

## **Evaluation of the Effects of Selected Plant Concentrates on the Growth of a Parasitic Plant; Field Dodder (*Cuscuta campestris*) and *Duranta erecta*.**

Aims: To determine effect of selected plant concentrates on the growth of field dodder (*Cuscuta campestris*). Study Design: A factorial experimental design; using four level extract application from blue gum, cypress, napier grass and distilled water as the control. Place and Duration of Study: Masinde Muliro University of Science and Technology from June 2018 to March 2019. Methodology: It incorporated use of 4 by 4 contingent field experiment, with *Duranta erecta* and *Cuscuta campestris* as independent and dependent variables respectively. It contained three experimental groups of extracts from the blue gum, cypress, Napier grass and distilled water as a control. Each treatment level was replicated four times. Samples of the affected plants (*Duranta erecta*) intertwined with parasite were purposive randomly selected. The parasites point of attachment through a haustoria for selected plants was marked with threads as a start point of Original Research Article Omondi and Amasongole; AJRIB, 6(3): 11-19, 2021; Article no.AJRIB.72477 12 measurements taken. Marked strings were of different colors to distinguish the type's treatments (concentrates) being applied. Application of 30 ml/cm<sup>2</sup> each of the extracts was done on both plant and parasite. Measurements of the plant heights, parasite length, number of plant leaves and application of extracts were done after every 48 hours. Results: Analysis of the effects of different concentrates as treatments of the same on parasite length increase, exhibited some differences ( $F = 1.648$ ,  $P = .18$ ). The mean ranged from lowest to highest extracts of the; cypress at ( $29.0 \pm 17.23$ ), Napier grass at ( $34.6 \pm 28.7$ ), blue gum at ( $38.7 \pm 28.6$ ), and distilled water at ( $39.4 \pm 27.4$ ) respectively. Conclusion: Cypress extract had the most effect on the *C. campestris*. Followed by blue gum extract which exhibited some effects, then Napier grass. This evidently shows that the parasitic weed can be controlled biologically.

### **Authors**

Bryan Okoth Omondi<sup>1\*</sup> and Shadrack Murunga Amasongole<sup>2</sup>