

## EFFECT OF COW URINE AND GA<sub>3</sub> ON GERMINATION OF SEEDS AND SEEDLING GROWTH OF KARONDA (*CARISSA CARANDAS* L.) UNDER POLYHOUSE CONDITION

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*Received-04.08.2021, Revised-15.08.2021, Accepted-26.08.2021*

**Abstract:** The present investigation entitled “Effect of cow urine and GA<sub>3</sub> on germination of seeds and seedling growth of karonda (*carissa carandas* L.)” was conducted at under poly house condition during the year 2019- 20 at the Krishi Vigyan Kendra, College of Agriculture, Rewa (M.P.) It was conducted to study the individual effect as well as combined effect of seed soaking duration, cow urine and GA<sub>3</sub> concentration on seed germination and seedling growth of karonda. Hence, pre-sowing treatments with cow urine and plant growth regulators (GA<sub>3</sub>) have a significantly role on the seed germination. The experiment was laid out in randomised block design with 7 treatments (T<sub>1</sub> - control, T<sub>2</sub> - GA<sub>3</sub> 100 ppm for 12 hours, T<sub>3</sub> – GA<sub>3</sub> 100 ppm for 24 hours, T<sub>4</sub> – GA<sub>3</sub> 100 ppm for 36 hours, T<sub>5</sub> - cow urine 25% for 12 hours, T<sub>6</sub> – cow urine 25% for 24 hours and T<sub>7</sub> – cow urine 25% for 36 hours). The treatment was replicated thrice. All the seed and treatments showed better germination and growth when compared to control. Among various combination, the effect of seed treatment with GA<sub>3</sub> 100 ppm 24 hours were more superior over the other combination with highest seed germination (6.55), complete germination (20.32), germination percentage (76.66%). Growth parameters at 30, 60, 90 and 120 DAS with seedling height (3.22, 6.21, 8.94 and 9.73 cm), diameter of shoot (0.63, 2.23, 3.04 and 3.23), number of leaves/ seedling (3.86, 10.66, 17.34 and 20.53/seedling), leaf area (2.09 cm<sup>2</sup>), fresh weight of leaves (1.22 g), dry weight of leaves (0.54 g), length of roots (20.67 cm), fresh weight of roots (0.64 g), dry weight of roots (0.30 g), seedling vigour index (1581.80 cm).

**Keywords:** Karonda, Seeds, Treatment, Germination, Growth

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