ACHIEVING LARGER 'ETTINGER' FRUITS IN WESTERN GALILEE, ISRAEL

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'Ettinger' is the second most important avocado cultivar in Israel, constituting 25% of the avocado planted area. Due to local favorable climatic conditions in the Western Galilee, the fruits there reach maturity and marketing size in mid-September, two weeks earlier than in most other Israeli growing regions. The early fruits achieve a much higher price than the in-season ones, but only 285 g fruits and those heavier fit the early marketing limitations. Therefore, the growers try to get a higher percentage of fruits of this size. Avocado fruit growth is a combined effect of fruit-cell division and cell enlargement, in which the former is predominant during the early fruit growth stages and the latter becomes more important later.

This research aimed at developing a technology which would increase the 'Ettinger' large-fruit yield.

Throghout five seasons (2001 to 2006) we studied application of auxin spray at the start of blooming; cytokinin and auxin during the early fruit-set; spray of auxin and gibberellin-inhibitor, as well as girdling during the summer. Only the early fruit-set cytokinin spray showed a consistent positive effect. It increased the large-fruit yield in 9 out of 12 experiments, by an average of 16% (max 39%, min 5%). In two experiments it showed no effect, and in one experiment it had a negative one. The most effective cytokinin (benzyl adenine) concentration was between 30 and 50 ppm. The best timing found was one spray application about four weeks after the blooming peak.