

**SCREENING OF MUNGBEAN (*Vigna radiata* L. Wilczek) GENOTYPES
AGAINST WATER STRESS MEDIATED THROUGH
POLYETHYLENE GLYCOL**

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Executive Summary

A study was conducted to know the effect of water stress mediated through polyethylene glycol (PEG) on the different genotypes of mungbean in completely randomized design with three replications in respect of growth and physiological characteristics. The results showed that different genotypes of mungbean exhibited distinct and significant response during screening against water stress at seedling growth stage by treating with different level of PEG treatment. The tolerant genotypes showed less reduction in length (shoot and root), fresh and dry weight (shoot and root), membrane stability, chlorophyll a and chlorophyll b contents, less Na⁺ and high K⁺ under high PEG treatment (40% PEG) with respect to control plants. However, the susceptible genotypes showed greater reduction in the measured parameters under PEG mediated water stress. On the basis low and best performance of growth, physiological and biochemical parameters under high PEG levels, total six genotypes were selected from the studied genotypes and which will be used in breeding for the genetic improvement of mungbean for water stress tolerance.

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