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Effect of rootstocks and grafting dates on the growth of Kaghazi lime (*Citrus aurantifolia*. Swing) under the agro-climatic conditions of Peshawar

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An experiment entitled “Effect of rootstocks and grafting dates on the growth of Kaghazi lime (*C. aurantifolia*. Swing) under the agro-climatic conditions of Peshawar” was carried out at the Agriculture Research Institute Tarnab, Peshawar during May-December, 2017. The experiment was carried out using Complete Randomized Design (CRD) with two factors. In factor A, there were three citrus rootstocks i.e., Sour orange, Australian bigarade, and Cox mandarin while grafting i.e., 25 May, 5 June, 15 June and 25 June were kept in factor B. The experimental findings showed that among rootstocks Australian bigarade had maximum graft take success percentage (78.3), scion shoot length (7.6 cm), scion shoot diameter (5.0 mm), number of leaves scion-1 shoot (23.2), total plant length (26.6 cm), number of shoots scion-1 (1.71), root volume (32.5 cm³), root length (14.4 cm) and number of roots plant-1 (18.5) while Cox mandarin produced the minimum scion shoot length (6.2 cm), scion shoot diameter (3.6 mm), number of leaves scion-1 shoot (16.1), total plant length (20.5 cm), number of shoots scion-1 (1.29), root volume (14.6 cm³), root length (8.9 cm), number of roots plant-1 (10.9) and rootstock diameter (5.4 mm). Minimum graft take success percentage (50) was found in Sour orange and the maximum rootstock diameter (6.5 mm) was also observed in Sour orange. The maximum physiological disorder percentage (20) was recorded in Cox mandarin while the minimum (5 %) was observed in Australian bigarade. Among grafting dates the maximum number of leaves scion-1 shoot (22.2), total plant length (25.9 cm), number of shoots scion-1 (1.80), number of roots plant-1 (17.0), root volume (26.7 cm³), root length (14.3 cm), graft take success percentage (71.1), scion shoot length (7.4 cm) were recorded in 15th June grafting while the minimum rootstock diameter (5.6 mm), number of shoot scion-1 (1.18), root volume (17.8 cm³), number of roots plant-1 (12.4) and root length (10.2 cm) were found on 25th June grafting. It can be concluded that Australian bigarade rootstock and 15th June grafting date showed the best result in propagation of Kaghazi lime in Peshawar climate.

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