Investigating the role of stomatal resistance and proline Amino Acid on determining drought resistance in six Iranian olive cultivars.

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Since olive culture development is started in many parts of Iran, therefore determining drought resistance of different cultivars is of great importance. This resarch carried out for determination of drought stress resistance in same Iranian olive cultivars sach as Zard, Roghani, Mary, Fishomi, Dezfol and Shenge. The research was conducted in a split plot design on the base of completely randomized blocks with three replications and three abservations in each plot. This research was conducted in 1999 in the experimental greenhouses of Horticulture Department of Agricultural Faculty of Tehran University. One year old plants of mentioned cultivars were put on under the drought stress by water withholding method. Then, stomatal resistance and amount of proline were measured. The irrigation treatments were 2,6,12 and 24 day. And the 2 day treatment was considered as control.

Comparision of treatments showed that the 24 day irrigation duration treatment in some cultivars coused defoliation or dried plants were eleminated from experiment.

Data on statistical analysis showed significant effect of irrigation period on increasing the stomatal resistance and proline Amino Acid.

Cultivars showed significant differences on the stomatal resistance. The interaction of irrigation duration and cultivars on stomatal resistance was significant too.