



Influence of length of cutting on root and shoot growth in dragon fruit (*Hylocereus undatus*)

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ABSTRACT

An experiment was conducted at ICAR-Indian Institute of Soil and Water Conservation, Research Centre, Vasad, Gujarat during 2016–17 to observe the influence of different cuttings lengths on root and shoot growth in dragon fruit for optimizing/standardizing the length of cutting for diverse environmental/edaphic conditions. Presently, farmers are cultivating dragon fruit in harsh climates and degraded lands, where establishment of plants is challenging. Hence, quality planting material is prerequisite for achieving success. The results showed that length of new shoots, dry weight of shoots and fresh weight of roots were higher when 35–40 cm long cutting was used for multiplication at 30 days of planting (DAP), whereas increase in fresh weight of shoots, number of 1st order roots and length of longest 1st order root were highest when 20–25 cm long cuttings were utilized. However, at 60 DAP, length of new shoots (33.06 cm), dry weight of shoots (32.56 g), number of 1st order roots (7.25) and length of longest 1st order root (32.37 cm), fresh and dry weight of roots (12.52 g and 4.75 g respectively) recorded highest in larger cuttings, i.e. above 30–35 cm cutting length, whereas fresh weight of shoots was highest in 25–30 cm cutting length while least values were observed in smaller cuttings. Therefore, though dragon fruit is propagated with ranges of cutting lengths, larger cuttings (40±5 cm) are recommended for better growth and development.

Key words: Cutting, Multiplication, Planting material, Rooting, Shoot length