

## INFLUENCE OF DIFFERENT PRE-TREATMENTS METHODS ON SEED GERMINATION AND SEEDLING GROWTH PERFORMANCE OF GOLDEN SHOWER TREE (*CASSIA FISTULA* L.)

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**Abstract:** The present study was conducted to find out the effect of different pre-treatments method on seed germination and seedling growth performance of Golden Shower Tree (*Cassia fistula* L.) at Forest nursery and Research Centre, SHUATS, Allahabad, India, during the month of June – September 2018. The seeds were pre-treated with different methods such T<sub>0</sub>- Control, T<sub>1</sub>- hot water 20 min + soaking in cold water 12 hrs, T<sub>2</sub>- cold water 24 hrs, T<sub>3</sub>- IAA 200 ppm 12 hrs, T<sub>4</sub>- IBA 200 ppm 12 hrs, and T<sub>5</sub>- Conc H<sub>2</sub>SO<sub>4</sub>- 2 Min+ 16 Hrs soaking in cold water and sown in poly bags filled with FYM 2:1:1 at Completely Randomized Design. The results indicated the maximum Germination percentage (78.89), Number of leaves (6.49) at 30 DAS, 7.29 AT 60 DAS, 9.21 at 90 DAS, shoot height (25.25 cm) at 90 DAS, root length (17.77cm), fresh shoot weight (7.27g), dry shoot weight (3.82g), fresh root weight (4.38g), dry root weight (2.78g) and vigour index (121.89) recorded in T<sub>5</sub>. However T<sub>0</sub> Control had no germination. Therefore, the results showed that the best pre-treatment method T<sub>5</sub> was more effective in germination and significantly improved the growth parameters as well as the quality seedling of *Cassia fistula* L.

**Keywords:** *Cassia fistula*, Pre-treatment, Seed germination, Seedling growth

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