



"A STUDY ON CONSUMER BUYING BEHAVIOUR & MARKETING STRATEGY OF FOXNUT(MAKHANA) IN MADHUBANI DISTRICT OF BIHAR"

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Abstract

Euryale ferox, also known as FOXNUT, Makhana, Nikori (in Assamese), Onibas (Onibas) in Japanese, or gorgon plant, is the sole species in the genus *Euryale*. Approximately, 80% of the total production of processed Makhana comes from Darbhanga, Madhubani, Purnia, and Katihar districts alone. Area under Makhana cultivation is about 13,000 ha. The state Bihar has monopoly in Makhana production. Harvesting refers to the collection of scattered seeds, either from bottom of the pond or shallow water fields. The collection of gorgon nut from the bottom of the ponds starts in August and continues till the end of November. Quality and price are the most important factors, with the relationship with the dealer and source of information also being significant. Packaging is the least important factor. To succeed in the agricultural sector, businesses should prioritize quality and price and invest in effective promotional strategies and strong dealer relationships. Around seventy-one percent of total respondents believe lack of transportation facility as constraint. As makhana is voluminous in nature per unit cost of transportation is high. Logistics is the major constraint for makhana industry to supply to distant markets.

Keywords- quality, price, promotional activities, logistics.

Introduction:

Euryale ferox, commonly known as Foxnut or Makhana, is a plant species found in the genus *Euryale*. The state of Bihar is a major producer of Makhana in India, with districts such as Darbhanga, Madhubani, Purnia, and Katihar contributing to 80% of the total processed production. Makhana cultivation occupies an area of approximately 13,000 hectares, and the state of Bihar has a monopoly in its production. The emergence of more expensive packaged and branded Makhana products has been observed in response to increasing incomes in developing countries. Consumer buying behaviour for Makhana is influenced by several factors such as age, gender, income, frequency of purchase, brand preference, reasons for

$$\text{Per cent Position} = \frac{100 * (R_{ij} - 0.50)}{N_j}$$

purchase, packaging type, and price sensitivity. However, the productivity of the crop has remained stagnant due to the absence of any improved varieties of Makhana seeds released so far. The NRC, Makhana along with state government of Bihar can think of organizing makhana food festivals in various metro cities, other major cities, and towns of India to promote the use of makhana.

Material and method:

Selection of District: The consumer buying behavior of Makhana was studied in 38 districts of Bihar, with Madhubani district being purposively selected as it has the highest area under Makhana cultivation and production in the state.

Selection of block: Selection of the block is the second stage of sampling. Out of 21 blocks present in Madhubani districts, Pandaul was selected purposively.

Selection of Villages: All the list of villages was prepared, out of which 5% villages was selected randomly i.e., Sarso, Gangauli, Isahpur, Kalyanpur, Rampur.

Selection of Respondents: A complete list of all the respondents in the selected villages was prepared out of which 10% respondents were selected randomly.

Selection of Market: primary and secondary market were selected purposively.

Tools and Techniques of Analysis:

Garrett Ranking Method: It is used to find out the most significant factor which influences the respondent. As per this method, respondents have been asked to assign the rank for all factors and the outcome of such ranking have been converted into score value with the help of following formula:

Where, R_{ij} is the rank given to i^{th} item by the j^{th} individual, N_{jj} is the number of items ranked by the j^{th} individual.

By using score card prepared by Garrett, scores were allocated to the percentage values. Mean of Garrett scores was calculated for each attribute.

Results and Discussion:

To know the consumer buying behavior and constraints in marketing of Foxnut (Makhana) in study area.

Factors affecting consumer buying behavior

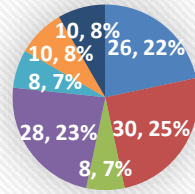
Consumer buying behavior depends on various factors such as age group, gender, income range, frequency of purchase, preferred brands, reasons of purchase, packaging type, price sensitivity.

Table No 1. factors affecting consumer buying behavior (n=120)

Parameter	No. of Farmers	Farmers %
Quality	26	21.6%
Price	30	25%
Packaging	8	6.6%
Relation with dealer	28	23.3%

Brand Image	8	6.6%
Promotional Strategies	10	8.3%
Source of Information	10	8.3%

No. of Farmers



■ Quality ■ Price ■ Packaging ■ Relation with dealer
 ■ Brand Image ■ Promotional Strategies ■ Source of Information

Fig 1: factors affecting consumer buying behavior

The table 1 presented shows factors that influence the buying behavior of farmers, including quality, price, packaging, relation with the dealer, brand image, promotional strategies, and source of information. Quality and price are the most important factors, with the relationship with the dealer and source of information also being

significant. Packaging is the least important factor. To succeed in the agricultural sector, businesses should prioritize quality and price and invest in effective promotional strategies and strong dealer relationships.

To find out constraints in marketing of makhana in the study area.

Table No 2: Constraints in marketing of makhana in Madhubani district of Bihar

S.No.	Issues	Garett Score	Rank
1.	Availability of raw material	18	i
2.	Limited market access	30	ii
3.	Lack of technical expertise	58	iii
4.	Price fluctuation in market	48	iv
5.	Packaging problem	63	v
6.	Lack of infrastructure	70	vi
7.	Less product awareness	37	vii
8.	Lack of transportation facility	82	viii
9.	Post-Harvest Loss	42	ix
10.	Loss due to flood	52	x

The high price fluctuation of Makhana was considered a significant constraint by 80% of the respondents. The prices of popped Makhana increase sharply during festival seasons such as Dashara, Deepawali, and Eid, while they fall during off-seasons. Additionally, lack of transportation facilities was cited as a constraint by 71% of the respondents, as Makhana is voluminous, leading to high transportation costs. The logistics and inadequate market facilities are the primary constraints for the Makhana industry to supply to distant markets. Unavailability of market facilities and market information was also seen as a constraint by 63% of the respondents for marketing of Makhana pop.

Conclusion

The study conducted in Madhubani district of Bihar revealed important insights into the consumer buying behavior and marketing constraints of Makhana, an important agricultural crop in the region. Quality and price were identified as the most significant factors affecting the buying behavior of farmers, followed by the relationship with the dealer and source of information. In contrast, packaging was the least important factor. The study also highlighted several constraints in the marketing of Makhana, including limited market access, lack of technical expertise, high price fluctuations, inadequate infrastructure, and unavailability of market facilities and information. These constraints need to be addressed to enable the Makhana industry to reach its full potential. The findings of the study could assist policymakers and industry players in developing effective

strategies to promote the growth of the Makhana industry in Bihar and beyond.

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