

STUDY OF PRILLED UREA AND GRANULAR UREA ON GROWTH AND YIELD OF CHILLI (*Capsicum annum L.*)

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Chilli is one of the most important condiments in Sri Lanka. Efficient nutrient management can intensify local chilli production. Nitrogen is responsible for growth and yield of chilli. Urea is the major Nitrogen source for chilli cultivation and fertilizer use efficiency of Urea varies with the form of application.

A field experiment was conducted at the Field Crops Research and Development Institute, *Maha Illuppallama* to evaluate the fertilizer use efficiency of prilled Urea and granular Urea on chilli, with five treatments namely; No Nitrogen (T1), 150 kg /ha of N [prilled urea] (T2), 50 kg /ha of N [granular urea] (T3), 100 kg /ha of N [granular urea] (T4) and 150 kg/ha of N [granular urea] (T5). The Department of Agriculture recommended quantities of Phosphorous and Potassium were added to all treatments. Randomized Complete Block Design with four replicates was used. Soil samples were taken before planting and after harvesting.

The results showed that plant height at 50% flowering and first harvesting, canopy width at first harvesting, number of pods per plant and green chilli yield were significantly improved and number of days to 50% flowering were significantly reduced by the application of Urea compared to the control (T1). There were no significant differences among T2, T3, T4 and T5 on above parameters. Application of Urea did not significantly increase the canopy width at 50% flowering. The highest agronomic nitrogen use efficiency was recorded in T3 and T4 compared to the T2 and T5. The results revealed that recommended rate of prilled Urea for chilli, (150 kg/ha of N) could be replaced by 50 kg N /ha granular urea to achieve the optimum yield.

Key words: *Capsicum annum L.*, Granular urea, Nitrogen use efficiency, Prilled urea