

Effect of Time of Planting on Growth, Flowering Efficiency and Yield of Different Onion Cultivars in *Maha* Season

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Abstract: Onion (*Allium cepa* L.) is an important cash crop in Sri Lanka, cultivated by either seed or bulb. Seed production of onion is important due to global demand of onion and lack of good quality planting materials at affordable price. The field experiment was conducted in Regional Agricultural Research and Development Centre, Kilinochchi, to evaluate the effect of planting time on growth, flowering efficiency and yield of different varieties of red onion cultivars in *Maha* season during November 2018 to March 2019. The experiment was carried out in factorial Randomized Complete Block Design with three replicates. Four different times of plantings [20th (P1), 30th (P2) of November and 10th (P3), 20th (P4) of December 2018] and one standard variety MICLO 1(V1) with two selected cultivars [Vethalam (V2), TVM 6(V3)] of red onion were used as treatment combinations. Altogether twelve treatment combinations were tested with three replicates. Management practices were performed as per the recommendation of Department of Agriculture, Sri Lanka. Growth and yield parameters were recorded. Data were analysed by ANOVA using SAS 9.1 package. The means were separated by Duncan Multiple Range Test. The results revealed that the planting time had positive and negative significant effects on growth parameters (plant height, number of leaves, number of days to fifty percentage flowering, stalk length and umbel diameter) and yield parameters (seed weight per umbel, total seed weight and total dry bulb weight) of onion. Among the treatment combinations, cultivar TVM 6 planted on November 20th had high significant seed yield (0.3695 t/ ha) than that of other treatment combinations. The differences in seed yield among planting time and variety were significant but there was no interaction ($P \leq 0.05$) between planting time and variety. It can be concluded that variety TVM-6 and planting date of November 20th could be the best combination for growing of red onion in Kilinochchi District during *Maha* season based on the finding of this study.