



Joha Rice of Assam: From Traditional Heritage to a Global Aromatic Rice

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Introduction

Rice is a part of the agricultural, cultural and culinary heritage of Assam. The state is known for its rich variety of traditional rice varieties that have been carefully chosen and maintained according to the local ecological conditions, dietary habits, and cultural practices. Among these traditional rice types, Joha rice is a special type because of its unique aroma, fine grain, good taste and cooking properties. Joha is generally considered as an indigenous aromatic rice group of Assam and not a single uniform cultivar. Thus, its importance goes beyond its role as a basic food, and it is also a sensory, cultural and geographical identity. Recent characterization studies have revealed a high degree of diversity among indigenous Joha cultivars and their potential for value addition and premium markets (Bordoloi *et al.*, 2024).

Joha rice is very much related to the traditional food culture of Assam. Rice is not just a food item in Assamese households, but the base for many traditional dishes, and different types of rice are chosen for their different cooking and

sensory qualities. This rice is especially appreciated in dishes where aroma and eating quality are important, such as traditional dishes and sweet dishes. Thus, the cultural significance of Joha rice is the foundation for its current development as a specialty food.

The Geographical Indication (GI) status of Joha rice enhances its contemporary significance, as it was registered under Application No. 439 in Class 30, with Certificate No. 287 issued on 27 April 2017, officially linking the rice to Assam (Intellectual Property India, 2017). This recognition not only protects the identity and geographical association of Joha rice but also strengthens its potential for geographical branding and market promotion.

Joha Rice as an Assamese Culinary Heritage

Joha rice is closely associated with the food culture of Assam and has traditionally been valued for its distinctive aroma, flavour, and palatability. These unique sensory attributes have contributed to its longstanding consumer preference and cultural significance in the

region. Among these characteristics, aroma is considered one of the most important quality attributes of Joha rice, contributing substantially to its acceptability and market value. The characteristic fragrance of Joha rice is primarily associated with 2-acetyl-1-pyrroline (2AP), a highly potent volatile compound widely recognized as a major contributor to the characteristic aroma of aromatic rice. Beyond its sensory appeal, the distinctive qualities of Joha rice are deeply embedded in the traditional food practices and cultural knowledge of Assamese communities. Its cultural value consequently includes the knowledge surrounding its cultivation, preparation and use. Joha's presence in traditional foods is a connection to the agricultural knowledge that was created by previous generations.

Assamese food culture has a strong association with the specific varieties of rice and the specific ways in which they are prepared. The use of Joha in Assamese traditional dishes like pulao and Kheer suggests that these varieties have specific culinary roles rather than being interchangeable with other rice varieties (Roy, 2018). Traditional Joha landraces have also been reported to possess desirable cooking and sensory properties (Lahkar & Tanti, 2018). These attributes are important in understanding their ongoing acceptance by consumers and also serve as a foundation for conveying the cultural heritage of Joha in food marketing.

Origin and cultural association can affect consumer value perceptions for specialty foods. Joha has scope for such positioning as it is associated with the agricultural practices, food culture and traditional knowledge of Assam. Its positioning can extend beyond aroma and grain characteristics to encompass Assamese cultural

heritage, traditional culinary practices, geographical identity, and the knowledge associated with its cultivation and use.

From Local Food to Global Specialty Product

Joha has already started to expand beyond its traditional regional market. Agricultural and Processed Food Products Export Development Authority (APEDA) organized the first export shipment of Joha rice from Assam to the United Kingdom and Italy in March 2026. The consignment consisted of 25 metric tonnes and the Government of India termed the export as a significant step towards promoting Assam's traditional aromatic rice in the international market (Press Information Bureau, 2026). APEDA has also mentioned previous export projects of Joha rice with GI tag in Vietnam and Middle East (APEDA, 2026).

The significance of these exports is not only in the volume of exports but also in Joha being recognized as a product fit for the specialty markets outside India. Joha may have potential market segments in the region for international consumers interested in regional Indian foods, traditional grains and products with a defined geographical origin.

International positioning should be done separately from Basmati. Basmati is a well-known global brand with a long grain, aroma and specific use. Joha is different in nature and from a different culture. Instead, its market position can be established on Assam, indigenous rice culture, aroma and Assamese cuisine.

The Premium Rice Market and Consumer Demand

The market potential of Joha is related to the wider demand for premium and aromatic rice. When consumers believe there are differences in sensory quality, origin or authenticity, they may be willing to pay more for specialty rice. The study by Varkey *et al.* (2023) revealed that there were variations in consumer preferences and willingness to pay for premium quality rice among the consumers of Assam. The results indicated that Joha may be able to meet the needs of multiple consumer groups, not just the traditional household consumer.

Another avenue for market development could be interest in regional and traditional foods. Foods that are linked to specific locations are found in restaurants, tourism, specialty food stores and digital media. The connection with Assam can be leveraged to distinguish the product from other aromatic rice varieties for Joha. Joha does not compete with the established long-grain aromatic rice on grain length, but can be marketed around its Assamese origin, aroma, culinary use and traditional status.

Challenges in Commercialization

There are a number of constraints to the commercial development of Joha. Traditional cultivars can yield less than modern cultivars and production can be spread across small and marginal farmers. Cultivar differences can also pose problems in quality control and in providing a consistent supply. Bordoloi *et al.* (2024) highlighted the importance of productivity and quality along with conservation and value of indigenous Joha rice.

Consumer awareness outside Assam is another constraint. When consumers are not familiar with the product and cannot tell the difference between the premium and other aromatic rice, it is hard to maintain the premium price. Thus, information about the origin, sensory properties, culinary applications and GI of the product must accompany market expansion. As Joha expands into the domestic and international markets, authentic labelling, quality standards and traceability will be more significant.

Conservation must also be balanced with commercial development. The value of traditional rice varieties may be lost over time if they are commercialised without consideration of their diversity and cultural context. Meanwhile, if there is no viable market, farmers may not be motivated to grow traditional varieties. The integration of conservation with remunerative markets is therefore a key element of the long-term development of Joha.

Future Prospects

Joha's future development relies on a value chain linking farmers to food science, traditional knowledge, consumers and markets. Consumer research can identify groups willing to pay for certain attributes and scientific studies can help establish quality characteristics and distinguish desirable material. New uses can be developed through food processing and the geographical and cultural background can be communicated through branding. Farmer groups and other collective organisations can help with aggregation, processing and market access, and traceability can help build confidence in product authenticity.

The 2026 export initiative shows that the export market for Joha is not just a possibility anymore.

But continued market development will require assured supply, quality, branding and returns to producers. Increasing the volume of rice sold should not be the sole measure of success. Greater economic value from authentic Joha, particularly for the farmers and communities involved in its cultivation, is a more meaningful objective.

A viable Joha value chain would therefore have to preserve traditional resources while ensuring product authenticity, prove quality, and convey cultural value and appeal to consumers willing to pay for these. Market development can be compatible with heritage conservation if it is based on the attributes that have enabled Joha to maintain its identity.

Conclusion

Joha rice is an important part of Assam's agricultural and culinary heritage and has potential as a premium specialty food. It is linked to its aroma, cooking properties, sensory attributes, traditional uses and geographical association with Assam. There is significant variation in indigenous Joha cultivars documented in the literature and opportunities for quality improvement and value addition, and consumer research has revealed that different groups have different values for premium rice. The GI registration of Joha Rice of Assam provides a recognised basis for geographical identification and authentication. To build Joha as a global specialty rice, development activities must integrate the following: GI-based branding, quality assurance, value addition, culinary promotion, consumer communication, tourism and export marketing. The farmers and communities who manage the crop and the knowledge should be at the heart of this process.

The cultural and sensory attributes of Joha can be translated into consumer recognition and improved economic returns, which gives the rice a potential to grow from a traditional food of the region to a recognised specialty rice of Assam's culinary heritage.

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