

**IMPACT OF SOIL MIXTURES AND NUTRIENT  
LEVELS ON SEED GERMINATION AND GROWTH  
OF SOME CITRUS SEEDLING.**

**By**

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### **ABSTRACT**

This study was conducted in the greenhouse of the nursery of Horticulture Research Institute, Giza- Egypt, on Volkameriana lemon, Sour orange and Carrizo citrange rootstocks seedling during the growing seasons of 2018 and 2019. This study aimed to evaluate the impact of soil mixtures and nutrient levels (barley seed sprout extract at 2 ml /L and elements nutrient solution at 1 g/L, 1.5 g/L and 2 g /L) on seeds germination, vegetative growth, leaf physical contents and leaf mineral contents of those rootstocks.

The obtained results showed that seedlings treated with barely seed sprout under sand-peat moss soil mixture showed the highest significant performance of most vegetative growth parameters (stem length, stem diameter, leaf area, number of leaves/rootstock, fresh weight of leaves, fresh weight of roots, dry weight of leaves and dry weight of roots), Also on chemical parameters (Leaves nitrogen, phosphorus, potassium, Magnesium, Calcium, Manganese, Iron and Zinc) and physical parameters ( Leaf Chlorophylls a, b, total carotenoids, total carbohydrates and total indoles) content were improved significantly with the addition of barely seed sprout and nutrient element solution especially with Volkameriana rootstock.

**Keywords:** Citrus rootstocks, Growth characters, Nutrient solution, Barely seed sprout.

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