

EVALUATION OF CONCENTRATED FRUITING BEHAVIOUR OF CHILLI VARIETIES ON DRY CHILLI PRODUCTION IN THE DRY ZONE OF SRI LANKA

I. Ihzana¹, K.N. Kannangara² and D.M.D. Dissanayake¹

¹*Department of Plant Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura, Sri Lanka.*

²*Field Crops Research and Development Institute, Mahailuppallama, Sri Lanka.*

Chilli (*Capsicum annum* L.) varieties with concentrated fruiting behaviour are more desirable for dry chilli production since more than 85% of fruits can be harvested within 3-4 picks. The study was conducted with the objective of evaluating the concentrated fruiting behaviour of locally grown chilli varieties for dry chilli production in the Field Crop Research and Development Institute (FCRDI) *Mahailluppallama*, Sri Lanka. A two-factor-factorial experiment was used in an open-field RCBD design with three blocks, using three chilli varieties (V1: *Arunalu*, V2: *Galkiriyagama* selection (GS), V3: MICH Hybrid 1) as the first factor and three harvesting schedules (T1: Green chilli picking with one-week interval, T2: Red chilli picking with two weeks interval, T3: Red chilli picking with four weeks interval) as the second. The significantly highest ($p < 0.05$) plant height and canopy width were observed in MICH Hybrid 1 at 100% flowering and 3rd pick. The flowering of MICH Hybrid 1 was late (62 days) compared to the early flowering (58 days) behaviour of the other two varieties. The pod length, breadth and thickness of MICH Hybrid 1 were the significantly highest (10.99 cm, 11.65 mm, and 1.1773 mm, respectively). The number of pods and mean total fresh and dry weights were significantly affected by the interaction between variety and harvesting schedule. The highest mean number of pods was observed in V3T1 (327), while the lowest V2T3 (134) and the highest mean total fresh weight was recorded in V3T1 (1852.4 g m⁻²), while the lowest was V1T1 (257.3 g m⁻²). The highest total dry weight was 376.72 g m⁻² (V3T2) and the lowest was 109.63 g m⁻² (V2T3). The variety MICH Hybrid 1 can be recommended to harvest as red chilli picking with a two weeks interval for dry chilli production.

Keywords: Green chilli picking, MICH Hybrid 1, Pod number, Red chilli picking