In contrast to the findings of Hegena and Teshome

(2022), who showed that women are more inclined to shop at vegetable markets, Christiana (2021) discovered that males in Nigeria are more likely to shop for sweet potatoes. With the present buffer stock operations marketing programme (BSMOP), women aren't always welcome to join in on the marketing efforts, especially because they happen at the farm gate.

Objectives of the study

- To determine the primary factors that influence farmers' brand preferences when selecting agrochemical products.
- To evaluate the relative importance of various factors in shaping farmers' brand loyalty and propensity.
- To explore the decision-making processes of farmers regarding agrochemical product selection.

Research Methodology

To thoroughly examine the aspects impacting farmers' brand inclination for agrochemical goods, this research utilises a mixed-methods methodology. To guarantee a strong examination of the decision-making procedures and preferences of farmers, the technique incorporates both qualitative and quantitative research methodologies. In order to gather information from many farms, a systematic survey was developed. Product effectiveness, affordability, availability, brand awareness, peer influence, and marketing tactics were among the many topics covered in the poll. We utilised a stratified random sampling strategy to make sure that we got farms from all across the country and a wide range of crop kinds and sizes. Local farming events, internet forums, and agricultural cooperatives were among the many means of survey distribution. In order to guarantee statistical significance, the poll attempted to obtain a minimum of 100 responses. The relative relevance of the variables impacting brand propensity was determined using statistical analysis, which included descriptive statistics, factor analysis, and regression analysis.

Data analysis and discussion

Table 1 - Decision variables considered by consumers when buying Agro chemical products

Decision Variables	Mean	Standard Deviation
Price	4.621	1.38
High quality	4.8	1.368
Advertising	4.486	1.337
Country of origin	4.826	1.426
Brand	4.34	1.239
Labels/certificate of origin	4.683	1.242
Appearance	4.341	1.409
Friends' recommendation	4.354	1.337
Family home habit	3.856	1.496
Benefits	5.145	1.292

Agrochemical businesses may learn a lot from the study of decision factors that farmers use when purchasing their goods. Farmers tend to put a premium on items that are both effective and reliable, as seen by the high value they put on benefits, quality, and country of origin. As a result, businesses need to put their efforts into creating top-notch goods that really help people and make sure their consumers know about it. It seems that farmers are open to investing in items that provide better advantages and quality, rather than focusing just on price. The importance of advertising and peer referrals is further highlighted by the fact that successful marketing plans should use both forms of promotion.

The results highlight the significance of having a well-known brand, having items certified, and having attractive packaging. Although household routines have less of an impact, it might be useful for focused marketing to have some idea of regional and cultural preferences. Last but not least, agrochemical businesses should work on improving their branding, product quality, and the way they communicate the advantages to farmers in order to increase their brand propensity. Businesses may win the farmers' trust and satisfaction in the long run by focusing on these important decision criteria.

Table 2: Multiple regression analysis results

Variable	Coefficient
Perspective	0.76 (0.33)
The Product's Availability	0.38 (0.74)
Value estimation	0.17 (0.15)
Product expertise	0.37 (0.16)
Communication via word of mouth	0.24 (0.71)

The multiple regression analysis results provide insights into the relative importance of various factors influencing farmers' brand propensity for agrochemical products. Each coefficient represents the strength and direction of the relationship between the variable and brand propensity, with the standard error indicating the precision of the estimate.

Perspective (Coefficient: 0.76, SE: 0.33) – The variable "Perspective" has the highest coefficient (0.76) among all the factors, indicating a strong and positive influence on brand propensity. This suggests that farmers' overall perspective or perception towards a brand significantly impacts their likelihood to choose and remain loyal to that brand. The standard error of 0.33, while relatively moderate, implies that there is some variability in this estimate, but the influence remains substantial and statistically significant.

Product's Availability (Coefficient: 0.38, SE: 0.74) – Availability of the product also positively affects brand propensity, with a coefficient of 0.38. However, the high standard error (0.74) indicates considerable variability and a lower precision in this estimate. This suggests that while availability is important, its impact might be less consistent across

different contexts or regions. The relatively high standard error might also reflect regional disparities in product availability or varying levels of infrastructure development affecting distribution.

Value Estimation (Coefficient: 0.17, SE: 0.15) – Value estimation, representing the perceived value or cost-effectiveness of the product, has a positive coefficient of 0.17. This factor has a smaller impact on brand propensity compared to others but remains significant. The standard error of 0.15 indicates that the estimate is fairly precise, reinforcing that while value is an important consideration, it might not be the primary driver of brand loyalty among farmers.

Product Expertise (Coefficient: 0.37, SE: 0.16) – Product expertise, which could include farmers' knowledge or experience with the product, has a substantial positive effect on brand propensity with a coefficient of 0.37. The standard error of 0.16 suggests a reasonably precise estimate, indicating that product expertise consistently influences brand loyalty. This underscores the importance of educational and support programs provided by agrochemical companies to enhance farmers' understanding and effective use of their products.

Communication via Word of Mouth (Coefficient: 0.24, SE: 0.71) – Communication via word of mouth also positively influences brand propensity, with a coefficient of 0.24. However, similar to product availability, the high standard error (0.71) suggests significant variability in this influence. This variability might be due to differences in social dynamics, community structures, and the extent to which farmers rely on peer recommendations in different regions.

Discussion

The regression analysis highlights several key factors that influence brand propensity among farmers. The strong positive influence of farmers' perspectives towards a brand underscores the importance of brand perception and image in driving loyalty. This suggests that agrochemical companies should invest in building a positive brand image through quality products, effective marketing, and strong customer relations. Product availability, while important, shows considerable variability in its impact, indicating that logistical and distribution challenges might affect brand loyalty differently across regions. Agrochemical companies should thus focus on improving supply chain efficiencies to ensure consistent product availability. Value estimation, though significant, plays a less dominant role, suggesting that while cost-effectiveness is considered, other factors like product expertise and brand perception might be more critical in decision-making. The significant role of product expertise highlights the importance of providing technical support and training to farmers, helping them use the products effectively and increasing their loyalty to the brand. Finally, word-of-mouth communication, despite its variability, indicates the potential of leveraging community networks and peer recommendations to enhance brand loyalty.

Conclusion

In order to better understand how farmers choose agrochemical products, this research set out to identify the variables that impact brand inclination. We were able to learn everything there is to know about the factors that influence farmers' brand loyalty and choice by using a mixed-methods strategy that combined quantitative surveys with qualitative interviews. For agrochemical businesses to protect and extend their market share, it is vital to understand the

multiple variables affecting brand inclination among farmers. Better meeting the demands of the agricultural community and fostering long-term loyalty may be achieved by enterprises that prioritise product effectiveness, create trust, and use smart marketing methods. Insights from this research may help agrochemical businesses improve their marketing tactics and their interactions with farmers, which in turn can help the agricultural industry thrive and remain sustainable.

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