Effect of Gibberellic Acid and Some Natural Compounds Application on Vegetative Growth, Yield and Fruit Characteristics of Jojoba Shrubs

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Abstract:

Abstract This study was carried out during 2014 and 2015 seasons in a private orchard of Jojoba located at Mout, El-Dakhla, New Valley Governorate to examine the effects of GA3 (25, 50 and 100 ppm), camphor oil (1.5, 3.0 and 4.5 cm3/L), effective microorganisms (EM1, 3, 6 and 9 cm3/L), glauconite compound (250 and 500 g/shrub) and a mixture of GA3 (50 ppm) with the aforementioned concentrations of camphor oil on vegetative growth, yield/shrub and Jojoba seed characteristics. The treatments were conducted at start of Jojoba blooming (the 1st application time), and the 2nd application was achieved 3 weeks after fruit set, except the glauconite was applied 3 weeks before Jojoba blooming. The experiment was conducted in randomized complete block design (RCBD) with 3 replicates, 2 shrubs each. According to the obtained results of this study, it could be deduced that all treatments improved the vegetative growth, yield and seed quality. Concerning oil weight/100 seeds and oil % in seeds treatment with mixture of GA3 (50 ppm) and camphor oil (1.5 or 3.0 cm3/L) gave the best results during the two studied seasons. Therefore, for improving yield and seed quality it could be recommended spray jojoba a mixture of GA3 (50 ppm) plus camphor oil at 1.5 or 3.0 cm3/L under the condition of this study.

Keywords:

GA3, Camphor oil, EM1, Glauconite, Jojoba shrub, Yield, Seed quality.

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