

# Screening of F<sub>2:3</sub> Mapping Population of Swarna Sub1 / AC39416A for Anaerobic Germination in Rice (*Oryza Sativa* L.)

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## ABSTRACT

Phenotypic screening for anaerobic germination (AG) was conducted at RARS, Maruteru, West Godavari district of Andhra Pradesh, using 188 F<sub>2:3</sub> biparental cross mapping population of Swarna sub1 / AC39416A along with parents as per standard protocol in Complete Randomized Design (CRD) with two replications. Anaerobic stress was created by submergence of trays with 15 cm depth of water in concrete tank for 14 and 21 days in two separate experiments. The level of tolerance to submergence during germination *i.e* AG percent in the population was recorded. After one week of de-submergence the observations *viz.*, plant survival percent, seedling shoot length (cm) and seedling root length (cm) were recorded. Analysis of variance revealed significant variation for all the characters studied. Among 188 F<sub>2:3</sub> population screened, only 47 lines (for two weeks of submergence) and 17 lines (for three weeks of submergence) had shown more than 70% of AG. The mean AG (%) ranged between 0% and 95% in the population.

**Key words:** *Anaerobic germination, Biparental cross population, Submergence.*