

## Salt tolerant casuarina clones released

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KOCHI: Showing the way to ensure coastal afforestation as well as productivity for the farmers in sea-facing districts, the Coimbatore-based Institute of Forest Genetics and Tree Breeding (IFGTB) has introduced superior and salt tolerant clones of casuarina (*Casuarina equisetifolia*) suitable for salt-affected sites across the country. Casuarina is grown as a cash crop and is identified as the most suitable tree species for agrarian ecosystems in the southern world. The release of these clones has happened after selection and repeated field testing for the past 20 years.

About 6.75 million hectare of India's land area is afflicted with the twin problems of salinity and high concentration of sodium in soil. In Kerala, about 20,000 hectare is affected by salt stress in Alappuzha, Ernakulam, Thrissur and Kannur districts.

Plantations of this species are grown in the coastal regions of West Bengal, Odisha, Maharashtra, Andhra Pradesh, Tamil Nadu, Kerala and Karnataka since about two to three rows of casuarina belt can strip a strong wind of its force. The bark of this species is also known to have medicinal properties and yields tannin, which is used for toughening fishermen's nets.

"We couldn't test the produce in Kerala because of lack of land availability in these coastal districts. *Casuarina equisetifolia* (Kaattadi) is grown from Australia in the east to Africa in the west due to its importance in the livelihood of people. Though it is not a good source of timber for furniture, the wood is used for beams, house posts, mine props, oars, masts, pavings, pilings, rafters, roofing shingles, tool handles, rough farm construction, ornamental turnery and parquet flooring. It is reputed to be the best fuelwood in the world with a calorific value of about 5000 kcal/kg," said Kannan C S Warriar, senior principal scientist, IFGTB, ministry of environment, forest and climate change. He said that as casuarina is a non-leguminous nitrogen fixing tree species, the agriculture college realized an increased yield to the extent of 45% in paddy, which was grown in the same field after completion of the testing of casuarina. The researchers then carried out further screening and

selection of salt tolerant clones of casuarina through multilocal field testing of 87 short-listed clones in three different locations in Tamil Nadu. After the evaluation of the performance of the clones by the implementation committee, regional variety release committee and the apex variety release committee of ICFRE led by experts in the fields of forest genetics, forest health, tree breeding, silviculture and statistics released three productive and salt tolerant (sodic) clones of *Casuarina equisetifolia* in the year 2014.

Following this, testing was carried out in collaboration with five major paper millswith the financial support of ministry of commerce and industries, government of India. CSIRO Australia was the international partner. The tests were completed by the end of 2018, he said

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