Iranian Journal of Horticultural Science and Technology 18 (1): 67-80 (2017)

Effect of Kaolin Application on Some Physiological Characteristics and Sunburn in 'Washington Navel' Orange

M. Mozaffarifard, M. Rahemi* and E. Aslmoshtaghi[1]

One of the most important problem of citrus fruit production in south of the Iran is sunburn of fruit during the summer. To prevent leaf and fruit burns an experiment was conducted as factorial in a randomized block design in a commercial orchard in Junan Darab region, Fars province, Iran, with four replications for two years (2012-13). Factor one was kaolin at 0, 3, and 6%, factor two was tree direction (north and south) and factor three was time of application. The results showed that kaolin at 3% significantly reduced tree transpiration, but had no significant effect on total leaf chlorophyll, Fv/Fm, photosynthetic rate and stomatal conductance. Kaolin at 3 and 6% significantly reduced the area, intensity and percentage of sunburn up to 54%. We recommended kaolin at 3% without influence on photosynthesis for sunburn protection of citrus fruit specially Navel orange in commercial orchards during growth and development.

Key Word: Canopy temperature, Kaolin, Transpiration, Sunburn.

[Downloaded from journal-irshs.ir on 2026-11-24]

[DOR: 20.1001.1.16807154.1396.18.1.7.0]

1. Former M.Sc. Student, Professor and Former Ph.D. Student of Horticultural Science, College of Agriculture, Shiraz University, Shiraz, Iran, respectively.
* Corresponding author, Email: (rahemi@shirazu.ac.ir).