

Morphological Characters, Flowering and Fruit Set of Thirteen Olive Cultivars Grown under Fayoum New Land Conditions

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Key words: Olive, New Land,
Blooming and Sex expression.

Abstract:

This investigation was conducted during three successive seasons 2006 2007 and 2008. to evaluate thirteen olive cultivars (*Olea europaea*, L.) namely; Arbequina, Cairo 7, Chemlali, Coratina, Frantoio, Hojiblanca, Koroneiki, Manzanillo, Manzanilla Cacerna, Moraiolo, Picual, Picudo and Villalonga grown in Kom Oshem farm, Fayoum Governorate and established through the Egyptian Spanish project belonging to the Ministry of Agriculture in Egypt. Most of these cultivars are newly introduced to Egypt and consequently have not been evaluated before under our climatic conditions. Also, the aim of the data for 2006 was considered to be primarily to explore the behavior of growth, flowering, fruiting habits.

From the obtained results, the studied olive cultivars could be classified according to **growth parameters**.1) vigorous trees, included Manzanillo, Picual, Cairo7 and Hojiblanca cvs.

2).Semi vigorous trees, included Moraiolo, Chemlali, Koroneiki, Frantoio and Villalonga cvs.

3).Small trees, included Arbequina, Picudo, Manzanilla Cacerna and Coratina cvs.

Bud burst occurred early from 23th Feb. to 8th March for (Arbequina, Cairo 7, Hojiblanca and Manzanillo cvs.) While it occurred lately through the period from 18th to 21st March for Koroneiki, Villalonga and Frantoio.

Concerning flowering dates, results showed that Cairo 7, Hojiblanca, Arbequina and Manzanillo were the earliest cvs., they started flowering after 78.5, 84.0, 80.5 and 86.0 days of the Julian dates, reached full bloom after 94.5, 91.5, 90.5 and 91.5 days of the Julian dates, respectively. Moreover, the end of blooming was detected after 95.5, 99.0 and 102.0 days of the Julian dates for Arbequina, Manzanillo and Hojiblanca cvs., respectively. Meanwhile, the latest cultivars in flowering were Villalonga and Frantoio which recorded 103.5 and 103.5 days of the Julian dates to start flowering, 111.5 and 110.5 days to reached full bloom; 119.5 and 116.5 days to reach the end of flowering, respectively (averages of two seasons).

Results indicated that there was a negative relationship between sex expression and flowering density, therefore, cultivars had the higher values of flowering density gave the lower values of sex expression