



# Promotion Of Makhana Cultivation In North Bihar

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## ABSTRACT

Makhana is a common agricultural product in Bihar, sometimes referred to as lotus seeds or fox nuts. Bihar has a long history of makhana cultivation, which is significant to the state's agricultural economy. Makhana is in greater demand both domestically and internationally, leading to a rise in its market price stakeholders, academics, and policymakers seeking to support the sustainable expansion of this significant crop, this analysis clarifies the complex dynamics of makhana production in Bihar. The Mithala makhana is now demanded all over the world. The conventional farming method of the pond system is quite complicated, is labour intensive. To encourage Makhana cultivation and assist farmers in the state, the Bihar government has launched a number of programs. Unpredictable weather is one of the many difficulties faced by Makhana producers in the area. Patterns, inadequate market infrastructure, a lack of specialized skills, and a lack of automation. In addition to offering insightful information for the makhana sector is mostly occupied by the local fishing population, which is composed of the economically disadvantaged segments of society. Now with the field system, the efficiency of seed processing has undergone an in change.

**Keywords-** Agriculture, Cultivation, Bihar, Makhana, Sustainable

## INTRODUCTION

Makhana (*Euryale ferox* Salisbury), a member of the Nymphaeaceae family and sometimes referred to as fox nut or gorgon nut, is a significant aquatic cash crop with therapeutic and nutritional benefits. It is a small crop that grows on around 18,000 hectares of land in India and produces about 24,000–26,000 Makhana seed MTs. Makhana is mostly grown in flood-prone areas of Bihar and is considered a significant crop of the portions of wetlands in the state's Kosi seemanchal and Mithila areas. It is often grows in permanent water bodies that are stagnant, such as ponds, land depressions, lakes, ditches, or marshes, where the water is shallow and can reach a depth of two to six feet.

The Bihar government has supported farmers in the state and encouraged Makhana growing through a number of programs. The region's makhana producers encounter a number of difficulties, including erratic weather patterns, a lack of machinery, inadequate market infrastructure, and a shortage of specialized skills. In August, 2022 the Government of India had awarded the Geographical Indication (GI) tag to Mithila Makhana, a move which is expected to help growers get the maximum price for their premium produce. As soon as the GI tag was awarded to Mithilanchal Makhana Utpadak Sangh, the Horticulture Directorate of the

Government of Bihar has revised its scheme namely; “Makhana Vikas Yojana (MVY)” in 11 districts spread over Kosi, Seemanchal and Mithilanchal regions of Bihar

### **Makhana Marketing Channels**

Channel One: Farmer > Local Aggregator > Processor > Wholesaler > Retailer > Consumer

Channel Two: Farmer > Processor > Wholesaler > Retailer > Consumer

Channel Three: Farmer cum processor > Retailer > Consumer

The marketing channels mentioned above are a few of the widely used methods used by Makhana farmers to sell their goods. The efficacy of various marketing channels varies, and as a result, so do farmers' profit margins. In general, a smaller chain will yield a larger profit margin and need less time to reach clients. A deliberate effort has been made to eliminate inefficiencies in the makhana marketing channels in order to increase revenue collections for all value chain players.

The efficiency of the marketing channel declines as the number of intermediaries in the channel rises. In many instances, farmers do not own the ponds, which significantly limits the amount of makhana that can be produced.

The absence of technology and equipment for makhana processing is another reason that makes the use of human labor in the process necessary.

### **Steps to increase efficiencies in the marketing channel**

There are a number of steps that stakeholders including the private players, farmers, governmental organizations can take to improve the efficiencies.

» **Mechanizing the makhana processing** is one of the ways that will improve the quality and also time taken to have finished makhana

» **Proper grading of makhana** will further ensure proper quality of makhana which will in turn fetch better prices for all stakeholders within the supply chain.

» **Geographical Indication (GI) registration**, this will ensure better protection to manufacturers in India.

» **Focus on branding of makhana** and other value added products of makhana, combined with suitable advertising would improve the visibility of the product, create more trust with the end consumers and hence act as a pull factor the demand for makhana and its value added products

### **Makhana Packaging**

Packaging of a product plays an important role in create a favourable perception in the minds of the end consumers. A decade ago, makhana manufacturers did not focus so much on the packaging of makhana and used rudimentary style of packaging in the all the clusters. This in turn, negatively impacted the quality, grade and price of the final product. In the past, makhana was only packaged in gunny bags for wholesale markets and smaller polythene bags for retail markets. Up to 10 kilos might fit in Makhana gunny bags. Makhana farmers may now command significantly higher prices thanks to changes in packaging techniques and significant improvements in supply to the retail and wholesale markets. Since the package label includes a list of all FSSAI requirements, good packaging has also helped consumers feel more confident about the product.

### **Packing for wholesale marketing :**

The last step involves packing makhana or lotus seeds in gunny bags with varying weight capabilities. These may come in eight, ten, or twelve kilogram packages. Makhana must be delivered to distant makhana whole sale marketplaces, such as Delhi, Uttar Pradesh, etc., even if it is made and packed in different districts of Bihar. Sturdy packaging is essential to preventing transportation-related degradation of the finished product's quality.

## Packing for retail marketing :

Makhana is now packaged in aesthetically pleasing, moisture-resistant plastic bags to preserve its freshness. At first, every step of the packaging process—grading, bag filling, weighing, packing, etc.—was completed by hand. However, local wholesalers of the clusters are now using hand-operated packaging machines more and more to pack and package Makhana in various sizes. For exporting, special packaging with appropriate labeling that is recognized in several nations is also crucial. Guidelines pertaining to all food products vary per country. Nowadays, there is a lot of emphasis on tailoring retail packaging to these nations' food and safety regulations.

## MAKHANA PROCESSING AND MARKETING

Makhana is a crop that undergoes complete processing, which is restricted to a little region dispersed among the chosen Bihar's portion. Makhana is mostly processed in a traditional manner. Makhana seed is bought and converted by a group of highly qualified individuals at this tiny, family-run business. via a sequence of steps, including sun drying, seed grading, preheating and tempering, roasting and popping, polishing, and so on, into popped makhana grading. Actually, the most complex stage of makhana cultivation is seed preparation. Approximately 85% of the Makhana is physically processed by the Mallah Community's historically trained laborers. Nonetheless, a number of private businesses in the state are adding value to Makaha. These businesses make various value-added Makhana items, such as atta and Makhana snacks. (flour), makhana chura mixture, flakes, biscuits, and bhujia. Makhana kalakand, Makhana burfi, Makhana powder, Makhana kheer mix, etc.

In terms of makhana marketing, it is a customary crop that is mostly grown in areas that are vulnerable to flooding. The Purnea, Madhubani, and Darbhanga districts are the marketplaces where the majority of the state's raw makhana seeds are sold. Farmers typically sell their raw seeds to nearby aggregators, who then sell them to processors. Farmers typically sell their raw seeds to nearby aggregators, who then sell them to processors. Following handling Makhana pops are offered for sale in both nearby and far-off markets across the nation. The state's main markets for makhana seeds are Purnea (about 3500 MT), Madhubani (approximately 3500 MT), Katihar (approximately 3000 MT), and Darbhanga (approximately 2000 MT). According to reports, the greatest market is Purnea, where 12,500 MT of Makhana seeds and 5000 MT of Makhana pops are sold every year.

## SUPPLY CHAIN AND MARKETING CHANNELS

The pathways that produce travels from the location of production to the location of consumption are known as supply chains. These are other routes and the network of middlemen that Makhana travels through to get from producers to buyers. Additionally, the investigation found that, depending on the target market and the time of sale, several middlemen are involved in the marketing and distribution of popped makhana. Additionally, there is little financial or physical assistance provided for makhana processing and advertising. Producers, processors, commission agents, wholesalers, retailers, and consumers are the main participants in supply chains.

### Marketing

- i. Need to create mass awareness about high nutritional value of the produce, as Makhana is still considered a primitive minor crop with limited consumption across the states and foreign markets.
- ii. There is a need for marketing linkage and brand promotion as marketing is a real challenge in today's world. In-depth understanding of the market needs is required, which can be achieved by strategic market linkages (backward & forward), product innovation and standardization of the products.

- iii. Demand for organically grown produce is growing rapidly and Bihar's Makhana is almost grown organically so, if quality certification of the produce is done, the produce may be sold at premium price.
- iv. Makhana markets are controlled by cartels of market entities which can be undone by organizing FPOs and approaching the nonconventional markets. This will be instrumental in increasing the demand of Makhana, making its market larger and competitive.
- v. Popularization of Makhana is needed for increasing the demand at all levels. It necessitates participation of Makhana FPOs & entrepreneurs in exhibitions, fairs, meets/conclaves etc.

### **MAKHANA – GLOBAL PROSPECTS AND OPPORTUNITIES**

- The Makhana market is expected to expand at a compound annual growth rate (CAGR) of around 7% from 2019 to 2023. Between 2019 and 2023, the size of the worldwide makhana market is expected to increase by USD 72.5 million. In nations like Thailand, China, Japan, and India, makhana is very well-liked.
- The Makhana market still has unrealized potential in Western nations like the US and the UK.
- In the upcoming years, there will likely be a sharp rise in demand for makhana due to rising consumer knowledge of its many health advantages.
- The existence of several unexplored markets will also motivate new competitors to join the industry.
- Fox nuts are becoming more and more popular and are thought to be a popcorn alternative.

### **CONCLUSION**

At last we can conclude that makhana has been now demanded all over the world. The export channel regarding the supply of makhana need to be fast in the present scenario. There is also some problems while producing makhana that is the credit facility. There is a so much government subsidiary schemes for the makhana farmer but due to unawareness among them, they are unknown from that. Safe express plays a vital role in supply of their produced product from one place to another. It provides the farmer better opportunities for the farmers and provide a proper market to sell their products by using proper platform.

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