

**EVALUATION OF A MULTIPLICATION METHOD FOR  
CITRONELLA (*Cymbopogon spp.*) USING ROOT SUCKERS**

A dissertation submitted to the  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University  
In partial fulfillment of the requirements for the award of  
Bachelor of Science in Export Agriculture

by  
**YOGARAJA PATHINATHAN THUSHANTH**

**Department of Export Agriculture  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University of Sri Lanka**

**2016**

## ABSTRACT

Citronella is an aromatic grass belongs to family Poaceae and there is a great interest due to its commercially valuable essential oils and extensively used in soap, perfumery, cosmetic and flavoring industries. Citronella is more rapidly propagated by root suckers but technology for efficient root sucker propagation is limited due to lack of research. Present study was carried out to evaluate a rapid multiplication method for Citronella using root suckers. Coir dust, soil and sand mixture (2:1:1 ratio) was used as the potting medium with four different types of root cuttings by which, the mother root sucker is cut in to two halves, four pieces, six pieces and eight pieces. Two *Cymbopogon* species, *Cymbopogon nardus* (Heen pangiri) and *Cymbopogon winterianus* (Maha Pangiri) were used. The experiment was conducted in Complete Randomized Design with four replicates. Time taken for sprouting (days), sprouting percentage, number of sprouts per cutting, plant height (cm), root length (cm), number of leaves per plant and leaf size were recorded. The minimum time taken for sprouting (9 days), highest sprouting percentage (100%), highest number of sprouts per cutting (2.00), highest shoot height (3.1 cm) and highest root length (13.5 cm) were recorded in *Cymbopogon nardus*, in which mother root sucker cut in to two halves. Similarly in *Cymbopogon winterianus*, minimum time taken for sprouting (7 days), highest sprouting percentage (100%), highest number of sprouts per cutting (2.00), highest shoot height (3.68 cm) and highest root length (16.25cm) were recorded in which mother root sucker cut in to two halves. Results revealed that mother root sucker cut in to two halves is suitable for rapid multiplication of *Cymbopogon nardus* (Heen pangiri) and *Cymbopogon winterianus* (Maha Pangiri).

Keywords: Rapid multiplication, Sprouting, *Cymbopogon nardus*, *Cymbopogon winterianus*, mother root sucker