



**GOJAN SCHOOL OF  
BUSINESS AND TECHNOLOGY**

AN AUTONOMOUS INSTITUTION

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# 2026 CONFERENCE PROCEEDINGS

MARCH **25 & 26** 2026

*1<sup>st</sup> International Conference on  
Recent Trends in Engineering  
and Technology (ICRTET'26)*

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## Interactive Effects of Growing Media and Seed Pre-Treatments on Germination, Seedling Vigour and Nursery Performance of Cashew (*Anacardium Occidentale* L.)

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### Abstract:

Cashew (*Anacardium occidentale*) is an economically important tropical plantation crop, and the production of vigorous, uniform nursery seedlings is essential for improving graft success, field establishment, and long-term orchard productivity. A factorial completely randomized design experiment was conducted during 2025 - 2026 at the School of Agriculture, Vels Institute of Science Technology and Advanced Studies, Chennai, to assess the interactive effects of growing media and seed pre-treatments on germination and seedling vigour. Five growing media combinations (sand, red soil, cocopeat, and vermicompost in varying proportions) and four pre-sowing treatments (control, 12-h water soaking, 24-h water soaking, and cow dung slurry soaking) were evaluated, constituting 20 treatment combinations. Significant variations were observed among treatments for germination, growth, biomass accumulation, and vigour index. The medium comprising sand + red soil + cocopeat + vermicompost (1:1:1:1) in combination with 24-h water soaking recorded the earliest germination (12.4 days), highest germination percentage (96.2%), greatest seedling height (31.8 cm), root length (25.4 cm), stem girth (7.1 mm), survival (99%), and vigour index (3058). Media enriched with cocopeat and vermicompost consistently enhanced germination (86.3–96.2%) compared with sand + red soil alone (68.0 - 78.2%). Pre-soaking treatments improved and synchronized emergence over control, with 24-h soaking proving most effective. The findings demonstrate that integrating organic substrates with simple pre-sowing hydration treatments provides a low-cost, eco-friendly strategy to improve nursery efficiency, reduce reliance on topsoil, and promote sustainable cashew seedling production.

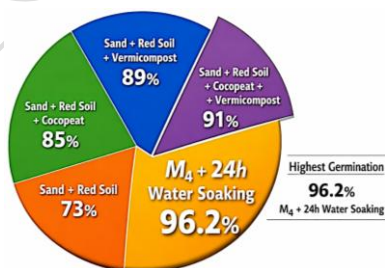


Fig. Effect of growing media and seed pre-treatments on germination percentage of cashew

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# ABOUT THE CONFERENCE

The 1<sup>st</sup> International Conference on Recent Trends in Engineering and Technology (ICRTET'26) serves as a prominent platform that brings together researchers, academicians, industry professionals, and students to share knowledge and discuss emerging developments in engineering and technology.

The conference aims to promote interdisciplinary collaboration, encourage innovative research, and provide opportunities for participants to present their work while exploring current global technological trends. It also facilitates networking between academia and industry, helping to build meaningful professional and research collaborations.

Through this platform, ICRTET '26 seeks to inspire innovation, support research excellence, and contribute to the advancement of technology-driven solutions for future challenges.

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