

EFFECTIVENESS OF DIFFERENT FERTILIZER PRODUCTS FOR DRIP IRRIGATION-BASED AGRONOMIC MANAGEMENT PACKAGE FOR CHILLI

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The availability of conventional inorganic fertilizers and their increasing cost became key constraints in crop production in Sri Lanka. It resulted in a challenge to maintain higher yield from the already recommended drip irrigation-based chilli (*Capsicum annum* L.) cultivation package (DICCP). Therefore, a field study was conducted to find out an alternative fertilizer to incorporate into the DICCP without sacrificing the yields. The study was conducted at the Field Crops Research and Development Institute, Mahailuppallama using MICH HY1 variety in Yala 2022. Five treatments; control (T1), Department of Agriculture recommended fertilizer in the package (T2), nano urea replacing the conventional urea supplying half of the recommended nitrogen dose in the package (T3), organic manure (T4), and a commercial liquid organic fertilizer (T5) were tested in a randomized complete block design with four replicates. The plant height and canopy diameters as the growth parameters and the green chilli yield as the yield parameter were obtained. Both T2 and T3 showed similar growth and yield performances and were significantly higher ($p < 0.05$) than those of T1, T4, and T5. Results revealed that the supplying of nano urea to fulfil half of the recommended nitrogen dose could be a better alternative to replace the conventional urea without sacrificing the yields in the DICCP. The yield or growth performances were not at satisfactory levels with liquid organic fertilizer and the organic manure. A cost-benefit analysis is recommended before introducing it in general cultivation.

Keywords: Chilli cultivation package, Conventional urea, Nano urea