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Nutritional and Functional Properties of Traditional Rice Varieties

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Abstract

Rice is a major cereal food crop and staple food in most of the developing countries. Though few varieties are cultivated extensively, milled and polished. These include the coloured and aromatic rice varieties. The nutritional profile of the specialty rice is high when compared to the white rice varieties. The coloured rice, which usually gets its colour due to the deposition of anthocyanin pigments in the bran layer of the grain, is rich in phytochemicals and antioxidants. Rice bran, a by-product of the rice milling industry is under-utilized, is rich in dietary fibre which finds application in the development of functional foods and various other value-added products. Thus, more focus on specialty rice like traditional rice varieties and its by-products will not only save it from becoming extinct but also lead a step forward towards nutrition security of the country as they are abundant in vitamins, minerals and polyphenols.

Introduction

Every rice varieties are unique of their own. There are rice varieties which can withstand flood, heavy winds also some varieties can grow without water. Different rice varieties are suitable for different kind of peoples *viz.*, for diabetic peoples, for pregnant ladies, for children's, for old age peoples, for youngsters *etc.* The high value traditional rice varieties are losing its existence after the green revolution. So it high time to save the traditional rice varieties and as a general public we also have the social responsibility to save our traditional rice varieties and pass the same to the next generation.

Kullakkar

Kullakkar possess 90-105 days duration. Kullakkar, is a short duration variety and cultivated in summer season. The crop is highly drought, pest and disease resistant, rich in fibre and locally the straw is a preferred roofing material. The rice can be used in the preparation of idli, dosa, puttu, as porridge as well as cooked rice. Medicinal properties are also attributed to this rice which includes, lowering bad cholesterol levels, controlling blood sugar levels (Figure 1). This variety possesses a higher content of zinc and iron than white rice. 15-30 bags (75 kg or 100 kg/ bag) of yield around can be obtained.

Karuppukavuni

Its duration is 155 days and is long and bold in shape. It possesses medicinal properties. Suitable season for growing this variety is September-January. Yield is 1800 kg per acre (Figure 2).

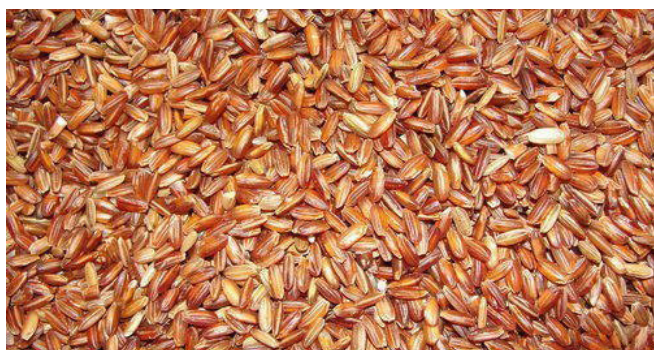


Figure 1: View of Kullakkar



Figure 2: View of Karuppukavuni

Kichadi Samba

It is good for some skin diseases. Its duration is 130-140 days and is fine-grained variety. It is ideally suited for sowing in July-August (Figure 3).



Figure 3: View of Kichadi Samba

Mapillai Samba

This is one of the rice varieties which lost after the green revolution. The name of this rice is based on a instance. Earlier this rice will be given to the bride groom before

the marriage to increase his strength which will help him to lift the stone (illavata kal) so the name. This rice is said to improve digestion, cure mouth ulcers and people with diabetic also can consume this rice. Its duration is 155-160 days duration (Figure 4).



Figure 4: View of Mapillai Samba

Thuyamalli

Grown in Kalapaganur village of Salem district. Samba season is best suitable season and the duration is 135-140 days. The rice has white in colour and having the fine quality. It yields about 1125 kg /ac. During the flowering stage the ear heads look like flowers. Highly resistant to pest and disease. It is best for food and In Tamil, 'thuyamalli' literally means pure jasmine and is similar to "malliga poo". Thooyamalli, a traditional rice variety, gets its name from its striking resemblance of jasmine buds. Thooyamalli is healthy and tasty rice which increases nerves strength and is suitable for preparation of biriyani (Figure 5).



Figure 5: View of Thuyamalli

Kandasalli-Scented Rice

Kandasali is 125 days crop, very good rice for making pongal. It is called as scented rice. This variety has got its origin from Karnataka (Figure 6).



Figure 6: View of Kandasalli-Scented Rice

Illupai Poo

The seed rate for one acre is 150 grams. It has got medicinal property mainly for treating body pain. Its duration is 144 days. Suppress the yield and comes up. Yields around 15 bags (Figure 7).



Figure 7: View of Illupai Poo

Kaivara Samba

Its duration is around 140 days. It is short and bold in nature. The yield obtained is around 15 to 18 bags. It is believed to be a good intake for diabetic patients (Figure 8).

Vallan

Its duration is 145 days and yields around 10-12 bags. Posterior end of each grain has a single bristle like structure which looks like a small bird's tail, hence its name (Figure 9).



Figure 8: View of Kaivara Samba



Figure 9: View of Vallan

Karunkkuruvai

The name of this rice is based on a instance. Earlier this rice will be given to the bride groom before the marriage to increase his strength which will help him to lift the stone (illavata kal) so the name. This rice is said to improve digestion, cure mouth ulcers and peoples with diabetic also can consume this rice (Figure 10).



Figure 10: View of Karunkkuruvai

Karuppukavuni

Its duration is 155 days and is long and bold in shape. It possesses medicinal properties. Suitable season for growing this variety is September-January. Yield is 1,800 kg per acre (Figure 11).



Figure 11: View of Karupukavuni

Navara (Medicinal Rice from Kerala)

A medicinal rice type is one of the native genetic resources of Kerala, famed for its use in Ayurveda. Possess 140 days duration (Figure 12).



Figure 12: View of Navara (Medicinal Rice from Kerala)

Salem Senna

The duration is around 135 days. It yields around 12 to 15 bags. It is long slender in shape (Figure 13).



Figure 13: View of Salem Senna

Karunkkuruvai

This is one of the rice varieties which lost after the green revolution. The name of this rice is based on an instance. Earlier this rice will be given to the bride groom before the marriage to increase his strength which will help him to lift the stone (illavata kal) so the name. This rice is said to improve digestion, cure mouth ulcers and people with diabetes also can consume this rice (Figure 14).



Figure 14: View of Karunkkuruvai

Conclusion

India is home to traditional red rice varieties and their use has been common among the practitioners of traditional medicine and communities as part of their cultural heritage, their functional effects and health benefits in terms of modern scientific methodology are far and few. Due to the insufficient availability of data, the beneficial properties of these varieties still remain unknown to a majority of the population. So, to leverage their health benefits, extensive research on these native coloured varieties by the stakeholders needs to be promoted so that they are available to consumers as a part of the daily diet or specialty functional foods.

Reference

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