

The Effect of Increasing Mycorrhiza Applications on Some Biological Properties of Baby Carrots (*Daucus carota* L.) Plants

Funda ERYILMAZ AÇIKGÖZ¹, Sevinç ADİLOĞLU², Yusuf SOLMAZ², Aydın ADİLOĞLU²

¹Department of Plant and Animal Production/Namık Kemal University, Turkey

²Department of Soil Science and Plant Nutrition/Namık Kemal University, Turkey
sadioglu@hotmail.com

Aim of the study: The study was done to determine the effect of increasing Mycorrhiza application on some biological properties of baby carrots plant.

Material and Methods: A pot experiment was done according to randomized block experimental design, with three replications in greenhouse conditions. Soil samples filled in pots 4 kg soil / pot. Baby carrots seeds were sown as pots. Three plants were left in each pot. Some chemical properties of soil sample as, pH: 6.5, EC x10⁶: 700, organic matter: 3.9 %, lime: 5.2 %, exchangeable potassium (K₂O: 128 kg.da⁻¹), available phosphorus (P₂O₅: 9.25 kg.da⁻¹) and texture: Clay (C). Six Mycorrhiza doses (I. dose: 0 mL /pot, II. dose: 120 mL / pot, III. dose: 150 mL / pot, IV. dose: 180 mL /pot, V. dose: 210 mL /pot and VI. dose: 240 ml/ pot) were applied and plant samples were harvested 60 days after sowing. Some biological properties of baby carrots plants (tuber diameter, height of leaf, number of leaf) were determined. Analysis results were evaluated SPSS 21 statistically programme.

Results: According to the pot experiment results, important increases in some biological properties of baby carrots plant were determined with increasing Mycorrhiza applications. The root diameter were determined as 9.79 cm, 11.09 cm, 12.58 cm, 13.80 cm, 14.25 cm and 14.25 cm; height of leaf 12.98 cm, 15.11 cm, 15.00 cm, 16.07 cm, 17.79 cm and 16.81 cm; number of leaf 7.11 cm, 7.44 cm, 6.99 cm, 7.89 cm, 7.66 cm and 8.11 cm at I. dose: 0 mL /pot, II. dose: 120 mL / pot, III. dose: 150 mL / pot, IV. dose: 180 mL /pot, V. dose: 210 mL /pot and VI. dose: 240 ml/ pot, respectively. These root diameter and height of leaf increases were determined significant at the level of 5 %, statistically. The effect of Mycorrhiza application on number of leaf was not found statistically significant.

Keywords: Mycorrhiza, root diameter, height of leaf, baby carrots