

Iriet—A New Avocado Cultivar

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Origin

'Iriet' (previously 12-15) is the name given to an avocado (*Persea americana* Mill.) seedling selected in a breeding project conducted at the Akko Experiment Station in Western Galilee, Israel (Lahav et al., 1985). One of the objectives was to find a late cultivar, similar to 'Hass', but with larger fruit. In Spring 1973, 'Hass' trees were caged with beehives. The progeny fruits were harvested in Winter 1974 and seedlings were planted in Spring 1975. 'Iriet' was selected as the best cultivar from this population.

'Iriet' was characterized by analysis of leaf and fruit mesocarp extracts for the following enzyme systems: alcohol dehydrogenase (ADH; EC 1.1.1.1) (Torres et al., 1978), leucine aminopeptidase (LAP; EC 3.4.11.1) (Degani et al., 1986), malate dehydrogenase (MDH; EC 1.1.1.37) (Degani and Gazit, 1984), phosphoglucoisomerase (PGM; EC 5.3.1.9) (Torres et al., 1978), and triosephosphate isomerase (TPI; EC 5.3.1.1) (Goldring et al., 1987). The genotypes of 'Iriet' and 'Hass' in these enzyme systems are listed in Table 1. 'Iriet' and 'Hass' have identical genotypes for ADH, LAP, MDH, and PGM; but, they have different genotypes for TPI—'Hass' is homozygous while 'Iriet' is heterozygous. This indicates that 'Iriet' is a product of 'Hass' outcrossing and not of 'Hass' self-pollination.

Table 1. Isozyme genotypes of 'Hass' and 'Iriet' avocados.

Cultivar	Genotypes ^a				
	<i>Adh-2</i>	<i>Lap-2</i>	<i>Mdh-1</i>	<i>Pgm-1</i>	<i>Tpi-1</i>
Hass	FF	FF	SS	FS	SS
Iriet	FF	FF	SS	FS	FS

^a*Adh-2*, alcohol dehydrogenase; *Lap-2*, leucine aminopeptidase; *Mdh-1*, malate dehydrogenase; *Pgm-1*, phosphoglucoisomerase; *Tpi-1*, triosephosphate isomerase.

Description

Tree canopy. The canopy is small to medium, slightly weeping. Leaves are small

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lanceolate, medium green. Flush is red-brown. Lenticels on young branches are green and hardly noticeable. No anise scent is noticeable. Flowering is fairly profuse, beginning 1 year after planting. Flowering is a few days earlier than 'Hass'; both beginning and ending. The cultivar belongs to flowering group B. 'Iriet's' potential as a pollenizer for the cultivars of the A flowering group still has to be investigated.

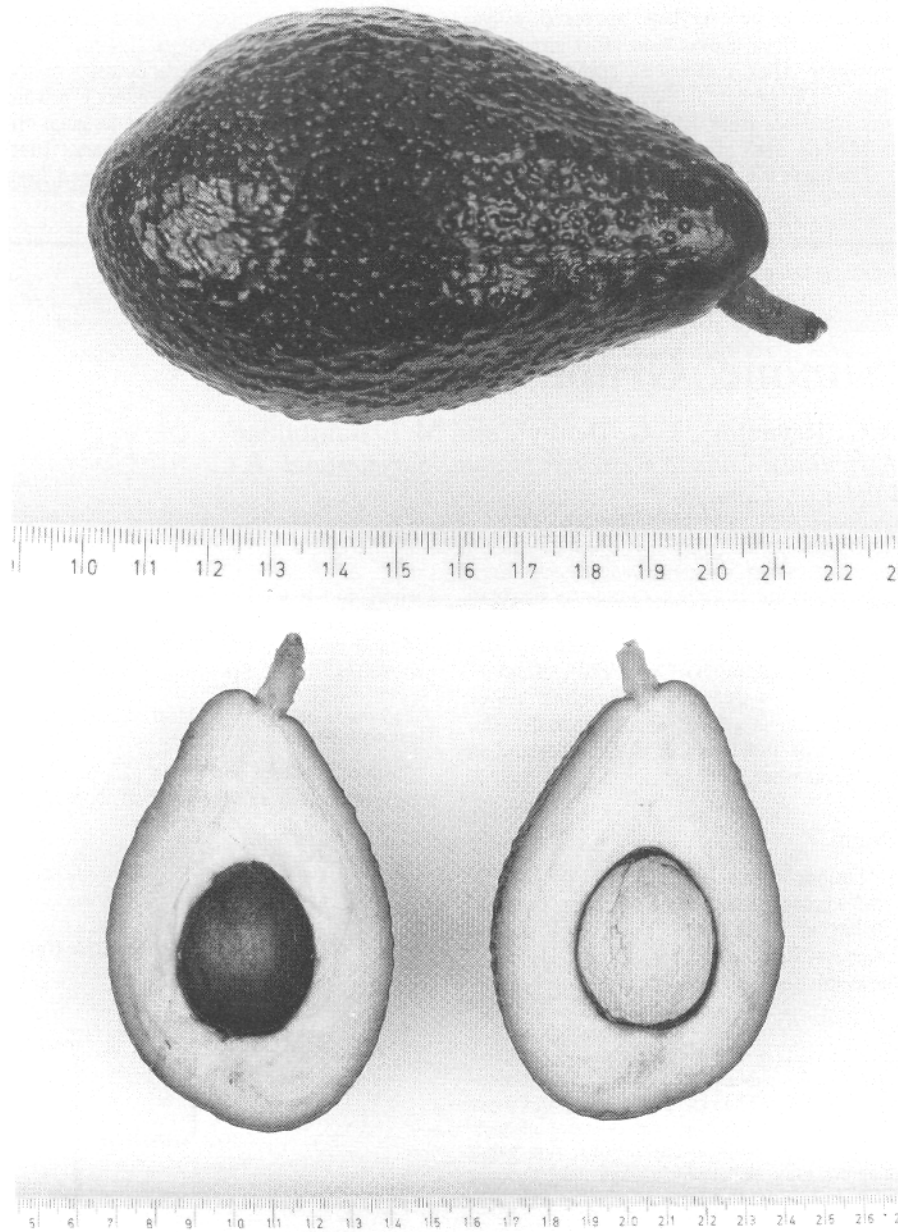


Fig. 1. Fruit of 'Iriet' avocado (scale in mm).

The fruit is pear-shaped (Fig. 1), fairly uniform in size and shape, and with glossy, slightly pebbly peel. It occasionally has ridges that do not affect its appeal. There is a typical small depression at the blossom-end of the fruit. Average fruit weight is 300-500 g. Fruit stalk is medium in length and thickness, and centered to slightly off-center. Fruit can be snap-picked with no damage to the pericarp. When the fruit matures, the skin

color changes (while on the tree) from green to black, especially late in the harvest season. Sometimes early in the season, the color of the mature fruit is not uniform, i.e., black with lightly speckled green patches. The change in skin color is faster than in 'Hass'. The peel is fairly thin and leathery, somewhat thicker than that of 'Fuerte', but thinner than that of 'Hass'. The peel separates easily from the flesh in ripe fruit. Seed shape is round to slightly elongated. The seed is small, 10% to 15% of the fruit weight. The flesh is green-yellow and buttery in texture. We found the flavor to be excellent, appreciably nutlike. The flesh shows very slow enzymatic browning after cutting as compared with 'Hass'. Oil percentage when fruits are mature increases from 10% in January to 18% in May on trees that carry a medium crop. The harvest season differs according to the alternate-bearing habit of the tree. In off-years, harvest may start in December, while in on-years it should be delayed until March. Fruit may be left on the tree after the end of the 'Hass' season. Preliminary experiments show that fruit may be stored for 14 days at 5C and 95% RH (Zauberman et al., 1987). Softening at room temperature takes \approx 9 days from harvest. Shelf life is 3 to 5 days.

Since 1984, 'Iriet' has been distributed for experimental purposes to 40 growers throughout Israel. Most of the trees have been topworked on other cultivars. The grafted tree starts to yield in the 2nd year after planting, even without being girdled (Lahav et al., 1986). It is difficult to assess average yield, since most of the trees are just coming into bearing. 'Iriet' has a tendency toward alternate bearing because of the unusual climatic conditions in the last few years. 'Iriet' is being patented and may be obtained from the Agricultural Research Organization, The Volcani Center, Bet Dagan, Israel.

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