

Impact of Different Border Crops on Growth and Yield Performance of Cabbage (*Brassica oleracea. L*) Varieties

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Abstract: A research was conducted to assess the impact of different border crops on growth and yield performances of cabbage varieties at Faculty of Agriculture, Kilinochchi during December 2018 to April 2019. Experiment was carried out in split plot design with four different borders such as sunflower (T₁), Lemongrass (T₂), Chrysanthemum (T₃) and No border (T₄) were selected as main plot treatments and two different cabbage varieties such as Green hot (V₁) and KY cross (V₂) were used as sub plot treatments. The cabbage varieties were planted at the spacing of 50 cm × 40 cm. All the agronomic practices were done according to the recommendations of the Department of Agriculture except plant protection methods. The growth, plant protection measures and yield parameters were recorded. ANOVA and Duncan's Multiple Range Test (DMRT) were performed to find out the significant differences among the treatment combinations. Growth parameters such as plant height, number of leaves showed non-significant effect among different border treatments and varieties. The yield parameters such as head weight, circumference, diameter and total yield were significantly different among the border crops. Highest yields were recorded in varieties Green hot (37.4 ton/ha) and KY cross (59 ton/ha) in chrysanthemum border (T₃) and in Lemongrass border (T₂) respectively. Marketable yield was significantly differed between different border crops and the highest was recorded in the lemongrass border (T₂) in both varieties (Green hot – 31.4 ton/ha and KY cross – 55.3 ton/ha). The plant protection parameters viz. number of damaged leaves per plant and number of damaged heads were significantly differed among the border crops and the highest measurement were recorded in control (T₄) treatment. There were no significant differences between varieties of cabbage on the plant protection parameters within same border and the highest was recorded in var. Green hot due to susceptibility to pest damage. It can be concluded that lemongrass border with KY cross variety can be recommended as best treatment combination for growing cabbage in Kilinochchi district during *Maha* season.