

Effect of Some Plant Growth Regulators on Induction of Seedless Fruits in Some Date Palm Cultivars

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The effect of spraying unpollinated flowers of date palm cultivars (Nebut-Seif, Sakaie, Seleg and Khudari) with GA₃, IAA and 2,4,5-T at various concentrations of single or combined regulators and in one or two sprays on the production of seedless fruits, was studied in 1985 and 1986.

Different cultivars responded to the treatments at various degrees. The treatments resulted in the production of seedless fruits, but the percentages obtained differed greatly with the concentration, the number of sprays and the season. The two-spray treatment of 50 ppm GA₃ + 10 ppm 2,4,5-T produced 70.20% seedless fruits in the Nebut-Seif cv. in 1985; whereas, the single spray treatment with 50 ppm IAA produced 79.17% seedless fruits in the Sakaie cv. in 1986. Most of the seedless fruits maintained colour characteristic of the Khalal stage. Few of the seedless fruits reached the rutab stage. Weight of the seedless fruits was relatively less as compared with the normal fruits.

As with many other plants, the use of plant growth regulators in date palm may increase the yield and induce seedless fruits. A good seedless date, approaching the pollinated one in quality, would be highly desirable either as a fresh fruit or for various purposes of date processing.

Few investigations were carried out in this respect, and their results were not promising. Thus, Sharpless and Hilgeman (1950) studied the effect of synthetic hormones (2,4-D, NAA and IBA at the rate of 20 and 500 ppm) on growth and ripening of "Sayer" date palm fruits. The treatments were applied on three dates representing different stages of fruit development. They concluded that the chemicals and concentrations used had no stimulatory effect on the growth and ripening of normally pollinated fruits in this cultivar.