

# **Ideal Hardening off Watering Interval of East African Greenheart (*Warburgiau gandensis*), Nursery Seedlings in East Mau Watershed, Njoro, Kenya**

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Water is becoming an increasingly a scarce resource in most areas but yet essential in establishing nursery seedlings. This calls for the effective and efficient use of this important resource. Hardening off of nursery seedlings through reduction of watering regime is necessary before transplanting seedlings to the field. This leads to better survival yet the interval of watering is not well established and this might vary with species and locality. An experiment was set up during the dry season just before planting out to determine the best hardening off watering interval for East African greenheart (*Warburgiau gandensis*) seedlings in Egerton University, East Mau watershed, Njoro, Kenya. The experiment was laid down as a completely randomized design (CRD) with 5 treatments replicated 3 times. Treatments comprised of different watering intervals, which were as follows: twice daily, once daily, 2 days, 4 days and 6 days. These treatments were applied for 2 months on 9 months old seedlings during January to March 2018. Analysis of variance was used to determine treatment differences while DMRT was used to determine the significantly different treatment means at  $p \leq 0.05$ . The results revealed that the best growth was shown by twice daily, once daily, 2 days and 4 days intervals for shoot biomass, total plant biomass and total leaf area. However, the recommended watering interval is 4 days since it showed good growth for most of the variables with minimal water use equivalent to 12.5% of the water used by seedling watered twice daily which saves 87.5% of the water used. The results can be applied in the Kenyan highlands for East African greenheart and other leaf succulent plants. However more studies needs to be done for other non-succulent species using different pot sizes and soil mixtures.

**Keywords:** Nursery seedlings, East African greenheart, watering interval