DBT supported project leads to development of resilient rice varieties

New Delhi, July 09: Global food production needs to be increased by 50% by 2050 to meet the food requirement of an increasing population across the world. Indian rice production should reach 120 million tons by 2030 from the current production of about 100 million tons. In order to bridge the gap, abiotic (drought, salinity, heat, cold and submergence) and biotic (pests and diseases) stresses that limit rice productivity need to be addressed by developing multiple stress tolerant resilient rice varieties that can perform optimally under changing climatic scenarios.

In the project "CEIB III - Program Support for Developing Resilient Rice through Genomics" pyramiding of QTLs controlling tolerance against various biotic/abiotic stresses have led to the development of improved lines for sustaining increased rice productivity in India. CBMAS14110, a RIL derived from a cross between Improved White Ponni x Apo, possessing two drought tolerant QTLs of Apo has been developed and has been nominated for evaluation under AICRIP trials at national level and MLT at State Level.

NILs of rice genotype, CBMAS14065, pyramided with QTLs controlling tolerance against drought, salinity and submergence have been developed. NILs exhibited enhanced tolerance against drought, salinity and submergence than the recurrent parent(s). Advanced breeding

lines of CBMAS14065 pyramided with 8 different genes/QTLs controlling tolerance against drought, salinity, submergence, blast, BLB and gall midge have been developed.

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