

Standardization of Concentration and Duration of Seed Priming with Zinc Sulphate for Enhancing Germination and Seedling Growth of Blackgram

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ABSTRACT

To standardize the concentration and duration of seed priming with zinc sulphate in blackgram variety, Tulasi (LBG-787), a laboratory experiment was conducted in Factorial Completely Randomized Design (FCRD) with four replications using various concentrations (0, 0.01, 0.05, 0.1 and 0.5 %) as first factor and different durations (0, 2, 4, 6, and 8 h) of priming as second factor. Primed as well as unprimed seed were tested for germination and seedling growth. Analysis of variance of results revealed that concentration of micronutrient, duration of priming and their interaction exhibited highly significant effect on germination (%), seedling length (cm) and seedling vigour index. Among all the concentrations, 0.05 % zinc sulphate has recorded the highest mean germination (88.60 %), seedling length (27.60 cm) and seedling vigour index (2457). Irrespective of concentration, 6 h duration of priming has effectively improved germination and seedling parameters. Seed priming with 0.05 % zinc sulphate for 6 hours caused maximum improvement in germination and early seedling growth of blackgram.

Keywords: *Blackgram, Germination, Nutripriming, Seedling length, Seedling vigour index and Zinc sulphate.*