

VARIETAL PERFORMANCE OF GREEN CHILLI UNDER DIFFERENT IRRIGATION SYSTEMS AND MULCHES IN THE JAFFNA DISTRICT OF SRI LANKA

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Chilli (*Capsicum annum*) is the major cash crop cultivated throughout the year by Jaffna farmers. Generally, Jaffna farmers get a lower yield (8- 10 ton / ha) from chilli cultivation mainly due to pest and disease incidences. The potential yield of the varieties cultivated are 10 - 12 tons / ha. But the national average yields are as poor as 8–10 ton / ha. Such low yields are mainly due to high incidences of pest and disease, moisture stress, the use of inferior quality seeds, poor crop management and high input costs. This study was conducted to evaluate the varietal performance of green chilli with different mulches under different irrigation methods from May to October, 2016 with the expectation of improving the yield and reducing the cost of production. Irrigation methods (sprinkler, drip and basin), varieties (Galkiriyagama, Super hybrid and Vijaya F₁ hybrid and Mulches (no mulch, neem leaves, gliricidia leaves) were factorially combined in a split plot design with three replicates where irrigation methods were assigned to the main plots while all combinations of other two factors (Mulch and Variety) were applied to sub-plots. Pod weight and pod number/plant of the chilli plants were significantly different in neem mulch + sprinkler irrigation method for Super Hybrid variety. The yield of chilli was statistically significant among varieties, mulches and irrigation systems. Higher yield was recorded in neem mulch under sprinkler irrigation system due to the low incidences of pest attacks at the 2nd harvesting in Super Hybrid variety (13.77 ton /ha). Therefore, sprinkler irrigation system with neem mulch is more suitable for Super Hybrid chilli variety cultivation to obtain an optimum yield of green chilli in Jaffna.

Keywords: Chilli, yield, irrigation, mulch

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