The Plant Production (Scientific Journal of Agriculture), 35(4), Winter, 2013

An Investigation into Different Olive Cultivars Responses to Sarpole Zehab Environmental Condition

I. Arji*[1], A.A. Zeinanloo[2], A. Hajiamiri[3], and M. Najafi[4]

1. **Corresponding Author:** Assistant Professor of Kermanshah Agricultural and Natural Resources Research Center
2. Assistant Professor of SPII of Karaj
3. Scientific member of Kermanshah Agricultural and Natural Resources Research Center
4. Technical Staff of Kermanshah Agricultural and Natural Resources Research Center

Received: 29 November, 2010 Accepted: 6 November, 2011

Abstract

This experiment was conducted to evaluate the adaptation ability of 14 olive cultivars in Dallaho olive research station under a completely randomized block design during 1383 till 1388 planted in 1379. The aim of the experiment was compatibility evaluation and determination of suitable olive cultivars to Sarpole Zehab environmental conditions. Vegetative and reproductive characters of olive trees were measured. Variance analysis results showed that vegetative characters like plant height, width and trunk cross sectional areas had significant differences between cultivars. Mission, Roghani and Sevillano cultivars had the high growth and Amphissis, Arbequina and Abou Satal had the lowest growth compared to the others. Reproductive characteristics showed significant differences between cultivars. Amigdalolia, Conservolia and Abou Satal cultivars had the highest fruit weight with 6.5, 6 and 5.9g respectively. Koroneiki and Arbeqina had smaller fruit weight than all cultivars. Fruit pulp percent was higher for Amigdalolia and Conservolia. Fruit pulp to pit ratio was higher for Conservolia, Manzanillo and Sevillano compared to the others. Oil content was low in most of the cultivars. Amigdalolia, Roghani, Amphissis and Zard had the higher oil content 21.34, 18, 35, 16.69 and 15.91% based on fresh weight respectively. Fruit yield and fruiting stability production was higher for Conservolia and Sevillano than all cultivars. In general, Conservolia and Sevillano cultivars are suitable for table olive use and there was no single recommended cultivar for oil production.

Keywords: Olive (Olea europaea, L.); Adoptability; Cultivar; Fruit