

# **EFFECTS OF ANTI-GRASS CLOTH COVERING ON SOIL AND CITRUS ROOT GROWTH IN ORCHARDS**

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## **ABSTRACT**

In order to reduce the use of chemical fertilizers and pesticides, while improving citrus production, it is important to study the effects of grass-proof cloth covering on soil environment, citrus root growth, and fruit yields in the orchard. The single factor experiment design was used to set up soil with the anti-grass cloth covering treatment and without covering (control) treatment. Soil hydrothermal conditions, nutrient levels, root growth, and fruit yield of both treatments were compared. Covering the ground surface with grass-proof cloth increased the soil water content and temperature; availability of phosphorus, potassium, zinc, and manganese, as well as the number of soil microbial population. Root growth and fruit yield also increased. The anti-grass covering can improve the soil hydrothermal condition and the overall nutrient level of a citrus orchard, which may be beneficial to the growth of citrus roots thus increasing productivity.

Keywords: Citrus, cover, soil environment, roots growth