

## The Synergistic Effects of Using Silicon and Selenium on Fruiting of Zaghoul Date Palm (*Phoenix dactylifera* L.)

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**Abstract :** During 2011 and 2012 seasons, Zaghoul date palms received four sprays of silicon (Si) at 0.05 to 0.1% and selenium (Se) at 0.01 to 0.02%. Growths, nutritional status, yield as well as physical and chemical characteristics of the fruits in response to application of silicon and selenium were investigated. Single and combined applications of silicon at 0.05 to 0.1% and selenium at 0.01 to 0.02% was very effective in enhancing the leaf area, total chlorophylls, percentages of N, P, and K in the leaves, yield, bunch weight as well as physical and chemical characteristics of the fruits in relative to the check treatment. Silicon was superior to selenium in this respect. Combined application was favourable than using each alone in this connection. Treating Zaghoul date palms four times with a mixture of silicon at 0.05% + selenium at 0.01% resulted in an economical yield and producing better fruit quality.

**Keywords :** date palms, Zaghoul, silicon, selenium, leaf area

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