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

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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, Ariviyal Nagar, 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 planting (T_1), 30 days after planting (T_2) and 37 days after planting(T_3) were used as first factor and five groundnut varieties Lanka Jambo (V_1), Tissa (V_2), Tikiri (V_3), Indi (V_4), and ANK G1 (V_5) were used as second factor. The groundnut varieties were planted at the spacing of 45 cm × 15 cm and all the other agronomic practices were done according to the recommendations of 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 was performed by using SAS 9.1 package. The means were separated by using Duncan's Multiple Range Test (DMRT) at p = 0.05. Growth parameters of groundnut varieties such as plant height (cm), number of leaves and number of branches were not significantly differed in each variety with duration of earthing-up. The yield parameters such as fresh pods weight per plant, dry pods weight per plant, 100 pods weight, 100 seed weight and mature pods per plant were significantly differed among the duration of earthing-up in each variety. There was no interaction effect among duration of earthing-up and varieties. Fresh pods weight per plant, dry pods weight per plant, 100 pods weight, 100 seed weight and mature pods per plant were highest in T_3 (Earthing up of 37 days after planting) than other treatments in each variety. The highest shelling percentage was observed in groundnut variety Lanka jambo under the (T_3) and it was 84 %. The highest yield was obtained from Earthing up of 37 days after planting (T_3) in each variety than other treatments, among the varieties Lanka jambo (V_1) gave the highest yield than other varieties. It can be concluded that among the duration of earthing-up, 37 days after planting and among the groundnut varieties, Lanka jambo groundnut variety can be selected as suitable treatment combination (T_3V_1) to obtain the highest yield from groundnut in Kilinochchi District.

Key words: Groundnut, Earthing up, Shelling percentage, Yield, Growth parameters