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Regeneration potentials of some medicinal plants used to treat human and livestock diseases in Limpopo province of South Africa

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any high valued tree species of medicinal use for both human and livestock diseases in the Limpopo province of South MAfrica exhibit seed dormancy and contain aromatic oils which inhibit rooting of their stem cuttings. These plant species are under pressure and threatened due to human over-exploitation. The aim of this study was to investigate rooting abilities on the cuttings of selected plant species, Elaeodendron transvaalense (Bushveld saffron), Brackenridgea zanguebarica (yellow peeling plane) and Warburgia salutaris (pepper-bark tree) using different growth hormones (IBA, IAA and NAA) in different growth media (natural soil, farm soil and hygromix). The experiment was conducted in controlled environment in order to determine the best treatment combination for the successful propagation of the plant species. Factorial experiments were carried out for this purpose using Randomized Complete Block Design (RCBD). Data were only obtained from Brackenridgea zanguebarica as other two plants dried up two weeks after sprouted possibly due to extreme environmental condition during the time of the experiments. Analysis of variance (ANOVA) on the effect of each treatment was carried out in terms of percentage sprouted stems and mean number of leaves produced and least significant difference (LSD) at 5% probability level was used to compare the significantly different means using STATISTICA software analysis package. The hormone, hormone concentration, growth media and their interactions on Brackenridgea zanguebarica cuttings had significant effect (P<0.05) on sprouted stems and number of leaves produced, with no record of the effect on rooting ability. This study showed no successful means of propagating the plant species which has become a critical topic. This implies that further fundamental research using special protocol needs to be conducted for the successful rooting of the vegetative part which will help in improving regeneration potential and domestication of the selected plant species.

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