

MORPHOLOGICAL AND AGRONOMICAL CHARACTERIZATION OF CHILLI ELITE LINES

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Chilli (*Capsicum annuum* L.) is considered as one of the most important condiments in Sri Lanka. The demand of domestic consumption is about three times over the local production. The crop improvement programme aiming in high yielding, disease tolerance is vital objectives to increase the productivity as well as the production of chilli. The experiment was conducted on morphological and agronomical characterization of four chilli elite lines (CAH36, ICPN18-7, Hot beauty and Waraniya) against four recommended varieties (KA-2, MI-2, MI-Green and Arunalu) was carried out at the Field Crops Research and Development Institute at Maha Illuppallama during 2009/10 Maha season. Data collection was done on 25 different morphological and agronomical characters including incidence of pest and diseases.

The Waraniya showed vigorous growth habit and significantly higher plant height (58.5 cm), leaf area (27.7 cm²) and was followed by ICPN18-7 (25.2 cm²). The initial flowering was observed in Arunalu (68 days) and Waraniya (70 days), which was an advantage, as compared to the recommended varieties. The highest fruit width was observed in ICPN 18-7 (2.1 cm) and followed by Waraniya (1.8 cm). The MI-2 showed the significantly highest number of pods per plant (40), followed by MI-Green (36) and Waraniya (29). The least incidence for leaf curl complex and Choanephora blight was observed in Waraniya. The elite line Waraniya revealed the highest yield (22.26 t/ha), with longer pods (13.2 cm) and highest vitamin C content (9.99 mg/100g) compared to others. The agronomical and morphological characters showed that the Waraniya and ICPN18-7 elite lines are important parents for breeding programmes.

Key words: *Capsicum annuum* L., Morphological characters, Agronomical characters, Waraniya.