

RESEARCH PROJECTS

Twenty nine research projects were organized by SAURES in the year 2014-2015. The results of the projects have been presented as extended summary in this report.

ROLE OF SHOOT RESERVER REMOBILIZATION AND CURRENT PHOTOSYNTHATE IN THE YIELD FORMATION OF HYBRID RICE VARIETIES

Dr. Kamal Uddin Ahamed¹

Extended Summary

An experiment was conducted at the research Farm of Sher-e-Bangla Agricultural University, Dhaka-1207 in Boro season, 2014-15 to study the role of shoot reserve remobilization and current photosynthate in the yield formation of hybrid rice varieties. Eight rice varieties (seven hybrid varieties viz., BRRi hybrid Dhan2, BRRi hybrid Dhan3, Heera3, Panna1, Tia, AC16, Tej and one inbred rice variety) and two transplanting dates were used for this factorial experiment. The experiment was laid out in Split-plot design and replicated thrice. Among varieties and transplanting dates, hybrid dhan Tej exhibited the best performance at 20 December transplanting in relation to pre and post-anthesis dry matter accumulation efficiency, shoot reserve remobilization, grain dry matter from current photosynthate and grain yield. Results showed that the variety Tej produced higher pre- and post-anthesis dry matter accumulation efficiency at 20 December transplanting which were 30.19 g hill⁻¹ and 24.80 g hill⁻¹ respectively. Shoot reserve remobilization to grain was also higher in the hybrid dhan Tej × 20 December transplanting (17.83%). Treatments Heera2 × 20 December transplanting showed highest grain dry matter from current photosynthate (88.28%) which was statistically similar with Tej × 20 December transplanting (88.13%). Highest grain filling percentage was found in BRRi dhan29 × 20 January transplanting. Consequently, the highest yield (4.64 t ha⁻¹) was obtained from Tej × 20 December transplanting followed by BRRi dhan29 × 20 December transplanting (4.38 t ha⁻¹) and Moyna × 20 December transplanting (4.37 t ha⁻¹). In respect of all parameters BRRi hybrid dhan2 showed lowest performance among the varieties. Performance of all varieties were decrease with delayed transplanting incase of almost all parameters.

¹Professor, Dept. of Agricultural Botany, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh