

EMERGENCE AND EARLY GROWTH OF SEEDLINGS OF TOMATO, BRINJAL AND CAPSICUM RAISED UNDER DIFFERENT COLOUR POLYTHENE SHADES

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Tomato (*Solanum lycopersicum* L.), brinjal (*Solanum melangena* L.) and capsicum (*Capsicum annum* L.) are popular and commonly cultivated vegetables in Sri Lanka. Direct seeding is not practised for Solanaceous crops due to their small seed size. It is recommended to transplant 2-3 weeks old seedlings. Seedlings, kept in the nursery for more than 2-3 weeks under optimum conditions, lead to rapid increase in seedling height, making them unsuitable for transplanting. Therefore, an experiment was conducted to investigate the effect of colour of shade polythene [*i.e.* red (T₁), yellow (T₂), blue (T₃), white (T₄), green (T₅) and transparent (T₆)] on seedling emergence and early growth of tomato (variety- Thilina), brinjal (SM 164) and capsicum (Hungarian Yellow Wax) in nurseries, at Horticultural Crop Research and Development Institute, Gannoruwa, from March to July, 2015. Treatments were arranged in Randomized Complete Block Design with three replicates each. Growth of seedlings under different colour shade polythene was significant ($P < 0.05$) and observed to be in the order of transparent > white > yellow > red > green > blue. The lowest values in seedling height (16.62 cm), root length (3.48 cm), fresh weight (1.65 g seedling⁻¹), dry weight (0.15 g seedling⁻¹), leaf area (54.41 cm² seedling⁻¹) and chlorophyll content (24.62 SPAD) were recorded under blue colour, compared to the highest values of seedling height (29.15 cm), root length (6.63 cm), fresh weight (14 g seedling⁻¹) dry weight (1.72 g seedling⁻¹) leaf area (147.58 cm² seedling⁻¹) and chlorophyll content (35.59 SPAD) under transparent polythene at five weeks after sowing. Therefore, this study revealed that the blue and green colour shade polythene control the growth of seedlings, including the seedling height. Thus, further investigations are suggested to evaluate the field performance of seedlings grown under blue and green colour polythene.

Keywords: Germination, Nursery, Polythene shade, Seedling emergence, Vegetable crops