

**Poster**

**Effects of Crop Establishment Methods on Plant Characteristics of Photoperiod Sensitive Rice Variety Bg 38 Under Rainfed Conditions of WL<sub>2a</sub> Agro- Ecological Region**

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**Abstract**

Bg 38 (*Ma wee*) is a popular, photoperiod sensitive and an improved, rice variety. It is recommended as a long-age rice variety with white, short and round grains. Due to the requirement of six months for maturity and short days to initiate flowering, cultivation of *Ma wee* is limited to *Maha* season in Sri Lanka. Crop establishment method is known to affect grain yield of rice. Therefore, four crop establishment methods, namely; sprouted seed sowing, random transplanting, seedling broadcasting (Parachute method) and machine transplanting were tested for plant characteristics of Bg 38. The experiment was conducted at the Regional Rice Research & Development Center (RRRDC), Bombuwala during 2019 *Maha* season as a randomized complete block design with four replicates. Apart from the crop establishment method other management practices were conducted according to the recommendations of the Department of Agriculture. Plant height, number of plants per m<sup>2</sup>, number of productive tillers per m<sup>2</sup>, panicle length, panicle weight, number of days required for panicle initiation, number of filled grains per panicle, 1000-grains weight and final grain yield were measured. Plant height of random transplanting, machine transplanting, seedling and seed broadcasting methods was 108, 104.5, 101.7 and 87.5 cm, respectively. The number of productive tillers at maturity was the highest in parachute method (300 m<sup>-2</sup>) and lowest in direct seeding (224 m<sup>-2</sup>) ( $P < 0.05$ ). Number of days required for panicle initiation was the highest under machine transplanting (131 days) and lowest in seed broadcasting (116 days) ( $P < 0.05$ ). Average panicle length (26.7 mm), panicle dry weight (2.3 g), number of filled grains per panicle (155) and 1000 grain weight (11.9 g) were similar among four treatments. Machine transplanted crop resulted the highest grain yield (3.5 t ha<sup>-1</sup>) while that of broadcasted crop reported the lowest (1.85 t ha<sup>-1</sup>). Crop establishment method significantly affected on plant characteristics of Bg 38 under tested conditions.

**Keywords:** Establishment methods, *Ma wee*, Panicle initiation, Rice

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