



Black Rice Cultivation and Forming Practices: Success Story of Indian Farmers

Kommu Santhosh*

Department of Botany, Acharya Nagarjuna University, India

Keywords: Black rice, Nutritional value, Rice cultivation, Farmers

Introduction

Black rice comes from the species of *Oryza sativa* L., some of which are glutinous rice and it is also called as forbidden rice, which is a medium-grain, non-glutinous heirloom rice. However, a majority of the people do not know about black rice (Krishna rice). Black rice has a dark purplish-black color with nutty, slightly sweet flavour. In addition, this different colored rice has brought rays of hope to the Indian farmers. Moreover, we have a bright example of farmers who are engaged in black rice farming and enjoying reasonable price benefits from agriculture. Varieties include Indonesian black rice, Philippine Balatinaw rice and Thai jasmine black rice. Black rice is known as Chakhao Amubi in Manipur, where desserts made from black rice are served at major feasts, which is higher by weight than that of other coloured grains. It is suitable for creating porridge, dessert, traditional Chinese black rice cake, bread and noodles. These days black rice is picking up in popularity and popping up in more health food stores. Black rice is known for its high nutritional value and is a source of iron, vitamin E, antioxidants, calcium, magnesium and zinc [1,2].

Cultivation and Forming Practices

If you presume that rice comes in shades of white, you are definitely wrong! Black rice is cultivated only in a few Indian states especially in Manipur – the north-east state of India. In the Goalpara district of Assam, black rice farming is not uncommon and over 200 farmers are opting for black rice over the other varieties of rice. Rice can be developed on an assortment of soils including sediments, topsoil and rock and can endure acidic weather just as soluble soils. Notwithstanding, profound prolific clayey or loamy soils which can be effortlessly puddled into mud and create breaks on drying are viewed as ideal for raising this harvest. Such soil necessities make it predominantly a harvest of stream valleys, flood fields, deltas and waterfront fields and a prevailing yield there. Significant level topsoil and lighter soils can be utilized for fast developing assortments of rice. Dark magma soil is likewise helpful to rice development. Rice culture isn't greatly fit for automation and is called 'cultivator culture'. The vast majority of the work in setting up the seed-bed, in communicating seeds, or in transplantation of plants from nurseries to the fields, in collecting and in winnowing activities is finished by human hand [2,3]. Hence, it is a serious development and requires a huge stockpile of modest work for its effective development. It is, in this manner, basically filled in zones of high populace thickness which give bountiful work and simultaneously, offer prepared market for its utilization. In most rice delivering states, work is locally accessible however in Punjab and Haryana, rice development predominantly relies on the transient workers from Bihar and the eastern U.P.

Indian Farmers Success Story of Black Rice Cultivation

Nalla Manmohan Reddy, a young organic farmer from Telangana state Nirmal district, is cultivating black rice. He has been producing the primitive rice variety for seven years and selling it in different parts of North Telangana. He claims that many farmers were going for the ancient grains, considering their nutritional values. He stated that he was registering a yield of five quintals of this produce per acre and was currently selling the rice variety at Rs 100 per kg. He reviewed

that he had begun natural cultivating in the wake of being impacted by Subhash Palekar, a prestigious horticulture researcher who spreads this strategy for agribusiness [4].

Kautilya Krishnan from Kashimpet town, Ganneruvaram Mandal, Karimnagar who finished his MA (Yajurveda) from National Sanskrit University, Tirupati and effectively developing Black Rice utilizing Vedas. He came to think about Krishna Vrihi. Subsequent to analyzing the customary techniques for cultivating following the rules from antiquated contents like Krishi Parashara, Kashyapiya's Krishisukti, and Surapala's Vrikshayurveda. Through his fiery examination and customary development, Krishnan delivered intriguing and nutritious Black rice which costs between Rs 400 to 600 for each KG. This old customary development primarily includes utilizing normal nectar, unadulterated milk and nectar.

Black rice is indigenous to West Bengal, Odisha, Jharkhand and Manipur. Till now, Manipur is the highest producer of black rice in the North East. In ancient India, it was apparently reserved for the Emperor and nobles and was out of reach of the commoners. "The farmers in our area have been cultivating only traditional white rice and they have never heard about black rice. The people of the area did not believe that the black rice could change their fate. However, Indian former Upendra efforts brought results in 2012 when Upendra could get 48 kg of black rice. "Upendra took his produce to agri- horticulture fairs organized by the government of Assam and other parts of the state. The next year Upendra cultivated black rice in five acres of land which resulted in nearly 1,500 kg of paddy [5].

Besides attracting buyers, Rabha is also being noticed for his ability to lead the mission. Meghalaya's Umiyam-based Indian Council of Agriculture Research Complex for the NEH Region has recognized him as an outstanding innovative farmer for his contribution to innovative technology pertaining to black rice conservation and production. Recognising his contribution to the overall society of Assam, Guwahati Neurological Research Centre has offered a free executive health check-up to Rabha for a year. To boost the farmers' effort, some nationalized banks have also come forward with finances. "Both the State Bank of India and Apex Bank offered a loan to 50 farmers in the first stage" says Rabha [4,5].

Black Rice Demand in the Market and Its Nutritional Values

The demand for black rice has been increasing in today's world because of its several biological activities due to the presence of antioxidants and phenolic compounds. Nutritionists say that dark rice contains a significant degree of cancer prevention agents and is a rich wellspring of proteins and dietary fiber. The peripheral layer of

*Corresponding author: Kommu Santhosh, Department of Botany, Acharya Nagarjuna University, India, Tel: 040-33432235; Email: kommusanthosh@hotmail.com

Received January 15, 2021; Accepted February 11, 2021; Published February 17, 2021

Citation: Santhosh K (2021) Black Rice Cultivation and Forming Practices: Success Story of Indian Farmers. J Rice Res 9: 241.

Copyright: © 2021 Santhosh K. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

the grain has a lot of the cancer prevention agent, anthocyanin. The measure of anthocyanin present in the dark rice is higher than some other grain, including earthy colored rice, red rice or other hued entire grain assortments. Phenolics can donate hydrogen and act as decreasing agents. Phenolics also act as singlet oxygen quenchers and free radical hydrogen donors and due to these properties, phenolics have a protective effect on cell constituents against oxidative damage. Such antioxidant characteristics of phenolics have been shown in epidemiological studies to prevent cardiovascular, cancer, and nerve diseases [6]. According to a research report of the Department of Food Science at Louisiana State University, USA, a spoonful of black rice bran contains more health promoting anthocyanin antioxidants. These properties are capable of fighting cancer, heart disease.

References

1. Agrawal A, Patel A, Kala D, Patidar J, Agrawal L (2020) Black Rice the New black gold of India. Food and Agriculture Spectrum J 1: 1-4.
2. Kushwaha UKS (2016) Black Rice. In: Black Rice. Pp: 21-47.
3. Kumar N, Murali RD (2020) Black Rice: A Novel Ingredient in Food Processing. J Nutrition & Food Sci 10 : 1-7.
4. Santosh P (2018) Telanganatoday. Nirmal farmer swears by black rice.
5. Chetia P (2020) News Gram: Agriculture World.
6. Prasad BJ, Sharavanan PS, Sivaraj R (2019) Health benefits of black rice –A review. Grain & Oil Science and Technology 2: 109-113.