

Fox Nut (Makhanas): The Power of Unknown Seed

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Abstract

The demand for nutritious food has increased since the COVID crisis. People are often concerned about their health and their immunity after COVID-19. People are more interested in having natural food consumption than medicine as a supplement to boost overall health and immunity. There are various non-cereal foods, such as Buckwheat, Amarnath, Aquatic cash crops, etc., packed with nutrients that can be consumed daily in proper proportion naturally without buying any medicine supplement to improve overall health and immunity.

Keywords: Immunity, Nutrition, Fox Nut, Health Benefits, Export

INTRODUCTION

The demand for nutritious food has increased since the COVID crisis. People are often concerned about their health and their immunity after COVID-19. People are more interested in having natural food consumption than medicine as a supplement to boost overall health and immunity. There are various non-cereal foods, such as Buckwheat, Amarnath, Aquatic cash crops, etc., packed with nutrients that can be consumed daily in proper proportion naturally without buying any medicine supplement to improve overall health and immunity. If we look into an aquatic cash crop and fox nut (Makhanas), both are non-cereal, nutritious, rich in medicinal properties, and good for a healthy daily diet. The nutrients contained are vitamins, minerals and fibres. Fox nuts (Makhanas), derived from lotus seeds, are white puffs roasted over high flames. Each pod contains around 20 seeds, which reach maturity within 40 days. The outer black shell breaks open, revealing the puffs known as makhanas in India. Fox nuts (Makhanas) dominate global production in India, contributing 70-80% of the total yield. Asian countries like Bangladesh, China, Japan, Korea and Russia also cultivate Makhana in their wild farm. Makhana, a lucrative commodity in India, is primarily commercially cultivated in Bihar, constituting 90% of production, with the remaining 10% originating from specific areas in eastern India. Furthermore, the extensive cultivation of Makhana is facilitated by its natural growth in Jammu & Kashmir, Madhya Pradesh, Manipur, Tripura and Rajasthan. (apeda.gov.in)

HEALTH BENEFITS

Makhana, a nutrient-rich snack, boasts various health benefits. It supports kidney health, regulates blood pressure, aids liver detox and helps manage diabetes. Calcium, essential for bone strength, aids in weight loss, hormonal balance, and fertility. Makhana's fibre ensures a healthy digestive system, while anti-inflammatory properties and antioxidants contribute to radiant skin, combating ageing. It should be consumed with 30 grams daily to prevent side effects. Overindulgence in Makhana can lead to digestive problems like constipation and bloating. In diabetes patients, it may cause a sudden drop in blood sugar due to insulin spikes. It's crucial to limit consumption to avoid these issues. (healthifyme.com)

GLOBAL MARKET FOR MAKHANA

Bihar dominates global production in India, contributing to 90% of the world's fox nut output. Wild farms are found in the northeast and central regions. Packaged fox nut snacks by Indian players like Makhana Wala's and Too Yum have influenced regional consumption. Fox nuts are used in traditional Chinese medicine, baby foods, pastries and Japanese desserts. London-based start-up Nuto produces popped lotus seeds from India and ships them to the UK because its popularity in France, Germany and Italy creates growth opportunities. (apeda.gov.in)

MARKET TRENDS OF MAKHANA

In 2022, The India Makhana, made from lotus seeds, experienced notable expansion, reaching INR 89.3 billion. At a compound annual growth rate of 12.1% from 2023 to 2028, the market is projected to reach ₹178.4 billion. Makhana, rich in protein, fibre and essential minerals, is beneficial for digestion, weight management, heart health and antioxidant properties. It is versatile and used in desserts, yoghurt bowls, and breakfast cereals, with rising demand for its high thiamine content. (imarcgroup.com)

METHODOLOGY

- The percentage technique is employed in the market study of makhana. This approach indicates the price and quantity contributions over the previous ten years. We could determine which year has made the most contributions using this way.
- The Makhana table's trend projection displays predicting. The least squares approach is employed, which provides us with the necessary data to aid in forecasting.

REVIEW OF LITERATURE

Rahul Vishnu Rathod, Girish Neve, Adheeti Jain and Parmeshwar Giri (2023): Euryale ferox, or makhana, a vital cash crop in South and East Asia, boasts mineral-rich seeds with therapeutic applications. Particularly significant in Bihar, its nutritional benefits align with the rising demand for vegan, gluten-free, and non-GMO snacks. The article suggests optimising production, expanding exports, and reducing retail margins to unlock its full potential. Emphasising the overlooked importance of foxnut, the nutrient-packed superfood, the piece advocates for increased research and awareness due to its potential impact on human health. (thepharmajournal.com)

Neha Garg, Komal Chauhan, KanchiBaria and Meenakshi BakshiMehan (2021): Euryale ferox, also known as Makhana or Foxnut, is cultivated in North Bihar, Manipur, West Bengal, and Madhya Pradesh. The cultivation process includes sun-drying, grading, and roasting to produce popped Foxnut. Recognised for its nutritional richness and Ayurvedic benefits, it features a high Essential Amino Acids index, aids in

soothing Doshas, and possesses anti-ageing properties. Despite its virtues, caution is advised for potential side effects, emphasising the importance of moderate consumption for overall well-being. (everymanscience.com)

BR Jana, Anuradha Srivastava and Md. Idris (2019): Makhana, a crucial aquatic crop in India, is rich in protein and carbohydrates and is endorsed for its Ayurvedic medicinal benefits. Scientific exploration validates its nutritional and antioxidant properties, introducing Makhana-based sweets like barfi, kalakand, and chapatti. These products exhibit favourable nutritional profiles, with makhana kalakand scoring the highest in taste and appearance. The study recommends diverse culinary applications for health-conscious consumers, emphasising low sugar, moderate calories, and continuous monitoring for optimal product quality over time. (phytojournal.com)

MARKET ANALYSIS OF MAKHANA

Makhana 20081920 HSN code with details of its export of makhana, which comes under other nut categories, for ten years. Now let’s see its export growth for the last ten years.

Year	Price (Val. In lac)	%	Growth Rate	Qty. (val. In thousands)KGS	%	Growth Rate
2012-2013	2358.4	4.06	--	2248.75	4.65	--
2013-2014	4323.65	7.44	20.25	3386.49	7.00	33.60
2014-2015	3957.67	6.81	16.84	3957.67	8.18	14.43
2015-2016	4975.48	8.56	14.41	4498.87	9.30	12.03
2016-2017	5175.58	8.91	12.60	3891.42	8.04	-15.61
2017-2018	4102.42	7.06	11.19	2861.28	5.91	-36.00
2018-2019	5459.33	9.40	10.06	2420.91	5.00	-18.19
2019-2020	4256.88	7.33	9.14	1617.51	3.34	-49.67
2020-2021	2687.13	4.63	8.38	1429.21	2.95	-13.18
2021-2022	4956.33	8.53	7.73	3706.53	7.66	61.44
2022-2023	15844.06	27.27	7.17	18371.72	37.97	79.82
Total	58096.93	100		48390.36	100	

(tradestat.commerce.gov.in)

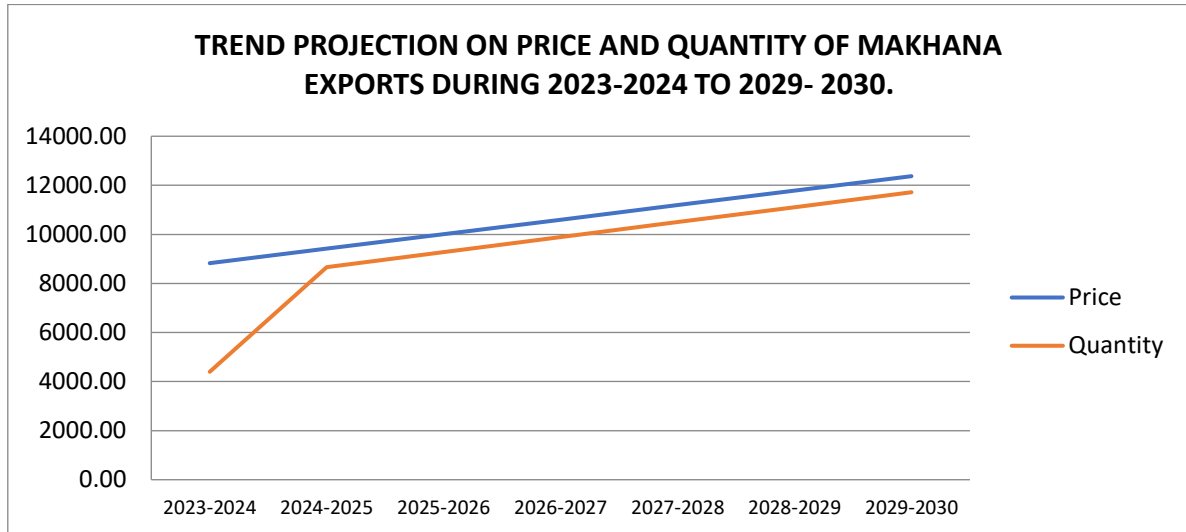
The price trend of the Makhana commodity from 2012-2023 shows fluctuations with varying growth rates. Starting at 2358.4 (in lac), prices steadily increased annually, with notable peaks in 2014-2015 and a significant surge in 2022-2023, reaching 15844.06 (in lac). The quantity (in thousand KGS) displayed parallel growth, peaking in 2022-2023 at 18371.72 KGS. Despite occasional declines, the overall trajectory indicates a substantial total value growth to 58096.93 (in lac). The analysis underscores the commodity's market dynamics, reflecting challenges and opportunities within the specified timeframe.

TREND PROJECTION OF MAKHANA FOR THE YEAR 2023-2030

year	Price	Quantity
2023-2024	8826.66	4399.12
2024-2025	9417.52	8667.62
2025-2026	10008.37	9277.41
2026-2027	10599.23	9887.19

2027-2028	11190.08	10496.98
2028-2029	11780.93	11106.76
2029-2030	12371.79	11716.55

Makhana prices are projected to rise steadily over the next seven years, from 8826.66 in 2023-2024 to 12371.79 in 2029-2030. The quantity also increases progressively, indicating a growing demand for this commodity. This upward trend suggests a positive outlook for the Makhana market.



FINDINGS

The demand for nutritious food increased after COVID-19, with people preferring natural food over supplements. Aquatic cash crop makhanas, derived from lotus seed, have numerous benefits and slight side effects only if they cross the limitation. And Bihar leads global makhana production. It tends to have a buoyant market in the coming years.

SUGGESTIONS

In recent years, Makahana has gained popularity and has a potential market in the US and UK. Suggested strategies include promoting responsible consumption, diversifying Makhana-based products, and fostering international collaborations to capitalise on its nutritional richness and cater to the health-conscious market. Continuous research, awareness, and sustainable cultivation practices are vital for maximising the potential of these aquatic superfoods.

CONCLUSION

The demand for nutritious food has increased awareness of numerous foods, like makhana, available in the market. While Makhana presents substantial health benefits and a booming market, caution is crucial for optimal consumption. The industry's positive trajectory, reflected in growing exports and market trends, calls for strategic measures like responsible promotion, product diversification, and international collaborations. Sustainable cultivation and ongoing research are pivotal for unlocking the full potential of these aquatic superfoods in the health-conscious market.

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