

been extensively cultivated in home gardens as well as tea plantations along with other plant species in upper Assam for the last several years. Generally, two distinct morphs of Agar are cultivated in the home gardens. According to information from the respondents, one variant known as 'Bhola sanchi' is fast-growing and yields less agarwood compared to the other variant 'Jati sanchi', which is slow-growing but high-yielding and therefore preferred for commercial cultivation.

The Assamese people are cultivating *A. malaccensis* in home gardens for their economic upliftment and thereby protecting the species from the danger of extinction. But, there is an urgent need – in addition to protection and conservation

and to create awareness among the local people about this precious species of great economic importance.

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Medicinal rice varieties of India need urgent attention

Rice is the staple food of over half of the world's population and 90% of Asians. Also, it has extensive curative properties known from the ancient days. In fact, specific rice varieties with medicinal properties were cultivated and used in the treatment of some ailments in different counties of South East Asia. In India, rice was distinguished into three broad kinds according to hardness, colour, flavour and size of the grain¹. Ancient records speak of the existence of rice varieties of curative value for various ailments, as detailed in Ayurvedic treatise (*Indian Materia Medica*) of the 15th and 16th century AD. For instance, varieties like 'Njavara' and 'Gathuran' were used in the treatment of arthritis, whereas varieties 'Kalama', 'Pundarika', 'Panduka', 'Sugandhalaka', 'Kardamaka', 'Maetunaka' and 'Mahasali' have different medicinal properties.

Surveys made in the 1970s and 1980s in Chhattisgarh have led to the identification of several traditional varieties of rice with medicinal utility. 'Aalcha' for the treatment of pimples, Maharaji, which gives strength and stamina to ladies immediately after delivery, 'Baisoor' for epilepsy, and 'Laicha' for pregnant women to deliver healthy children are a few examples². Moreover, the 'Baisoor' variety is used for the treatment of headache and boils in different regions of Chhattisgarh. It is also used for skin diseases, ringworm infection, itching and conjunctivitis, and as a face pack with neem leaves. Another variety, 'Njavara',

is a unique land race with great antiquity, valued for its medicinal properties. It is traditionally used for the treatment of rheumatism, arthritis, neurological problems and for the relaxation as well as rejuvenation of weak muscles of aged persons by the Ayurvedic physicians of Kerala. 'Njavara' is used as a supplementary diet for underweight persons or consumed as a replenishing drink called 'karkada kanjhi' during monsoon season along with some herbal medicines. The oil prepared from this variety is used for a wide range of ailments like aches, painful inflammations, spondylitis, lower backpain, etc. But the most significant use is the medicinal pouch named 'njavarakizi', made with this rice after cooking it in a milk decoction of medicinal herb, *Sida cordifolia*. It is applied as a massage on the whole body, dipping the pouch repeatedly in the decoction. Some other medicinal rice varieties still available in Kerala are 'Jaathi Suggi', 'Jeeraka Chembavu', 'Karutha Chembavu', 'Kamaal', 'Kolaran', 'Naron', 'Nalla Chennellu', 'Vadakkan' and 'Vatten'. The medicinal and nutritive properties of 'Njavara' have recently received wide recognition and drawn the attention of some corporate sectors for its commercial exploitation.

In Odisha, the tribal inhabitants consume rice beer colloquially called 'Handia' prepared from traditional rice varieties by fermenting watered rice for several days. They add a herbal formulation called 'Bakhara' into it, which they

claim makes it a health drink and which also prevents gastro-intestinal ailments. Similar practice is observed among the tribals of North Bengal, who consume an alcoholic beverage called 'Haria'. It is herbal formulation prepared out of rice flour fermented using yeast culture³.

But with the advent of hybrid revolution, farmers are gladly accepting the new varieties for higher yield. Thus millions of years of genetic diversity and germplasm heritage are vanishing forever⁴. Hence urgent attention is warranted to collect and conserve these unique rice varieties for the benefit of posterity.

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