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# GENETIC VARIABILITY FOR EARLY RICE SEEDLING VIGOUR IN A $F_3$ POPULATION OF BPT5204/ IR88633-1-136-B2 UNDER DRY DIRECT SEEDED CONDITION

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***ABSTRACT***

***In the present study the genetic variability among progenies of $F_3$ population segregating for ESVG (ESVG) was explored by phenotypic evaluation under dry-direct seeded system of rice cultivation. The $F_3$ population was derived from a cross between BPT5204/ IR88633-1-136-B2. IR88633-1-136-B2 is very good donor for ESVG. A new phenotyping method was standardised for screening ESVG under dry direct seeded condition. Analysis of variance and genetic estimates indicated there was significant genetic variation among progenies. Plant height, biomass and vigour index had high heritability and genetic advance at 15 and 30 days stages of crop, indicating that selection for ESVG will be effective at both stages of crop. Plant height, leaf number, tiller number, biomass and vigour index showed significant positive correlation with ESVG under both the stages of the crop. Families out-performing BPT5204 for ESVG progenies at 15 days and 30 days stages of the crop were obtained providing evidence that phenotypically IR88633-1-136-B2 contributed to ESVG increase. This donor can be a novel source of natural genetic variation for the improvement of rice under dry direct seeded condition of rice cultivation.***

***KEYWORDS: Genetic Variability, Early Seedling Vigour, Dry-Direct Seeded Rice, Transgressive Segregants***

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