

# **JIGNASA STUDENT STUDY PROJECT 2021-22**

## **SYNOPSIS ON “A PROJECT ON BLACK RICE”**

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## A PROJECT ON BLACK RICE



### Statement of the Problem

As there is an immediate need of undertaking eco conscious and ecological balancing agricultural practices, A PROJECT ON BLACK RICE may add on for promotion of the same. .

Aim: To know the history of origin of black rice, its method of cultivation, its nutritional and medicinal value and promotion of the same.

Objectives: For promotion of cultivation of a healthy ancestral variety of rice which is not only environmental friendly due to its cultivation through organic mode but also for its high nutritional and medicinal value.

### Review of literature

( Data gathered from the article on black rice by Subash Chandra Roy and Pankaj Shil and an article BY K.P Prabhakaran Nair)

This black rice is thought to be originated in China 4000 Yrs back. In China they used to refer it as “Emperors rice” or “forbidden rice” as it was not in reach of common man. It was thought to be developed through interspecific hybridization in between *O.sativa* (white pericarp) and *O. rufipogon* (red pericarp) through recombination and insertion.

## **Research methodology**

For the project, we have conducted a survey and collected the data from Primary sources and secondary sources, Primary sources include survey conducted in the field of Mr. Prashant, an MBA graduate turned farmer from Nagasamudram Village of



Dandepalli Mandal, Mancherial District whose ecoconscious soul made him to go for Organic Farming. Secondary sources include various articles on black rice.

## **Data Collected**

**Black rice variety: Khalabati**

**Type of soil: Black soil with water holding capacity**

**Temperature: 21°C is the favorable temperature**

**Fertilizers used: Organic fertilizers prepared by cow's urine and dung.**

**Transplantation: In June**

**Harvesting: In January**

**Importance of the product: Its medicinal and nutritious values**



## Analysis of Data

It is found that cost of production of black rice is less when compared to white rice grown through inorganic means, because no chemical fertilizers are used and also the product is safe and healthy.

## Analysis of yield of Black rice and white rice per acre

S. No	criteria	Black Rice	White Rice
1	Quantity produced	12 quintals	25 quintals
2.	Cost per Kg	Rs.130/-	Rs. 40/-
Cost of rice produced per acre		Rs.156000/-	Rs.100000/-
Cost of production		Rs. 26,110/-	Rs.21, 100/-
Total Benefit		1,29,890	Rs.78,900/-

## Nutritional values

By the data collected from various articles it has come to know that black rice contains more Vitamins B and E, niacin, calcium, magnesium, iron and zinc. Compared to white rice it is rich in fiber.

## Analysis of Nutritional profile of the Black rice compared to white rice

S. No	Nutritional Profile	Black rice	White rice
1	Calories	150	90
2	Carbohydrates	32 g	19.78 g
3	Proteins	4 g	1.89 g
4	Fat	1.5 g	0.05 g
5	Fiber	2.3 g	0.26 g
6	Iron	0.7 mg	0.84 mg

7	Cholesterol	0	0
8	GI index	less	High

### **Medicinal values**

Black rice has plenty of medicinal values due to the presence of phenolic compounds and antioxidants. Hence due to the presence of these compounds black rice is thought act against cardiovascular, cancer and nerve diseases. It has anti cancerous properties and its bran soothes inflammation due to allergies, asthma and other diseases.

### **Marketing challenges**

As producer himself should fix the price and market his product, a correct approach for marketing is a bit challenging.

### **Conclusion**

From the data collected and analyzed it has been concluded that growing indigenous ancestral varieties through organic means is the best step to redeem and restore our mother land to its previous position. where green canopy and green mat spread all over with biodiversity leading to ecological balance. Awareness should be brought among the farmers in this instance. Government is also assisting in production of healthy varieties through organic means by Paramparagath Krishi Vikas Yojana.

### **References:**

1. Nothing to beat Black Rice , An article by K. P. Prabhakaran Nayar
2. Origin of black rice gene from Indian Wild Rice by Pankaj Shil and Subash Chandra Roy.