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### Variation in Spikelet-Related Traits of Rice Plants Regenerated from Mature Seed-Derived Callus Culture

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**Abstract:** Callus is an excellent source for *in vitro* plant regeneration, but plants regenerated from callus sometimes show phenotypic and genotypic variation from the initial plants. In this study, the variation in spikelet-related traits of the rice plants regenerated from calluses and their performance in the paddy field were examined. The phenotypic variation in spikelet-related traits of the regenerated plants was not always in a reduction in their mean value. For instance, panicle length, spikelet number and fertile spikelet number of Indonesian rice genotypes Ciapus and BP-140 in the regenerated plants were significantly greater than those of the initial plants (developed from the seeds). The spikelet fertility of the regenerated rice plants was not significantly lower than that of the initial plants except in Ciapus and BP-140. The occurrence of somaclonal variants varied with the genotype. Ciapus and BP-140, which induce many somaclonal variants, are suggested to be valuable for genetic, breeding or functional genomic studies, while Fatmawati, which is stable, could be used for genetic transformation study.

**Keywords:** [Callus](#), [Regenerated plants](#), [Rice](#), [Spikelet fertility](#)[\[PDF \(342K\)\]](#) [\[References\]](#)

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