

Effect of Different Periods of Earthing up on Growth and Yield Performances of Groundnut (*Arachis hypogea* L.) Varieties

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Abstract: An experiment was conducted to assess the effect of different periods of earthing up on growth and yield performances of groundnut (*Arachis hypogea* L.) varieties at the Faculty of Agriculture, Kilinochchi during the period of February to July 2018. Two factor factorial experiment was conducted in Randomized Complete Block Design (RCBD) with four replications. Different periods of earthing up such as 23 days after (T₁), 30 days after (T₂) and 37 days after planting (T₃) and five groundnut varieties Lanka Jambo (V₁), Tissa (V₂), Tikiri (V₃), Indi (V₄), and ANK G1 (V₅) were used as factors. The groundnut varieties were planted at the spacing of 45 cm × 15 cm and all the other agronomic practices were done according to the Department of Agriculture. The growth and yield parameters were recorded, shelling percentage was calculated and to find the significant differences among treatment combinations, ANOVA and Duncan's Multiple Range Test (DMRT) was performed. Growth parameters of groundnut varieties such as plant height, number of leaves and branches were not significantly differed in each variety with duration of earthing-up. The yield parameters such as fresh and dry pods weight per plant, 100 pods and seed weight and mature pods per plant were significantly differed among the duration of earthing-up in each variety and the highest in T₃ treatment in each variety. There was no interaction effect among earthing-up period and varieties. The highest shelling percentage 84 % was observed in groundnut variety Lanka jambo under the T₃. The highest yield was obtained from T₃ treatment in each variety and among the varieties; Lanka jambo (V₁) gave the highest yield. It can be concluded 37 days after earthing up (T₃) and Lanka jambo (V₁) can be selected as suitable treatment combination to obtain the highest yield from groundnut in Kilinochchi District.