Iranian Journal of Horticultural Science and Technology 19(4): 459 - 468 (2018)

Mineral Nutrient Uptake in Cucumbers Grafted on *Lagenaria siceraria* and *Cucurbita moschata* Rootstocks in Different Temperature

S. Mohammadnia, M. Haghighi* and A. Farhadi[1]

An experiment was designed to investigate the effect of grafting *Cucumis sativus* var. Super daminos on *Cucurbita moschata* (Rs) and *Lagenaria siceraria (Lg)*which is comparing with non-grafting of *Cucumis sativus* var. Super daminos (Rn) and self-grafting (Rc). The experiment carried out as a factorial experiment based on complete randomized design (CRD) with 4 replicates in two temperature treatments in the greenhouse of Isfahan University of Technology. Treatments were temperature included optimum temperature (27±2°C) and cold temperature (15±2°C). The results showed that concentrations of N, P, K, Ca, and Mg decreased in low temperature and Na concentration was increased. Nutrient use efficiency of N, P, K, and Na was increased with decreasing temperature and the concentrations of Ca and Mg was decreased. Generally, endemic rootstock could improve the grafting cucumber nutrient absorbtion so the result of this experiment showed that *Lagenaria siceraria* compare with other rootstock improved the N, P, K and Mg absorption.

Keywords: Cucumber, Nitrogen, Cold stress, Grafting.

[Downloaded from journal-irshs.ir on 2026-10-31]

[DOR: 20.1001.1.16807154.1397.19.4.2.8]

1. M.Sc. Student and Associate Professor, Department of Horticulture, College of Agriculture, Isfahan University of Technology and Assistant Professor, Isfahan Research Center of Agriculture and Natural Resources, Isfahan, Iran.

* Corresponding author: Email: (mhaghighi@cc.iut.ac.ir)