

# **Comparison different auxin concentration and benzimidazole compounds on rooting of Ficus benjamina 'Amstel'**

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**Abstract** A factorial experiment based on completely randomized design with 20 treatments in a greenhouse with temperature of 22-25 ° C and humidity of 70-80 percent was carried out in order to investigate the effect of fungicides and growth regulators on rooting of semi-woody cuttings Ficus Amstel. Test treatments was include auxin in 5 levels (0, 2000 mg/IBA, 2000 mg per liter NAA, "1000 ppm/ IBA 1000 mg per liter NAA" and "2000 ppm IBA 2000 mg per liter NAA ") and three types of fungicides benzyl-Imidazoleincludes (2 mg/l benomyl, 2 mg/l and 2 mg per liter Mancozeb and 2mg/l Carbendazim) which were employed in the fourth repeat. In this study the rooting percentage, the highest root, root diameter, root size, fresh weight and dry matter of roots and chlorophyll a, b and total leaf was evaluated. The results showed that different levels of fungicides and auxin on all traits were superior to control, so that all treatments except control resulted in 100% rooting in cuttings. The highest root (279.9 mm), the highest diameter of the root (2.635 mm), root size (2.325 ml), chlorophyll a (1.638 mg/gram of fresh weight), chlorophyll b ( 0.683 mg/gram of fresh weight) and total chlorophyll (2.32 mg per gram of fresh weight) Mancozeb treatments × 2000 ppm/l IBA 2000 mg per liter NAA. The Least root length (8.49 mm), root diameter (0.32 mm), root size (0), chlorophyll a (0.307 mg per gram of fresh weight), chlorophyll b (0.122 mm g wet weight) and total chlorophyll (0.429 mg per gram of fresh weight) was belong to control group. The lowest and highest fresh weight, respectively by 0.18 and 1.897g for the control and Mancozeb × 2000 mg IBA was recorded. Mancozeb treatments × 2000 ppm/l IBA was the superior treatments in root dry matter which was no statistically significant difference between treatment Mancozeb × "2000 ppm IBA 2000 mg per liter NAA".

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**Keywords : Keywords: Benomyl, Carbendazim, Mancozeb, Asexual reproduction, NAA, IBA**

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