

# IDENTIFICATION OF COLD TOLERANT GENOTYPES AT SEEDLING STAGE IN RICE (*ORYZA SATIVA* L.)

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**Abstract:** In Chhattisgarh, rice is also grown during summer season in about 2 lakh hectares, mainly in areas with canal irrigation. Usually the productivity during summer is higher than *Kharif* season. However, in this season the sowing is usually done in the month of December or January during which the minimum temperature is low, which results in poor seedling establishment, stunting, yellowing and mortality. To overcome the problem of damage caused by low temperature, rice breeders have been making efforts to develop more cold-tolerant cultivars mainly at seedling stage. In this study, 17 different genotypes, including commonly grown varieties, were screened under field condition during December-January 2011 and 2012 during seedling stage at Research cum Instructional Farm, IGKV, Raipur (C.G.). The minimum temperature during this period was below 10°C at least for 12 days. Lines were evaluated on 1-9 score according to SES of rice, IRRI. Genotypes Samleshwari, Annada and R-RF-75 showed dark green leaf colour with score 1, while Sahbhagidhan and IR-84887-B-15 exhibited yellowing of leaf with score of 9 and 7, respectively. The result of this study is discussed in context of breeding value and practical significance from farmers' point-of-view.

**Keywords:** Rice *Oryza sativa* L., cold tolerance, seedling stage screening

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