

P-16 (118)**THE EFFECTS OF HARVEST TIMES AND FERTILIZER TYPES ON MORPHO-PHYSIOLOGICAL AND BIOCHEMICAL PROPERTIES OF LAVENDER "RIGHT" (LAVANDULA STRICTA DEL.) REGENERATION FROM SEED AND TISSUE CULTURE**

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In order to study the effects of harvest times and fertilizer types growth indices, morpho-physiological and biochemical properties of lavender "right" (*Lavandula stricta* Del.) regeneration from seed and tissue culture experiment factorial design based on randomized complete block design with three replicates each consisting of four experimental unit, in the field of Gorgan University of Agricultural Sciences and natural resources in the crop year 2016 - 2017 was administered. Treatment consists of three types of treatments that includes two plants with different reconstruction methods (seeds and tissue culture), and various types of fertilizers (no fertilizer, NPK fertilizer in concentrations of 10 and 20 kg/hectare and concentration NPK nanofertilizer 10 and 20 kg/ha) and harvest times (first and second times), respectively. Then growth indices and morphological, and biochemical characteristics was assessed at start of flowering time and full bloom, respectively. The results showed that fertilizer treatments had a significant effects on all measured characteristics except internodes length and total flavonoid. Harvest times had a significant effects on stem number and diameter, leaves and flower number, chlorophyll, total phenol and antioxidant activity. Also internodes length, stem number and diameter, leaves number, total phenol and flavonoid and antioxidant activity were effected by plant types significantly. Deposit of these results, interaction of treatments had a significant effects on all measured characteristics. The results showed that first harvest time and NPK nanofertilizer have the best effects on plant growth and yield performance in tissue cultured plants.

Keywords: Antioxidant activity, Chlorophyll, NPK nanofertilizer, Total flavonoid, Total phenol.