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Impact of PEG Induced Drought Stress on Growth and Physiology of Fenugreek (*Trigonella foenum graecum* L.)

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ABSTRACT Drought stress is one of the critical abiotic stress factors that limit the seed germination, growth, development and yield of plant. The objective of the present investigation was to explore the effects of application of drought stress, which is induced by different concentrations of polyethylene glycol (5, 10 and 15%) in fenugreek seedlings. Drought stress remarkably inhibited the seed germination and growth (shoot length, dry and fresh weight of seedling and seedling vigour index). Germination percentage decreased with increasing concentration of PEG. Seedlings shoot and root length and biomasses were inhibited with an increasing the concentration of PEG. The lengths of shoot and root were gradually inhibited by the PEG treatment. Fresh and dry weights by PEG treatment were inhibited with application of PEG. The content of protein and proline were gradually inhibited with increase in the amount of PEG.