Agri Express: **04** (02), *Article No.* V04I02.05, April - June, **2026** *E - ISSN No. 2584 – 2498*

7.594 Impact Factor

A STUDY ON BRAND PROMOTION OF HYBRID PEARL MILLET (PROAGRO-9001) IN SAIYAN BLOCK, AGRA DISTRICT OF UTTAR PRADESH

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ABSTRACT

The present study entitled "A Study on Brand Promotion of Hybrid Pearl Millet (Proagro-9001) in Saiyan Block, Agra District of Uttar Pradesh" was undertaken to evaluate brand promotion strategies and assess farmers' awareness and purchasing behaviour regarding hybrid pearl millet (Proagro-9001). A multistage sampling design was adopted, and primary data were collected from 150 respondents through structured interviews, while secondary data were obtained from relevant literature and reports. The data were analysed using the Likert Scale, Multiple Regression Analysis, Standard Deviation, and Garrett's Ranking Technique. The findings revealed that yield potential and higher productivity (weighted mean = 4.32) were the most influential factors affecting farmers' purchase decisions, followed by past experience (4.20) and brand reputation (4.10). Multiple regression analysis showed that quality, price, and availability significantly influenced buying behaviour, explaining 67% of the variation (R^2 = 0.67; $p < 0.001$). Garrett's Ranking identified the dealer/input retailer network as the most effective brand promotion channel, whereas lack of farmer awareness about new brands was the major constraint. The study concludes that effective promotional strategies, improved product quality, and stronger dealer networks can enhance the adoption and market performance of hybrid pearl millet.

Keywords: Pearl Millet, Brand Promotion, Hybrid Seeds, Proagro-9001, Farmers' Awareness, Buying Behaviour, Garrett's Ranking, Agra District, Uttar Pradesh.

INTRODUCTION

Pearl millet, scientifically known as *Pennisetum glaucum*, is one of the most important cereal crops cultivated in arid and semi-arid regions of the world. It is widely grown in many parts of Africa and Asia due to its remarkable ability to withstand drought, high temperatures, and poor soil fertility. The crop plays a vital role in ensuring food and nutritional security for millions of people living in these regions. In India, pearl millet is an important staple crop cultivated mainly during the Kharif season and is commonly known as bajra.

Agra district of Uttar Pradesh is characterized by semi-arid climatic conditions, moderate rainfall, and soil types suitable for pearl millet cultivation. Farmers in the district often prefer pearl millet as it requires relatively lower input costs and provides both food grain and fodder for livestock. In recent years, hybrid pearl millet seeds such as Proagro-9001 have been introduced by various seed companies to improve productivity and enhance farmers' profitability. These hybrid seeds are promoted through different marketing

and extension activities such as farmer meetings, demonstration plots, field days, and dealer networks **(Kumar, A., Singh, V. and Tiwari, R., 2018)**.

Despite the significant advantages associated with hybrid pearl millet, many farmers continue to rely on traditional seed varieties due to limited knowledge about improved hybrids or uncertainty regarding their performance under local conditions **(Singh, R., Yadav, O. P. and Sharma, S. (2019).** Therefore, it becomes necessary to study the brand promotion strategies of hybrid pearl millet seeds and to understand the level of awareness and perception among farmers in Agra district. The present study focuses on Proagro-9001, a hybrid pearl millet variety marketed by Bayer Crop Science, which has been introduced in the semi-arid farming regions of western Uttar Pradesh.

RESEARCH METHODOLOGY

3.1 SAMPLING METHODS

A multi-stage sampling procedure was adopted for the present study:

- First stage – Selection of District (Purposive Sampling)
- Second stage – Selection of Block (Purposive Sampling)
- Third stage – Selection of Villages (Random Sampling)
- Fourth stage – Selection of Respondents (Random Sampling)
- Fifth stage – Selection of Market and Market Functionaries (Random Sampling)

Selection of District

There are 75 districts in Uttar Pradesh. Agra district was selected purposively for the study on the basis of its significant area under pearl millet (bajra) cultivation and the active presence of hybrid seed brands and promotional activities carried out by seed companies in the district.

Selection of Block

There are 15 blocks in Agra district. Out of these, Saiyan block was selected purposively on the basis of the maximum presence and visibility of agricultural input brands and promotional activities carried out by seed companies, including field demonstrations and farmer meetings.

Selection of Villages

From the selected Saiyan block, two villages namely Beerai (population: 429) and Tehra (population: 1085) were selected randomly for the purpose of the study, giving a total study population of 1,514 farming households.

Selection of Respondents

A total of 150 respondents were selected randomly from the two villages. Respondents were categorized based on land holding as follows:

- Marginal farmer – up to 1 hectare
- Small farmer – 1–2 hectares
- Semi-medium – 2–4 hectares
- Medium farmer – 4–10 hectares
- Large farmer – above 10 hectares

Selection of Market

Primary market (Saiyan market) and secondary market (Beerai market) were selected purposively for the in-depth analysis of brand promotion dynamics in the study area.

3.2 DATA COLLECTION METHODS

Primary Data Collection:

Primary data was collected through surveys conducted via personal interviews. Specially designed interview schedules were used for the collection of primary data. The interviews involved key stakeholders

including farmers from different land categories, agricultural input dealers, and company representatives.

Secondary Data Collection:

Secondary data was collected from books, journals, research papers, government publications including the Statistical Abstract of Agra district, company reports, and online resources specific to agricultural marketing and brand promotion.

3.3 ANALYTICAL TOOLS AND TECHNIQUES

Likert Scale:

A 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to measure the key factors influencing farmers' purchase decisions for Proagro-9001.

Weighted Mean = $\Sigma (W \times f) / N$

Multiple Regression:

Multiple Regression was used to determine the relative contribution of each factor in predicting farmers' buying behaviour towards Proagro-9001.

$Y = a + b_1$ (Price) + b_2 (Quality) + b_3 (Availability)

Garrett's Ranking Technique:

Garrett's Ranking was used to rank the key factors influencing purchase decisions and the problems faced by marketers in brand promotion of Proagro-9001. The percent position formula is:

Per cent position = $100 (R^{Ij} - 0.5) / N_j$

RESULTS AND DISCUSSION

4.1 SOCIO-ECONOMIC PROFILE OF RESPONDENTS

Table 1: Distribution of respondents on the size of land holding

S. No.	Types of Respondents (on the basis of land holdings)	Number of Respondents	Percentage (%)
1.	Marginal (< 1 ha.)	56	37.33
2.	Small (1-2 ha.)	37	24.66
3.	Semi-medium (2-4 ha.)	29	19.33
4.	Medium (4-10 ha.)	18	12.00
5.	Large (>10 ha.)	10	6.66
	Total	**150**	**100**

Table 1: categorizes 150 agricultural respondents by land size. Marginal farmers, with less than 1 hectare of land, form the largest group at 37.33% (56 respondents), indicating a significant number of small-scale farmers in the study area. Small farmers (1–2 ha) make up 24.66%, followed by semi-medium (19.33%), medium (12%), and large farmers (6.66%). The predominance of marginal and small farmers highlights the need for price-sensitive and accessible brand promotion strategies for Proagro-9001 hybrid pearl millet **(Sharma, T. and Choudhary,V. K., 2025).**

Table 2: Distribution of respondents based on age group

S. No.	Age Categories (Years)	Number of Respondents	Percentage (%)
1.	Young Age (18-35)	57	38
2.	Middle Age (36-50)	66	44
3.	Old Age (>50)	27	18
	Total	**150**	**100**

Table 2: categorizes respondents into three age groups. The majority fall within the middle age category (36–50 years), accounting for 44% with 66 respondents. This group is most actively involved in farming decisions and is therefore most receptive to brand promotion activities. The young age group (18–35 years) follows at 38%, a demographic increasingly influenced by digital promotion and modern marketing tools **(Yadav, P., Singh, H. and Kumar, M., 2020).**

Table 3: Distribution of respondents based on gender

S. No.	Gender	Number of Respondents	Percentage (%)
1.	Male	107	71.33
2.	Female	43	28.66
	Total	**150**	**100**

Table 3: presents the gender distribution of 150 respondents. Out of the total, 107 respondents are male (71.33%), and 43 are female (28.66%). This reflects the general structure of farming communities in the Saiyan block, where land ownership and agricultural decision-making remain predominantly male. The notable presence of female respondents (28.66%) highlights the growing participation of women in agricultural activities (**Sharma, S. and Patel, A., 2021).**

Table 4: Distribution of respondents based on education level

S. No.	Education Level	Number of Respondents	Percentage (%)
1.	Illiterate	24	16.00
2.	Primary School	21	14.00
3.	Junior High School	35	23.33
4.	High School	33	22.00
5.	Intermediate	20	13.33
6.	Graduation	12	8.00
7.	Higher Education	5	3.33
	Total	**150**	**100**

Table 4: outlines the educational levels of 150 respondents across seven categories. The largest group consists of those who have completed junior high school (23.33%), closely followed by high school graduates (22%). The illiterate group constitutes 16% of the sample. This broad spectrum of educational attainment directly influences how brand promotion messages should be designed and delivered — visually-oriented demonstrations and dealer interactions work best for less-literate farmers, while print media and digital platforms can be used to target the more educated segments.

Table 5: Distribution of respondents based on family type

S. No.	Family Type	Number of Respondents	Percentage (%)
1.	Joint (> 5 members)	93	62
2.	Nuclear (≤5 members)	57	38
	Total	**150**	**100**

Table 5: shows that the majority of respondents (93, i.e., 62%) belong to joint families with more than 5 members, while 57 respondents (38%) belong to nuclear families. The prevalence of joint family structures is significant for brand promotion, as agricultural purchasing decisions in such households are often made collectively. Group-based promotional activities such as farmer meetings, community demonstrations, and cooperative-level campaigns are therefore particularly effective in reaching this dominant segment (**Rouamba, A. and Shimelis, H., 2021).**

4.2 KEY FACTORS INFLUENCING PURCHASE DECISION

Table 6: Key factors influencing purchase decision for Proagro-9001 (Likert Scale)

S. No.	Factor	Weighted Mean	Std. Deviation	Rank
1.	Yield Potential / Higher Productivity	4.32	0.61	I
2.	Past Experience with the Variety	4.20	0.74	II
3.	Brand Reputation of Seed Company	4.10	0.78	III
4.	Availability of Seeds in Market	3.90	0.83	IV
5.	Seed Price / Affordability	3.85	0.91	V
6.	Dealer / Retailer Recommendation	3.65	0.95	VI
7.	Govt. Subsidy / Extension Support	3.45	1.02	VII

Table 6: presents the key factors influencing farmers' purchase decisions for Proagro-

9001 hybrid pearl millet, analysed using a 5-point Likert Scale. Yield Potential / Higher Productivity emerged as the most critical factor (Weighted Mean = 4.32, Rank I), affirming that farmers primarily evaluate hybrid seeds based on their potential to deliver superior yields compared to traditional varieties. Past Experience with the Variety ranked second (Mean = 4.20), indicating that farmers who have previously used Proagro-9001 are significantly more likely to adopt it. Brand Reputation of the Seed Company ranked third (Mean = 4.10), reflecting the crucial role that brand trust and company credibility play in farmers' decision-making. Government Subsidy / Extension Support had the lowest mean score (3.45, Rank VII), suggesting that institutional support, though appreciated, plays a limited role in immediate purchase decisions (**Mishra, A., Singh, P. and Verma, R., 2022).**

Table 7: Multiple regression analysis – factors affecting buying behaviour

Sr. No.	Variable	β Coefficient	Std. Error	t-Value	Sig.
–	Constant (a)	1.12	0.34	3.29	0.001
1.	Price (b_1)	0.31	0.09	3.44	0.001
2.	Quality (b_2)	0.45	0.08	5.62	0.000
3.	Availability (b_3)	0.28	0.10	2.80	0.006
R^2 = 0.67 | Adjusted R^2 = 0.64 | F = 22.4 | p < 0.001					

Table 7: presents the Multiple Regression analysis results. The overall model is statistically significant ($F = 22.4$, $p < 0.001$) with an R^2 value of 0.67, indicating that the three independent variables together explain 67% of the variance in farmers' buying behaviour. Quality ($b_2 = 0.45$) has the strongest positive influence on buying behaviour, confirming that seed quality and yield performance are the primary drivers of purchase decisions. Price ($b_1 = 0.31$) is the second most significant factor, and Availability ($b_3 = 0.28$) also has a significant positive effect, reinforcing the importance of a well-developed distribution network for Proagro-9001 seeds in the Saiyan block **(Verma, A., Sharma, R. and Gupta, P., 2018).**

4.3 EFFECTIVENESS OF BRAND PROMOTION STRATEGIES

Table 8: Effectiveness of brand promotion strategies – Garrett's Ranking

S. No.	Promotion Strategy	Garrett's Mean Score	Rank
1.	Dealer / Input Retailer Network	72.4	I
2.	Field Demonstration / Demo Plots	68.9	II
3.	Farmer Meetings / Group Discussions	64.2	III
4.	Fellow Farmer Recommendation	59.7	IV
5.	Television / Radio Advertisement	52.3	V
6.	Print Media / Pamphlets	47.8	VI
7.	Agricultural Exhibitions / Melas	43.1	VII

Table 8: presents the effectiveness of various brand promotion strategies as ranked by respondents using Garrett's Ranking technique. The Dealer / Input Retailer Network emerged as the most effective promotional channel (Garrett's mean score = 72.4, Rank I), confirming that agricultural input dealers are the primary gatekeepers of brand information for farmers in the Saiyan block. Field Demonstration / Demo Plots ranked second (Score = 68.9), reinforcing the importance of experiential learning and on-farm observation in building farmer confidence in Proagro-9001. Farmer Meetings / Group Discussions ranked third (64.2), demonstrating that direct interaction and community-based promotion remain highly

effective in rural contexts. Television/Radio Advertisement (52.3) and Print Media/Pamphlets (47.8) ranked fifth and sixth respectively, indicating that while mass media has a moderate reach, personal and interactive channels significantly outperform it in the agricultural context **(Choudhary, R., Gupta, S. and Sharma, V., 2022).**

4.4 PROBLEMS FACED BY MARKETERS IN BRAND PROMOTION

Table 9: Problems faced by marketers in promoting Proagro-9001 – Garrett's Ranking

S. No.	Problem / Constraint	Garrett's Mean Score	Rank
1.	Lack of Farmer Awareness about New Brands	72.4	I
2.	High Price of Hybrid Seeds	65.8	II
3.	Inadequate Dealer / Distribution Network	58.3	III
4.	Farmers' Mistrust of Unfamiliar Brands	52.7	IV
5.	Limited Reach of Field Demonstrations	47.1	V
6.	Counterfeit / Adulterated Seed Problem	41.5	VI

Table 9: enumerates the various problems encountered by marketers and distributors in promoting Proagro-9001 hybrid pearl millet in Agra district, ranked using Garrett's Ranking technique. Lack of Farmer Awareness about New Brands emerged as the most critical problem (Score = 72.4, Rank I). Despite possessing superior agronomic traits, Proagro-9001 has not achieved sufficient penetration in the market primarily due to farmers' limited knowledge about its benefits and cultivation practices. High Price of Hybrid Seeds ranked second (Score = 65.8, Rank II), indicating that the cost differential between Proagro-9001 and traditional varieties is a significant barrier for small and marginal farmers. Inadequate Dealer/Distribution Network ranked third (58.3, Rank III), reflecting that seeds are not consistently available at all retail outlets in the Saiyan block. Counterfeit/Adulterated Seed Problem ranked sixth (41.5, Rank VI), indicating that quality assurance concerns at the retail level continue to erode brand confidence **(Sharma, D., 2022).**

CONCLUSION

In conclusion, the study on brand promotion of Proagro-9001 hybrid pearl millet in the Saiyan block of Agra district reveals several important insights. The socio-economic profile of respondents indicates a predominance of small-scale, middle-aged male farmers within joint family setups, highlighting the traditional fabric of the agricultural community and the pressing need for targeted interventions to support these primary stakeholders.

The analysis of purchase decision factors clearly establishes that yield performance, past experience, and brand reputation are the primary drivers of farmers' buying behaviour. The Multiple Regression model confirms that quality, price, and availability together explain 67% of the variance in buying behaviour, providing a clear strategic roadmap for seed companies. The evaluation of promotion strategies reveals that dealer networks and field demonstrations are far more effective than mass media channels in rural Agra, underscoring the importance of personal selling, experiential learning, and peer influence.

Efforts to improve brand promotion should focus on: (i) intensifying field demonstration programmes across all villages; (ii) introducing flexible pricing strategies to make Proagro-9001 accessible to marginal and small farmers; (iii)

strengthening the dealer network through comprehensive product training and incentive programmes; (iv) engaging government agricultural extension agencies (KVKs, ATMAs) as promotional partners; and (v) implementing robust seed certification and quality assurance mechanisms to eliminate counterfeit seeds from the market. By addressing these critical areas, there is significant potential to enhance the adoption of superior hybrid varieties and support the economic well-being of farming communities in Agra district.

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