



DENOMINATIONS AND SYNONYMS:

(I. Trujillo, D. Barranco, P. Morello)
K-18, K-18,

ORIGIN AND DIFFUSION:

It is the most dominant cultivar in Israeli intensive olive orchards (25%). Some diffusion in some new producing countries like Australia, New Zealand and Argentina.

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PURPOSE: Oil

MORPHOLOGICAL CHARACTERISATION:

Tree	Vigour	Strong
	Growth habit	Upright
	Canopy density	Sparse
Leaf blade	Length	Medium
	Width	Medium
	Radio length/width	Moderately elongated
	Curvature of longitudinal axis	Straight
Fruit	Weight	Medium
	Radio length/width in position A	Very elongated
	Over colour at full maturity	Black
	Symmetry in position A	Weakly asymmetric
	Shape of apex in position A	Acute
	Nipple	Strong
	Shape of base in position A	Truncate
Stone	Ratio length/width	Very elongated
	Weight	Medium
	Symmetry in position A	Weakly asymmetric
	Symmetry in position B	Symmetric
	Number of grooves on basal end	Between 7 and 10
	Distribution of grooves on basal end	Strongly grouped around suture
	Shape of apex in position A	Acute
	Mucron	Absent
	Shape of base in position A	Acute
	Rugosity of surface	Medium



MOLECULAR CHARACTERISATION (SSRs)

UDO-43	DCA3	DCA9	DCA16	GAPU-101
166/175	229/229	170/192	122/144	197/199

AGRONOMICAL CHARACTERISATION AND COMMERCIAL CONSIDERATIONS

The tree (and particularly the fruit) is sensitive to stress caused by a lack of water in summer. Its fruiting potential is very high. Barnea trees are well known and easily recognized by their tall apical dominant tree characteristics. They are vigorous, erect-growing trees with thin fruiting branches and a loose, open crown. Barnea trees are usually intensively cultivated. It has a very high yield with medium rate of alternate bearing. Barnea is propagated from cuttings that root easily and is only grown on its own roots. Flowering is relatively early, as is green maturation. Full black maturation is in mid-season. The oil content in mature Barnea olives is about 18 percent (an average of 2 tons/ha). The quality of Barnea olive oil is accepted as being somewhat lower than the strong Souri oil and other more delicate European olive oils. Barnea trees are highly susceptible to Leopard moth larvae. The trees are well suited to mechanical harvesting using trunk shakers. (Lavee and Wodner 2004, Wiesman 2009).Lavee, S. and M. Wodner (2004). "The effect of yield, harvest time and fruit size on the oil content in fruits of irrigated olive trees (*Olea europaea*), cvs. Barnea and Manzanillo." *Scientia Horticulturae* 99(3): 267-277.Wiesman, Z. (2009). Chapter 7 - Desert-suitable genetic material. *Desert Olive Oil Cultivation*. Z. Wiesman. San Diego, Academic Press: 135-183.

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