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Popular Article

Bamboo Rice and Its Scope for Utilization In Food Industry

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Abstract

The term "bamboo rice" refers to the seeds of bamboo plants, *Bambusa arundinacea*. Certain bamboo seeds resemble rice grains in appearance. The brown seeds of the native bamboo species in India, after being dehusked, resemble rice grains. Bamboo rice refers to the unique form of rice seeds that bloom when the bamboo shoot finally dies. Consumption of bamboo rice has a long history and is still popular in areas like southwest China, northeastern India, and southern India. Bamboo seeds are high in nutrients and have ingredients that are good for people's health. Bamboo seeds are used in some tribal areas as an aphrodisiac and to cure urinary tract and digestive issues. Bamboo rice can be utilized for preparation of noodles, kheer mix, payasam, idli, porridge, cookies etc. Still there are many opportunities to explore as to how this functional food ingredient can be promoted for increasing the revenue of farming community.

Keywords- Bamboo rice, health benefits, food products

Introduction

There are roughly 75 genera and more than 1,250 woody bamboo species in the globe. They have been brought to Europe but are native to Africa, the Americas, Asia, and Oceania. For indigenous people who live in the forest, bamboo rice has grown to be a significant and vital source of revenue. Special rice known as "bamboo rice" is produced from a dying bamboo shoot. As the bambooshoot withers away, it blossoms into bamboo rice, an uncommon kind of rice seeds. When ripe, the fruit of bamboo is a single seeded structure that does not split. Bamboo rice is also called as Mulayri in Malayalam Language. In Tamil, it is called Moongil Arisi by the tribal people of southern states of India (Haldipur and Srividya, 2021). Bamboo rice when cooked, gives the taste of Japanese sushi rice. This rice is high in fibre, vitamins, minerals, proteins, carbs, and amino acids (Zhijian et al., 2023). Rich in nutrients, bamboo



seeds have taken the role of paddy in many tribal villages found in the Northeast and Western Ghats. The market for bamboo-based products is growing day by day and has a large potential to flourish as bamboo-based products have functional benefits on human health. The bamboo shoots are used for pickle making, bamboo rice is used for cookies or porridge making etc. Farmers are not aware about the huge potential and the huge market that exists for bamboo-based products. Converting their produce in to value-added products and creating awareness for them is the only way to help them. Bakery products are made using bamboo rice and shoots, millets, wheat and other organically-grown cereals and vegetables.



source: www.indiamart.com

Fig. A. Image of Bamboo rice; source: Kiruba et al., 2007 **Fig. B.** Image of milled Bamboo rice;

The nutritive quality of Bamboo rice is marginally higher than that of wheat and rice. The dehusked bamboo seeds have a moisture of 10 percent, crude protein 12 percent, ether extracted fat 0.9 percent, ash 1.1 percent, fibre 2.6 percent, carbohydrate percent (by difference) is 73.4, calcium 25 mg/100gm, phosphorus 218.0 mg/100gm, iron 9.2 mg/100gm, vitamin B1 0.1 mg (33.3 International Unit) /100gm, nicotinic acid 2.03 mg/100gm, riboflavin 36.3 µg/100gm, carotene 12.0 µg (20 International Units of Vitamin A) /100gm, and calorific value of 98.0 (calories per ounce). Studies on fractionation showed that the main proteins in the seed were glucoselins, which have an isoelectric point of pH 4.6. In actuality, bamboo seeds have a higher protein concentration than wheat and rice. It has low glycaemic index and is a good option for persons suffering from Celiac disease. In addition to protein, the rice contains minerals including calcium, iron, phosphorus, and fibre, as well as carbs and vitamins A, B1, B2, B3, and B 6. Because of the quick energy release it provides, this makes the rice extremely nutritious, especially for young children (Kiruba et al., 2007).

Although many food products can be prepared from bamboo rice but the procedure for preparation of these products are not standardized and the developed product characteristics are mainly associated with the regional taste. There are many recipes like payasam, upma, idli,



cookies, porridge, sweets, puddings etc. but none of them are available commercially as ready to cook recipes.

Conclusion

In India, bamboo seed is an underutilized food ingredient. In particular, bamboo rice and seed types have a great deal of potential to help attain the Millennium Development Goals (MDGs), especially in addressing malnutrition and providing access to healthcare and generate additional sources of income. Additionally, they have a strong connection to cultural customs, which makes them crucial for promoting social variety. Not only do native people use bamboo seeds as food, but inhabitants also exchanged goods and medications with this item. There is lot of scope to promote this product for upliftment of marginal farmers without significant investments.

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