

## 'Adi', a New Avocado Cultivar

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'Adi' (previously Akko 44-46) is an avocado (*Persea americana* Mill.) seedling selected in a breeding project (Lavi et al., 1991) conducted at the Akko Experiment Station in Western Galilee, Israel. One objective was to select new cultivars superior to 'Hass' in productivity, fruit size, and performance.

### Origin

In Spring 1975, a 'Hass' tree (Griswold, 1945) was caged with a tree of 'Horshim' (Slor and Spodheim, 1972), and a beehive was introduced into the cage for pollination. The progeny fruit of both trees were harvested in Winter 1975-76, and the resulting seedlings were planted in Spring 1977. 'Adi' was harvested from the 'Horshim' tree and is the second cultivar to be selected in the project (Lahav et al., 1989). Since the available enzyme systems do not distinguish between 'Hass' and 'Horshim' (unpublished), it was impossible to determine whether 'Adi' originated from self-pollination of 'Horshim' or from a cross with 'Hass'. We believe it is a hybrid, however, since it resembles both cultivars.

### Description

The tree canopy is small to medium and sturdily branched. The leaves are small to medium, lanceolate, and fairly acute at both ends. The medium-green leaves are almost flat, with slightly wavy edges. The flush is a distinctive reddish brown with a few lenticels on the young growth. No anise scent is noticeable. Flowering intensity is medium, commencing and ending  $\approx 2$  to 3 weeks later than 'Hass'. Unlike 'Hass' and 'Horshim', the inflorescence racemes of 'Adi' are quite short and compact. 'Adi' belongs to the A flowering group. Its potential as a pollinizer for the cultivars of the B flowering group is still to be investigated.

The mature fruit is obvoid or pear-shaped and strongly resembles 'Hass' (Fig. 1); it

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sometimes has a slight neck but is otherwise fairly uniform in shape and size. The fruit is an attractive light-green with a rough, pebbly surface and no gloss. Average fruit weight is  $\approx 230$  g, with a range of 180-300 g. The fruit stalk is short, fairly thick, and attached slightly off-center. Fruit can be picked with no damage to the pericarp.

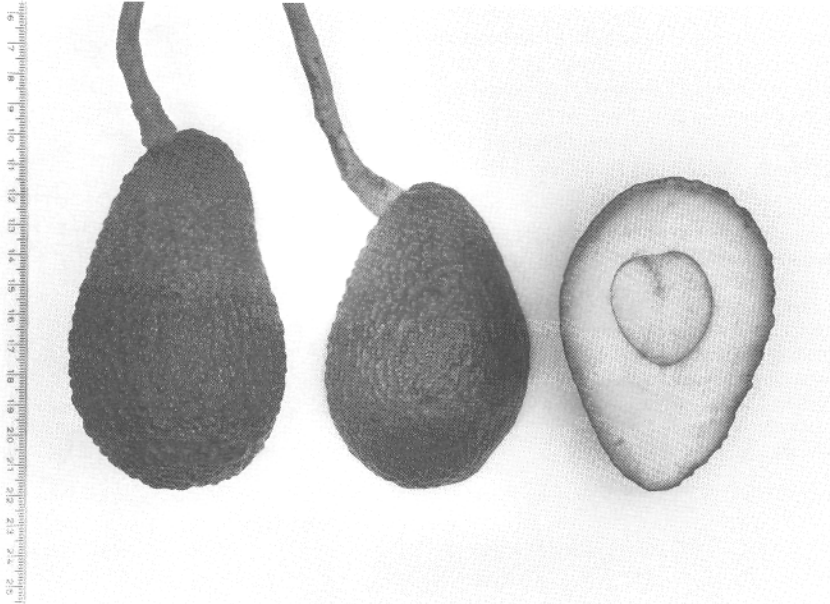


Fig. 1. Fruit of 'Adi' avocado (scale in millimeters).

The ripe fruit remain green. Seed shape is round to slightly elongated and usually <10% of the fresh fruit weight. The peel separates easily from the flesh and is of medium thickness and slightly more stoney than that of 'Hass'. The flesh is pale yellow with a green rim. The texture is buttery. In our opinion, flavor is excellent, with a slightly less nutlike aroma than 'Hass'. The flesh shows very slight enzymatic browning 6 h after being cut (less so than 'Hass'). The harvest season is long, commencing and ending earlier than 'Hass' (which is early October until March). At the end of the harvest season, small black spots may appear on the peel as the fruit soften, but the eating quality remains high. Overall, the fruit are very similar in shape and internal characteristics to 'Hass' but remain green when ripe.

Preliminary experiments show that fruit storage qualities are good (Zauberman et al., 1991). Shelf life at 20C was 7 to 9 days. Dry weight percentage, depending on fruit weight and season, is similar to that of 'Hass'.

Since 1989, 'Adi' has been distributed for evaluation throughout Israel. Most of the trees have been top-worked on mature trees. It is still difficult to assess average yield, since most of the trees are just coming into bearing, but grafted trees appear to give good yields, similar to those of 'Hass', with a tendency toward alternate bearing. Excessive production may result in undersized fruit.

'Adi' is not recommended for areas of high summer temperatures, which might result in small fruit. The tree's sensitivity to frost is similar to that of 'Hass'. 'Adi' is being patented, and graftwood may be obtained from the Agricultural Research Organization, The Volcani Center, Bet Dagan.

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