

## **Standardization of temperature regime for seed germination and seedling vigour in pyrethrum (*Chrysanthemum cinerarifolium* Vis.)**

**Siddharth Shankar Bhatt, S. Tripathi, D.C. Dimri and A. Singh**

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**ABSTRACT :** Dhaincha being a bio-fertilizer is also known for its medicinal properties. Studies were conducted to improve seed germination and vigour through soaking in different hormonal regime of gibberelic acid and ABA. Evaluation elucidated high germination percentage for the treatment 100 mg L<sup>-1</sup> GA<sub>3</sub> while it was minimum for 100 mg L<sup>-1</sup> ABA and 75 mg L<sup>-1</sup> ABA +25 mg L<sup>-1</sup> GA<sub>3</sub>. Gibberelic acid improved seed germination by breaking dormancy and stimulating faster germination in dhaincha seeds. 75 mg L<sup>-1</sup> GA<sub>3</sub> +25 mg L<sup>-1</sup> ABA also had significant effect on seed germination in comparison to control. Root length and shoot length was also found higher for 100 mg L<sup>-1</sup> GA<sub>3</sub> while the combination of 75 mg L<sup>-1</sup> GA<sub>3</sub> +25 mg L<sup>-1</sup> ABA, also had significant effect. The increased seedling length in 100 mg L<sup>-1</sup> GA<sub>3</sub> was due to increased root and shoot length. Vigour index was also evaluated higher for 100 mg L<sup>-1</sup> GA<sub>3</sub> treatment while it was minimum for 100 mg L<sup>-1</sup> ABA. The studies concluded that 100 mg L<sup>-1</sup> GA<sub>3</sub> was best for increasing seed germination and vigour in dhaincha seeds and must be soaked with it prior to germination.

**Key Words :** Dhaincha, gibberelic acid, ABA, germination, vigour.