

## **QUESTIONS FREQUENTLY ASKED BY FARMERS & ANSWERS.**

### **Q.1 How many varieties have been developed from CRRI?**

A.107 varieties have been developed from C.R.R.I

### **Q.2 Please name some of the recommended varieties of CRRI for growing in different ecosystem of Orissa.?**

For drought prone areas.

Heera, Vandana, Anjali, Kalyani II, Kalinga III, Sahabhadhan, Satyabhama

Irrigated areas.

Ratna, Naveen, Satabdi, Saket 4, Khitish, Tapaswini, Ajay, Rajlaxmi, Geetanjali

Shallow lowlands

Pooja, Padmini, Ketekijoha, Savitri, Dharitri, CRDhan401, Sumit.

Semi Deep

Kalasree, Sarla, Gayatri, Moti, Varshadhan, CR Dhan 500

Deep Water/Water logged

Varshadhan, Durga, Paridhan, Utkalprabha, CR Dhan 500, Jalamani

Coastal Saline

Lunishree, Sonamani, Luna Sampad,

### **Q.3 What rice hybrids have been developed by CRRI ?**

There are two hybrid varieties Ajay and Rajlaxmi . Duration is 135 days for both having yield potential of 7.5 t/ha and 7.0 t/ha respectively.

### **Q. 4 What are the Aromatic Rice varieties of Odisha ?**

A. There are seven Aromatic varieties of CRRI viz. Geetanjali and Ketekijoha. Duration is 135 days and 145 days with yield potential of 5.0 t/ha and 4.0 t/ha respectively.

### **Q.5 How can we use pure and healthy seeds?**

A. For using pure and healthy seeds we have to prepare a salt solution by adding 100 g of salt in 1 Litre of water. Dip the seeds in the solution. Remove the floating seeds and wash the seeds with clean water.

**Q. 6. How seed treatment can be done?**

A. Seed treatment is done to control seed borne diseases.  
Bavistin @ 2.5 g/kg of seeds.  
or  
Beam 75 @ 0.6 g/kg of seeds.

**Q.7 How seedling treatment is done at nursery bed?**

Seedling treatment is done by application of

Furadon 3G @ 250 g/100 sq.m. to make the seedling resistant for at least 25-30 days against gall midge.

Seedling root dip before transplanting to the mainfield for 10- 12 hours in chlorpyrifos solution @ 1ml/liter of water.

**Q.8 What will be the planting distance for high yielding varieties, hybrid rice and SRI method?**

A. Planting distance  
for HYV 20cmX10cm or 20cmX15cm or 15cmX10cm  
Hybrid rice 20cmX20cm  
SRI method 25cmX25cm or 30cmX30cm

**Q.9 What will be recommended fertilizer dose for rainfed upland, Kharif and Rabi rice.**

A. Fertiliser dose for unfavourable rainfed upland NPK will be @ 40-20-20 kg/ha  
Lowland Kharif irrigated rice 60-30-30 kg/ha  
Rabi rice 80-40-40 kg/ha

**Q. 10. What will be recommended fertilizer dose for Hybrid rice and Aromatic rice?**

A. Fertiliser dose for  
Hybrid rice N, P & K 100-60-60 kg/ha  
Aromatic rice N,P,K,Zn 60-30-30-25 kg/ha

**Q.11. How fertilizer management can be done in nursery bed? Fertiliser dose for 10 decimal area is as follows.**

A. For 10 decimal nursery area, it is recommended to use 2 quintal of FYM, 4.5 kg of Urea, 13 kg of SSP and 3.5 kg of MOP.  
If required 4.5 kg Urea may be applied as top dressing after 15 days of sowing.

**Q.12. What is Azolla? How Azolla can be beneficial to us?**

A. Azolla is a water fern. It fixes atmospheric nitrogen into the soil with the help of blue green

algae by symbiosis process.

Its application improves soil health and soil fertility. Azolla suppresses weed growth, reduces loss of applied chemical Nitrogen fertilizer. Azolla biofertilizer technology is simple, economic and ecofriendly. In rice field Azolla grown once before or

after planting can produce upto 25 tons of fresh biomass and contribute upto 50 kg N/ha. Azolla grown once during the cropping season can easily supply 20-40 kg N/ha. Azolla can be used as a feed for poultry, duckery, fish and cattle.

**Q.13. What is Kisan call centre?**

A. The objective of schme has been to make Agriculture knowledge available at free of cost

to the farmers as and when desired.

Kisan call centre No. is 1551

**Q. 14 What should be the age of seedling for High yielding varieties and SRI method of seedling?**

A. Age of Seedlings for

HYV 20-30 days

SRI 10-12 days

**Q.15. How weeds can be controlled by using herbicides?**

A. Herbicides are cost effective alternatives to hand weeding

Butachlor(1.0-1.5 kg/ha)

Anilophos(0.4-0.6 kg/ha)

Pretilochlor(0.6-0.8 kg/ha)

are some of the widely used pre emergence herbicides. These are generally applied 4-7 days

after transplanting.

Propanil(2.0 kg/ha)

Post emergence application can control weeds effectively when applied at 20 days after transplanting.

**Q.16 What will be suitable cropping system to be adopted in Orissa?**

A. Selection of suitable crop enterprises.

Kharif/Wet season Rabi/Dry season Summer season

Rice Rice Legume Crops

Rice Groundnut/Potato/ Green gram /

wheat/Maize/ Black gram/

Sunflower Bean

**Q.17. How can Brown Plant Hopper can be controlled?**

A. Brown Plant Hopper can be controlled by following methods.

Cultural control

Drain out water from field for 3-4 days . Maintain optimum plant population, preparing alley(skip 1 row after each 20 rows)

Chemical Control

Monocrotophos 36 SL @ 400 ml

Ethofenprox 10 EC @ 300 ml

Phosalone 35 EC@ 400ml

Imidacloprid @ 40 ml

BPMC @ 400 ml per area in 200 Lit of water.

Direct the nozzle to the base of the plant.

Spray neem based pesticide @ 4-5 ml per Lit at the base of plant.

### **Q.18.How can the Blast disease can be controlled?**

A. Blast disease can be controlled by the following methods.

Cultural Avoid raising seedlings in upland areas. Avoid excess application of N fertilizer beyond 80 kg/ha. Apply balanced fertilizer NPK in 2-3 splits.

Chemical

Hinosan 50EC @ 2ml/Lit of water.

Bavistin 50 WP @ 2.5 g/Lit of water

Aqueous extract of bael leaves(A.marmelous) @ 25 g/Lit to be grinded and mixed in 1 Lit water.

Tulsi leaves(0.Sanctum) @ 25 g to be steamed for 15 minutes and mixed in 1 Lit water.

### **Q.19. What are the Agricultural Implements developed by CRRI?**

A. There are several Agril implements developed by CRRI viz. Mini parboiling Unit, Star cum

Cono weeder, CRRI multicrop seed drill(2 rows).

Drum seeder, 3 row manual pull type seed drill, Paddy wheel hoe.

Two row rice seed cum fertilizer drill, Rice husk & Chaff stove, finger weeder, 4 row manual rice transplanter, hand shovel, hand plough.

Division of Biochemistry, Plant Physiology & Environmental Sciences

## **Frequently Asked Questions (FAQs)**

### **Q. 1. What is brown rice? Is it a variety of rice?**

**Ans.** When the husk of paddy grains is carefully removed, brown colored rice grains are obtained which is called brown rice. It is not a variety of rice. Brown rice of any variety can be obtained just by removing the husk (hull) that encloses the rice grain using a rice hulling machine.

### **Q.2. Why is brown rice so called? What is the advantage of eating brown rice?**

**Ans.** The normal color of the whole rice kernel obtained by removal of the husk, is brown. That is why it is called brown rice, but the color may be reddish or purple also. This brownish layer is highly rich in iron, zinc, oil and vitamins. Besides these, it is rich in several antioxidants like oryzanols which lowers blood cholesterol. It is, therefore, advised to eat brown rice.

**Q.3 Why is brown rice not available freely in the market?**

**Ans.** As the outer brownish layer is rich in nutrients, brown rice is easily infested by insects and microbes resulting in short shelf life. This is why, it is not so freely available in the market. But now you can get it in departmental stores and malls.

**Q.4. How should we cook brown rice?**

**Ans.** Brown rice takes a little long time to cook. To reduce cooking time, it should be soaked in water for 24 h before cooking. This further increases its nutritional value.

**Q. 5. What is bran? What is polished rice?**

**Ans.** As the shelf life of brown rice is short, the outer brownish layer is removed by milling, which collects as a brown colored powder known as *rice bran*. In fact, the traditional rice mills remove the husk and the bran layer together, directly giving *milled rice*. To give sheen to milled rice, it is passed through machines called polishers which further remove the outer layer from the grain surface giving *polished rice*, but this makes rice still more deficient in nutrients.

**Q.6. How is rice bran oil extracted? Is it edible?**

**Ans.** Rice bran oil is normally extracted from stabilized rice bran by solvent extractor plants using hexane. The process recycles about 95% hexane. The oil is degummed, deodorized and decolorized before it is released for mass consumption. The refined oil is not only edible but also considered one of the best cooking medium, because it is about 15% less absorbed, free of trans fats and recommended for a healthy heart. It is advisable to use RBO blended with another edible oil rich in w-3 fatty acids. Such oils are present in the market.

**Q.7. Is there a rice suitable for consumption by diabetics?**

**Ans.** The rice sold by the brand name *Moolgiri rice* or *Smart rice* is claimed to be good for diabetics as its Glycemic index value is stated to be below 55. Recently the rice Swarna, Mahsuri and Lalat have been indicated to be suitable for diabetics.

**Q.8. An unpleasant smell is emitted when some hybrid rice are cooked. What to do?**

**Ans.** This complaint has been made by some farmers. We have found that if the paddy of such hybrids is milled and consumed after 3-4 months of harvesting, this smell vanishes on its own.

**Q.9. What kind of rice varieties should be cultivated to get better market price?**

**Ans.** High market price is fetched by a rice variety which gives high milling output (say about, 60-65% milling recovery) together with least breakage and high head rice (nearly intact grain ) recovery (about, 52- 55%). This is true for all rice varieties. Besides this, varieties with slender grains normally command higher price than the bold grain types. Scented rice varieties, whether basmati or non-basmati short grain type, fetch premium price in domestic as well as international market.

**Q.10. How we can reduce grain breakage during milling?**

**Ans.** Paddy should be harvested when about 85% grains become straw colored and contain about 20-25% moisture. The harvested crop should be threshed within a day, grains should be dried to about 14% moisture and cleaned to remove any undesirable material before milling. Rubber shellers should be preferred over traditional rice mills for milling to get high head rice recovery.

**Q.11. Which rice variety is good for making *moodhi* (Puffed rice)?**

**Ans.** Rice cultivars Panidhan, Foundation (local), Gangasiuli, Sarubozni. Nalikama, and Bedamanji are good for making puffed rice.

**Q.12. Which rice varieties are good for making *khai/kheel* (puffed rice)?**

**Ans.** The rice SR 24B, and Mayurkantha are good in this regard.

**Q.13. Is there any variety from CRRI that is good for making *Idli*?**

**Ans.** Yes, CRRI variety Savitri is very popular in Tamil Nadu to make *idli*. In fact, it is better known there by the name Ponmani.

**Q.14. Does rice contain vitamin A?**

**Ans.** No, rice does not contain vitamin A, nor does it contain appreciable amount of carotenoids, which are converted to vitamin A in the body. Besides that, rice lacks in vitamin C and is a poor source of iron also.

**Q.15. What is golden rice? Is it available in the market?**

**Ans.** Rice lacks in vitamin A, which is very much essential for vision and other functions .Hence scientists developed Golden rice, which is transgenic rice. It is a rich source of

carotenoids which are converted to vitamin A in the body when golden rice is consumed. It is still under various safety tests and not released for mass cultivation.

**Q.16. What is the best way to cook rice to get maximum nutrition from it?**

**Ans.** Please use only that quantity of water which is just necessary to cook rice. All water should be absorbed by the cooked rice, because important nutrients find their way into the cooking water during the cooking process. If you use large quantity of water for cooking and then throw the excess water that remains after rice is cooked, you deprive yourself of lot of iron, zinc, and several vitamins. Besides this, you spend more on fuel and time on cooking.

**Q 17. What is the advantage of parboiling paddy grains?**

**Ans .** When paddy is converted to parboiled (partially boiled ) rice, no chalks or white areas seen in the grains. Grain breakage during milling is reduced significantly and head rice recovery is more than 90% with little milling loss of nutrients. The hull is easier to remove, after parboiling. The parboiled rice is more nutritive than the raw milled rice, as nutrients are sucked in the grains during the process. The shelf life of parboiled rice is also longer and it is less infested by microbes and insects.

**Q18. How much protein I will get if I eat 100 gram of rice?**

**A.**Normally you get only about 7 grams of protein by eating 100 gram milled rice. But CRRI rice variety Heera will provide you about 11 gram from 100g rice.