



## 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:

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



## MOLECULAR CHARACTERISATION (SSRs)

<b>UDO-43</b>	<b>DCA3</b>	<b>DCA9</b>	<b>DCA16</b>	<b>GAPU-101</b>
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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