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Study on marketing and buying behaviour of farmers towards sweet corn seed in Guntur district, Andhra Pradesh

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Abstract
The present study investigates the marketing and buying behaviour of farmers towards sweet corn seed, focusing on factors that influence their purchasing decisions. Understanding farmers' preferences is vital for improving seed marketing strategies and enhancing adoption rates of improved seed varieties. The study synthesizes literature from Guntur district of Andhra Pradesh, highlighting key determinants such as brand image, seed quality, pest resistance, yield potential, price, and promotional activities. Peer influence, dealer recommendations, and community networks also emerged as significant factors shaping buying behaviour. Additionally, the role of organized versus conventional retailing, seed packaging, and perceived economic returns was examined. The findings suggest that farmers exhibit brand loyalty when their expectations regarding performance and support are met. Challenges such as fluctuating prices, lack of awareness, and limited access to quality seeds were noted. The study underscores the need for targeted marketing strategies, consistent promotional efforts, and enhanced access to reliable information sources to support informed decision-making among farmers. The insights can assist Agri-input marketers, policymakers, and extension agents in designing farmer-centric interventions.

Keywords: Sweet corn seed, farmer buying behaviour, brand preference, marketing strategies, seed quality, peer influence, promotional activities, retail models

Introduction
Agriculture remains the backbone of India's economy with over half the population dependent on it. Among emerging crops sweet corn has gained prominence due to its higher returns, shorter crop cycle and growing demand in domestic and export markets. Unlike traditional maize which is mainly used for feed and industry, sweet corn is a premium crop valued for its taste, tenderness and direct consumer appeal. Its cultivation requires strategic seed selection, making farmer buying behaviour towards sweet corn seeds a critical area of study.

Farmer seed buying behaviour is shaped by socio-economic factors, technical knowledge, risk perception and market access. Attributes such as germination, disease resistance, maturity period, yield and brand reputation strongly influence decisions. Peer influence, agro-dealer recommendations, extension advisories and government schemes also play major roles. Progressive farmers with better access to information and markets are more willing to invest in high-quality hybrid seeds while risk-averse or resource-poor farmers often prefer cheaper options or stick to traditional crops.

Marketing of sweet corn seed involves private companies, cooperatives, retailers and government agencies with strategies focused on branding, demonstrations, field days and increasingly digital platforms. Agro-dealers and local influencers remain crucial in guiding farmer choices, while seed companies build brand equity through trust, after-sale service and farmer engagement. Regional cropping systems, proximity to urban markets and processing industries further shape demand. Farmers near consumption hubs are more likely to grow sweet corn due to assured price realization and market linkage.

Price sensitivity, trust and risk perception remain decisive factors in seed purchase. While hybrid seeds are costlier companies address this through bundled services, subsidies, credit support and demonstration trials.

Farmers value reliability and often develop brand loyalty based on consistent results. Climate change and sustainability concerns are also influencing choices with growing preference for disease-resistant, drought-tolerant and climate-smart hybrids. Overall, the buying behaviour of farmers towards sweet corn seeds reflects a mix of economic opportunities, market access, risk management, and trust in brands and intermediaries.

Objectives

- To study the socio-economic profile of the farmers engaged in sweet corn cultivation in the study area.
- To examine the buying behaviour of farmers towards sweet corn seed with reference to brand preference, pricing, availability, and source of purchase.

Research methodology

The present study adopts a systematic research methodology involving problem identification, hypothesis formulation, data collection, analysis, and conclusion in a scientific manner. It is structured around key components that include the study area, sampling procedure, sources of data, and analytical tools and techniques used to achieve the objectives.

The major components of this study are

- Selection of the study area
- Methods and sources of data collection
- Analytical tools

Selection of Study Area

The present study was conducted in Guntur district of Andhra Pradesh, purposively selected for its prominence in horticulture and sweet corn cultivation. Three mandals—Narasaraopet, Pedakurapadu, and Dachepalli were chosen for their active involvement in sweet corn farming and seed marketing, supported by irrigation facilities, seed dealers, and extension services. From these mandals, six villages (Chinakakani, Mangapet, Vadlamudi, Uppalapadu, Rajupalem, and Polavaram) were randomly selected to represent diverse agro-climatic and socio-economic conditions. A total of 120 farmers were selected using stratified random sampling based on landholding size: marginal (40%), small (30%), medium (20%), and large (10%). This ensured balanced representation and helped analyze differences in seed buying behaviour and marketing practices across farm sizes.

Method and sources of data collection

Primary data was collected through structured interviews and pre-tested questionnaires administered to sweet corn farmers in the selected villages of Guntur district, along with focus group discussions to capture collective perspectives. The data covered farmers' socio-economic profiles, seed purchasing behaviour, brand awareness, factors influencing seed choice, marketing channels, challenges faced, and satisfaction with seed quality, price, and availability.

Secondary data was obtained from District and Mandal Agricultural Offices, seed companies, local dealers, government publications, and relevant research studies, providing insights into cultivation trends, seed distribution, pricing, policies, and marketing strategies. This combined approach ensured a comprehensive and reliable understanding of sweet corn seed marketing and farmer buying behaviour in the study area.

Analytical tools

Standard deviation

The standard deviation in descriptive statistics represents the degree of dispersion or the extent to which data points scatter around the mean. It indicates how widely the values are distributed within a sample and measures the variation of data points from the mean. Mathematically, the standard deviation of a sample, population, random variable, dataset, or probability distribution is defined as the square root of its variance. The formula for the population standard deviation is expressed as -

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$

Here,
σ = Population standard deviation
μ = Assumed mean

Likert Scale

A Likert scale is a widely used rating scale designed to measure respondents' opinions, attitudes, or behaviours. It provides an effective way to operationalize abstract constructs such as personality traits or perceptions. Data collection is carried out by presenting participants with Likert-type questions or statements accompanied by a continuum of possible responses, typically arranged on a 5 or 7 point scale. Each response option is assigned a numerical value, enabling quantitative analysis.

- **Step 1:** For each question on the questionnaire, calculate the total number of responses for each sentiment level (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).
- **Step 2:** Sum these frequencies and divide by the total number of respondents:1 + 0 + 0 + 0 + 5 = 6 / 2 respondents = 3.

Results and discussion

Age wise distribution of farmers

Based on chronological age, the respondents were grouped into three categories: small, medium and large

Table 1: Age wise distribution of sample farmers

Sr. No.	Age (in years)	Farmers (Numbers)					Total	Total Percentage
		Marginal	Small	Semi-medium	Medium	Large		
1	Below 30 years	8	5	8	10	5	36	30%
2	Between 30 to 50 years	18	13	12	11	6	60	50%
3	Above 50 years	7	5	4	5	3	24	20%
	Total	33	23	24	26	14	120	100%

Table 4.1 reveals about the age of farmers in the research area to study about the socio-economic conditions of the farmers in which 30% were of below 30 years, 50% were of between 30 to 50 years and 20% were of above 50 years.

Literacy levels

Literacy levels of sample farmers

Respondents were classified into seven educational levels, and the results are shown in the table

Table 2: Literacy levels of sample farmers

Sr. No.	Education	No of Farmers					Total	Percentage
		Marginal	Small	Semi-medium	Medium	Large		
1	Illiterate	2	2	1	1	0	6	5%
2	Primary level	3	4	2	2	0	11	9%
3	Middle school	7	5	3	2	2	19	16%
4	High school	12	11	8	4	3	38	32%
5	Intermediate	9	5	6	3	2	25	21%
6	Graduate	2	2	3	4	2	13	11%
7	Post Graduate	3	1	1	2	1	8	7%
	Grand Total	38	30	24	18	10	120	100%

Table 4.2 reveals about the literacy levels of farmers in the research area to study about the socio-economic conditions of the farmers in which 5% were illiterate followed by 9% had done primary, 16% had done middle schooling, 32% had done high school, 21% had done intermediate, 11% had done graduate and 7% had done post graduate

Table 3: Brand Preference for Sweet Corn Seed

Brand	Number of Farmers	Percentage (%)
Mahyco	30	25.00
Syngenta	25	20.83
Monsanto	20	16.67
Nunhems	15	12.50
Others	30	25.00

Among the surveyed farmers, Mahyco and "Other" brands are equally preferred (25% each), indicating significant market competition. Syngenta also shows strong brand presence. The preference reflects both brand awareness and availability in local markets. The data suggests that while top-tier brands are popular, a considerable proportion of farmers are open to trying newer or local brands.

Table 4: Price Sensitivity in Buying Sweet Corn Seed

Price Range (INR/kg)	Number of Farmers	Percentage (%)
<500	10	8.33
500-750	40	33.33
750-1000	50	41.67
>1000	20	16.67

A majority (41.67%) of farmers prefer sweet corn seeds priced between ₹750-₹1000, showing moderate price sensitivity. About one-third opt for slightly lower-priced options, while only 8.33% go for the cheapest. This suggests that most farmers are willing to pay more if they perceive better quality, though affordability still plays a key role.

Table 5: Availability of Sweet Corn Seed

Availability	Number of Farmers	Percentage (%)
Always Available	40	33.33
Often Available	50	41.67
Rarely Available	20	16.67
Never Available	10	8.33

Most farmers (75%) report that seeds are either always or often available. However, about 25% still face inconsistent supply, with some even reporting complete unavailability. This irregularity could impact timely sowing and crop planning, underscoring the need for better distribution logistics and dealer network coverage.

Table 6: Source of Purchase for Sweet Corn Seed

Source	Number of Farmers	Percentage (%)
Agri Input Dealer	60	50.00
Co-operative Society	20	16.67
Government Store	30	25.00
Online Platform	10	8.33

Half of the farmers rely on Agri input dealers, highlighting their dominant role in seed distribution. Government stores serve a quarter of the sample, while co-operative societies are less significant. Online platforms have limited reach, suggesting that digital penetration in seed marketing is still in its early stage.

Conclusion

The study revealed that sweet corn farmers are mostly middle-aged, moderately educated, and belong to a lower-middle-income group with diversified livelihoods. Farmers preferred moderately priced seeds from Mahyco and local brands, relying mainly on Agri-dealers and personal interactions for purchase decisions. Yield potential and disease resistance were key factors influencing choices. Challenges such as high prices, fake products, and supply issues reduced trust in seed companies. Farmers emphasized the need for affordable pricing, certified quality, better distribution, and stricter regulations to strengthen seed marketing and support farming communities.

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