

Table S4. Morphotypes differentiated by cluster analysis, constituted by modern supposed wild populations and varieties whose area of cultivation and belonging to a gene pool according to genetic data [21, 54, 55] are presented.

Morphotype / discrimination rate (%)	Pit shape	Main area/Country of cultivation	Main use	Inferred origin in the Mediterranean Basin (nuclear DNA markers)	Maternal lineage of varieties (cpDNA haplotype)
MT1 / 90.48	Round and rather symmetrical pits. Those of Arbequina are larger (size not measured in this study).	Supposed wild populations from various geographical origins and a Spanish variety (Arbequina) whose morphology is considered as primitive, i.e. close to the wild morphotype. "Arbequina" is discriminated from wild populations with a rate of 86.7%.	Oil for Arbequina	Central for Arbequina	-
MT2 / 80.95	Slightly asymmetrical in lateral view with a rounded base and a slightly narrowed apex	4 varieties from Syria, France and Slovenia	Table or mixed use	Eastern for varieties whose origin is known	Eastern for varieties whose origin is known
MT3 / 79.6	Tapered, elliptical, non-acuminate and slightly asymmetric pit in lateral view	1 supposed wild populations and varieties from mixed origin (Greece, Morocco, Spain and France)	The majority used to produce oil, except Semlal	Eastern (1) – Central (1)	Eastern except Megaritiki and 2 varieties whose lineage is unknown
MT4 / 90.63	Slightly acuminate pit with relatively pronounced asymmetry in lateral view	Varieties from various origins (Cyprus, Croatia, Morocco and France)	Oil or mixed use	Eastern (1) - Central (3)	Eastern
MT5 / 88	Weakly acuminate and asymmetrical, essentially in lateral view	2 varieties from the levantine region and 2 westerns (1 from Morocco and 1 from Spain)	Various uses	Mixed	Eastern + 1 unknown lineage
MT6 / 76.67	Weakly acuminate and asymmetrical, essentially in lateral view. Apical tip slightly more pronounced and the centre of gravity shifted towards the apex.	1 supposed wild population and 7 varieties from various areas (Greece, Tunisia, Morocco (2), Spain (2 and France).	Various uses	Western (3), Central (1) or Admixed (1) varieties whose origin is known	Eastern
MT7 / 100	Very tapered and asymmetrical, especially in lateral view, with a centre of gravity located in the middle part or even slightly below.	2 varieties from Lebanon and France	Oil and mixed use	Central or Admixed	Eastern for varieties whose lineage is known

MT8 / 89.7	Elliptical, slightly tapered, relatively symmetrical in dorsal view and asymmetrical in lateral view.	Single variety from Greece	Table	Unknown	Unknown
MT9 / 87.88	Elliptical, slightly tapered, relatively symmetrical pits in dorsal view and asymmetrical pits in lateral view	2 varieties from eastern Mediterranean (Syria and Greece) and 4 from western areas (Italy (2), Spain and Morocco)	Various uses	Central or admixed	Eastern
MT10 / 80.33	Elliptical and slightly asymmetrical in lateral view	3 supposed wild populations (Israel and Tunisia (2)), 4 Greek, 1 Croatian, 2 Tunisian and 1 Italian varieties.	Various uses	Admixed (4), Eastern (2), Central (1)	Eastern
MT11 / 74.6	Elliptical, apex weakly acuminate, slightly asymmetrical in lateral view	3 supposed wild population (Israel and Morocco (2)), 1 from eastern mediterranea (Syria) and 5 from western areas (Italy (3), Tunisia and France.	For oil or mixed use (Besbessi and Aglandau)	Eastern (2), Admixed (3), Western (1)	Eastern except Cayon and Crastu
MT12 / 75.22	Apex more pronounced, center of gravity located towards the base of the pit	1 supposed wild population and varieties mostly from Eastern areas (Levantine region (3), Cyprus (2 synonymous varieties) and France.	Oil or mixed use	Eastern (5) or admixed	Eastern except Olivière
