

Scientists rely on traditional Odisha rice to develop flood-resistant variety

BOOSTING YIELD. New climate-resilient rice varieties released by PM Modi include flood-tolerant Gayatri sub1

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Among the 109 climate-resilient varieties released by Prime Minister Narendra Modi recently, one rice variety — Gayatri sub1 or CR Dhan 810 — was developed with flood-tolerant quality, having 155-160 days duration. The gene to make it flood-tolerant was taken from a traditional variety, Dhalaa Putia, of Odisha which is no more in cultivation.

“There is a need to undertake a special project-based research with adequate funding to identify India’s traditional rice varieties, which are no more in cultivation but their germplasm are preserved. If research can be done on those varieties, India can provide the best climate-resilient rice plants with highest productivity in the

world,” said a former top agriculture scientist.

He said several of these varieties could have important traits which can be mapped using selection and molecular markers, and the required gene from these types can be introgressed in new supporting types of rice to get the best variety.

SK Pradhan, Additional Director-General in the Indian Council of Agricultural Research (ICAR) — the main breeder to develop CR Dhan 810 — said it was in trials for 3-4 years before its release now.

“There is a popular rice variety called Gayatri grown mainly in coastal Odisha, which earlier was not flood-tolerant and farmers used to incur losses if there is a flood anytime during its duration of over 150 days. So, to make it tolerant to floods, the Gayatri sub 1 (CR Dhan 810) has been



ON REVIVAL PATH. The gene to make the rice variety flood-tolerant has been taken from a traditional variety, Dhalaa Putia of Odisha, which is no longer in cultivation

developed,” said Pradhan, who was earlier Principal Scientist at the Cuttack-based National Rice Research Institute (NRRI).

YIELD AND CROP CYCLE
Highlighting that the productivity could be 6 tonnes

per hectare in normal condition, he said the good point is that the maturity will come at a fixed time after flowering around November first week even if it is transplanted a few days late. So, if 155-160 days duration will provide normal yield, it will have lower pro-

ductivity if the paddy gets matured in 140 days, he added.

CR Dhan 416 and CR Dhan 108 are the two other varieties developed by NRRI and released by the Prime Minister on August 11.

OTHER VARIETIES

Besides these, a variety called CSR 101, developed by the ICAR’s Central Soil Salinity Research Institute, Karnal (Haryana), that is suitable for irrigated alkaline/saline stress areas has also been released. It has a yield potential of 3.5 tonnes/hectare (alkaline stress), 3.9 tonnes/ha (saline stress) and 5.6 tonnes/ha (normal condition), having a maturity of 125-130 days.

The government has also released three rice varieties — all climate-resilient and developed by the Hyderabad-based Indian Institute of Rice Research.