

## GROWTH AND YIELD PERFORMANCE OF POPULAR BELL PEPPER (*Capsicum annuum* L.) VARIETIES UNDER PROTECTED CULTURE

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Bell pepper (*Capsicum annuum* L.) is a popular greenhouse vegetable in Sri Lanka due to its export potential. Productivity and profitability of bell pepper in open field conditions is low due to seasonality in production, price fluctuation and lack of quality. The cultivation under protected houses is the best solution to overcome these problems. Five bell pepper varieties namely; *Indra*, *Olympus*, *Twingo*, *Aristotal* and *King Arthur* were evaluated in a protected house in Doluwa farm, Panvilathanna during April to August, 2012. The experiment was arranged in a Complete Randomized Design with three replicates. Growth and yield parameters using recommended management practices were recorded during the cropping period. The highest plant height and leaf area were observed in variety *Twingo*. Variety *Olympus* showed the highest stem girth, total fresh weight, and total dry weight. Highest yield was obtained from variety *King Arthur* followed by *Olympus* and *Indra*, respectively. Even though, fruit length and width were varied, all varieties were acceptable with respect to fruit size and shape. Despite the variability in vegetative growth, the combination of yield parameters has contributed for the greater yield of bell pepper varieties. Based on the yield and growth performances, varieties *King Arthur* and *Olympus* could be selected for commercial level cultivations under semi-intensive greenhouse conditions in the mid country wet zone of Sri Lanka.

**Key words:** Bell pepper, Growth, Protected culture, Variety, Yield