

Olive Sanz-Cortés et al., in press

Phenological growth stages and BBCH-identification keys of olive tree (*Olea europaea* L.)

Code	Description
Principal growth stage 0: Bud development	
00	Foliar buds at the apex of shoots grown the previous crop-year are completely closed, sharp-pointed, stemless and ochre-coloured (Fig. 1: 00).
01	Foliar buds start to swell and open, showing the new foliar primordia.
03	Foliar buds lengthen and separate from the base.
07	External small leaves open, not completely separated, remaining joined by apices (Fig. 1: 07).
09	External small leaves opening further with their tips inter crossing (Fig. 1: 09)
Principal growth stage 1: Leaf development	
11	First leaves completely separated. Grey-greenish coloured (Fig. 1: 11)
15	The leaves are more separated without reaching their final size.
19	First leaves turn greenish on the upperside. Leaves get the typical variety size and shape.
Principal growth stage 3: Shoot development	
31	Shoots reach 10 % of final size.
33	Shoots reach 30 % of final size (Fig. 1: 33).
37	Shoots reach 70 % of final size.
Principal growth stage 5: Inflorescence emergence.	
50	Inflorescence buds in leaf axiles are completely closed. They are sharp-pointed, stemless and ochre-coloured.
51	Inflorescence buds start to swell on its stem.
52	Inflorescence buds open. Flower cluster development starts (Fig 1: 53).
54	Flower cluster growing
55	Flower cluster totally expanded. Floral buds start to open (Fig 1: 55).
57	The corolla, green-coloured, is longer than calyx (Fig 1: 57).
59	The corolla changes from green to white colour.

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Principal growth stage 6: Flowering

60	First flowers open (Fig 1: 60).
61	Beginning of flowering: 10 % of flowers open.
65	Full flowering: at least 50 % of flowers open (Fig 1: 65).
67	First petals falling.
68	Majority of petals fallen or faded (Fig 1: 68).
69	End of flowering, fruit set, non-fertilized ovaries fallen.

Principal growth stage 7: Fruit development

71	Fruit size about 10 % of final size (Fig 1: 71).
75	Fruit size about 50 % of final size. Stone starts to lignificate (it shows cutting resistance).
79	Fruit size about 90 % of final size. Fruit suitable for picking green olives (Fig 1: 79).

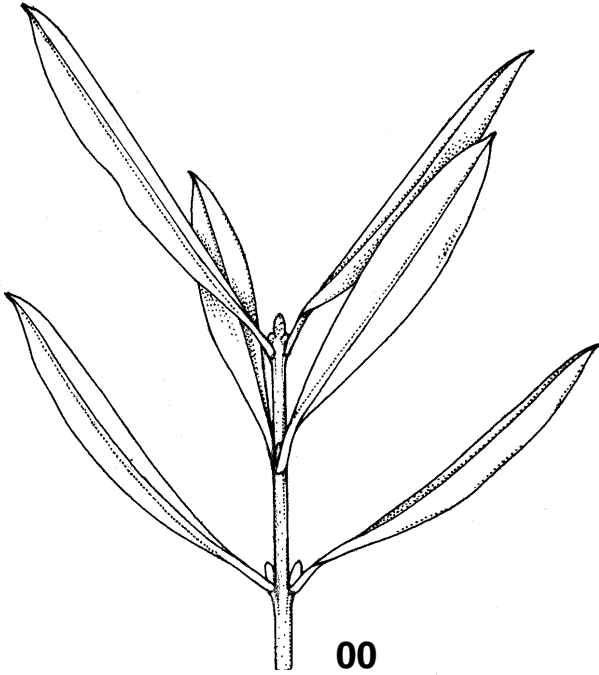
Principal growth stage 8: Maturity of fruit

80	Fruit deep green colour becomes light green, yellowish.
81	Beginning of fruit colouring (Fig 1: 81).
85	Increasing of specific fruit colouring.
89	Harvest maturity: fruits get the typical variety colour, remaining turgid, suitable for oil extraction (Fig. 1: 89).

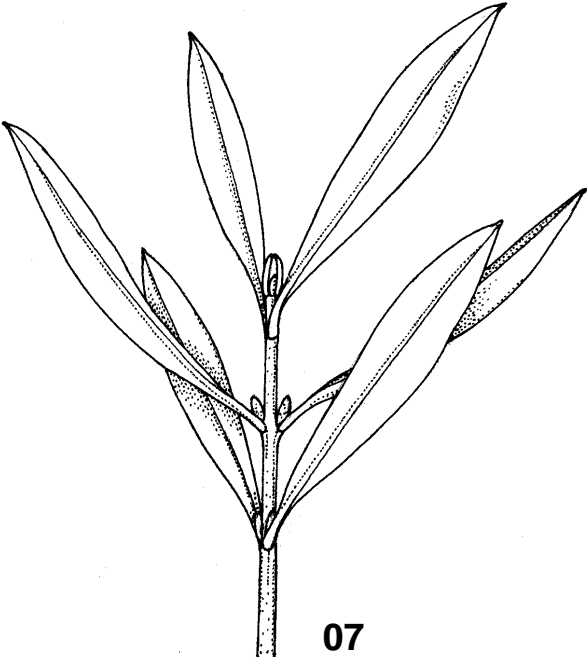
Principal growth stage 9: Senescence

92	Overripe: fruits lose turgidity and start to fall (Fig 1: 92).
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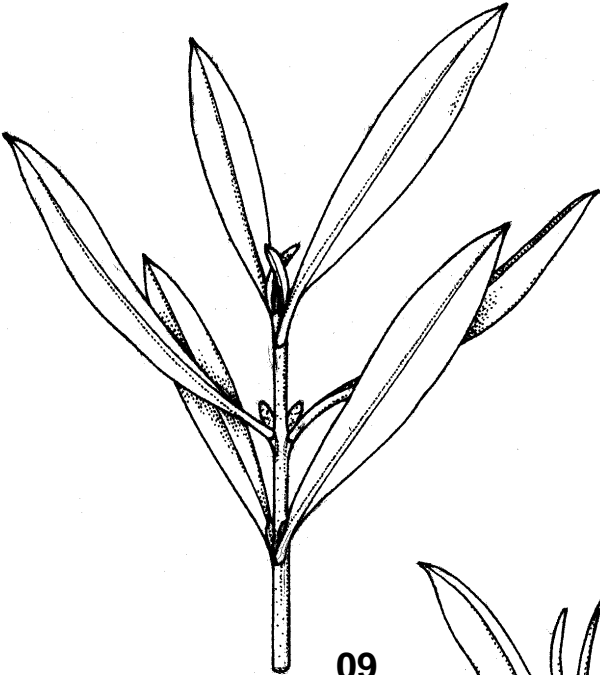
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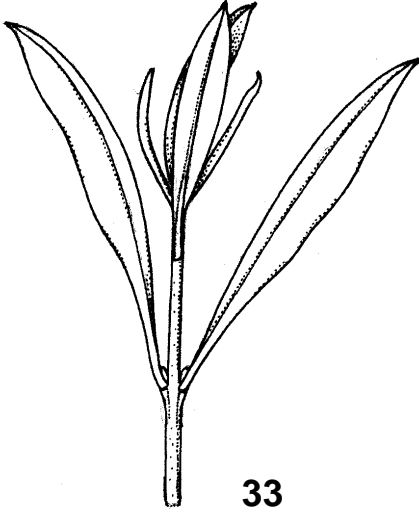
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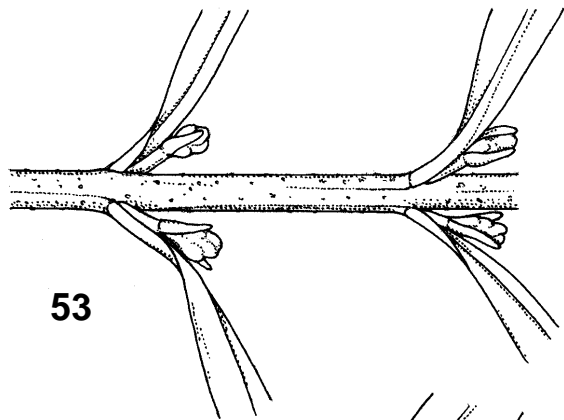
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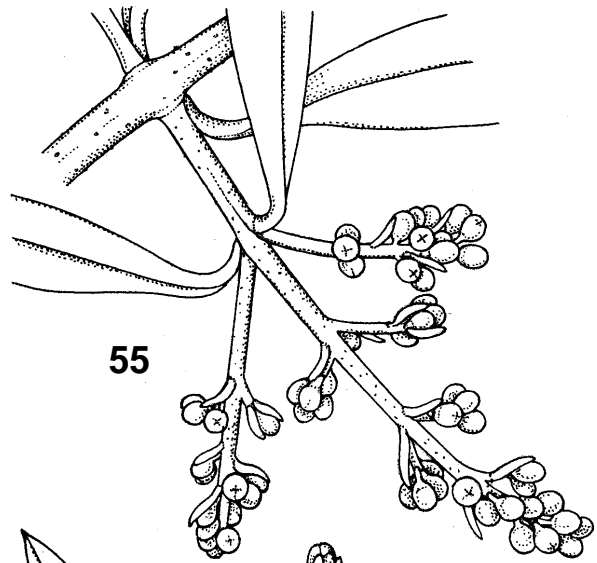
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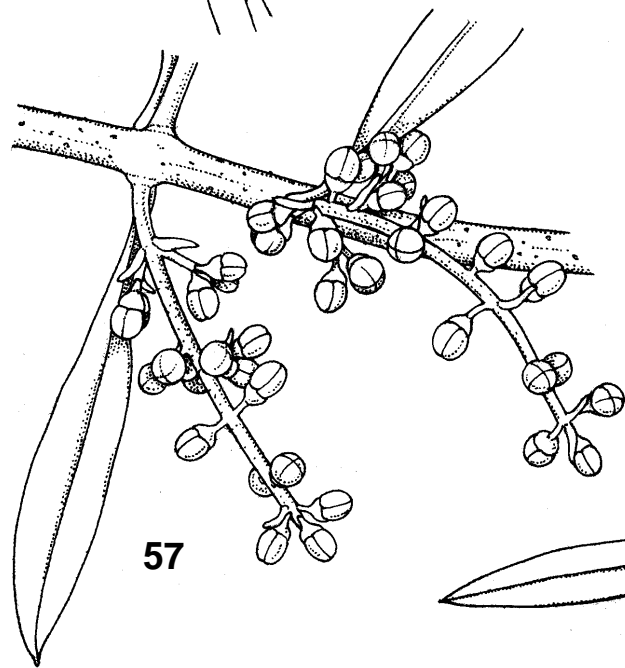
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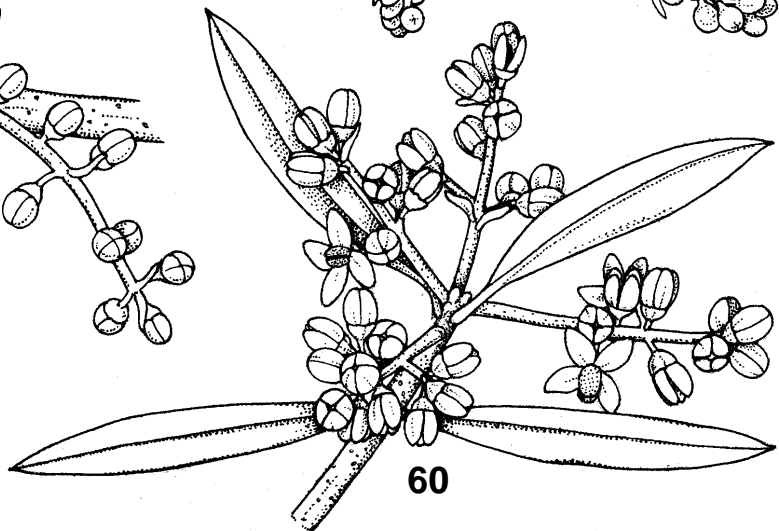
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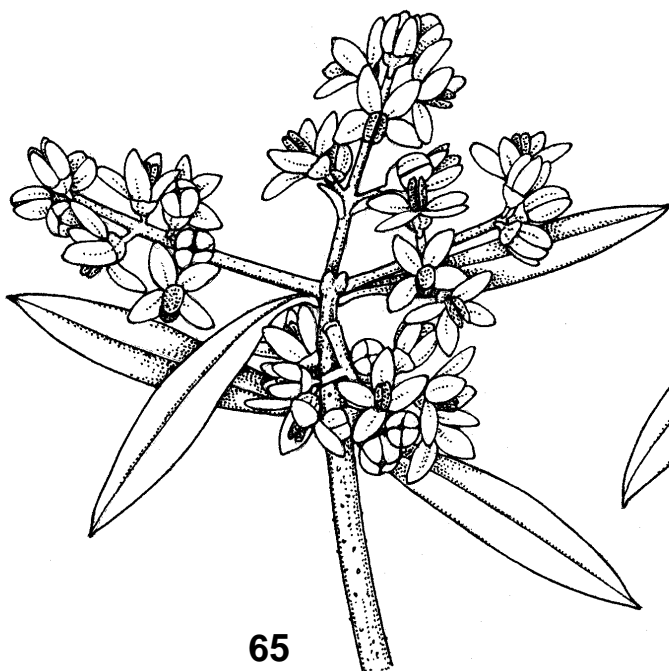
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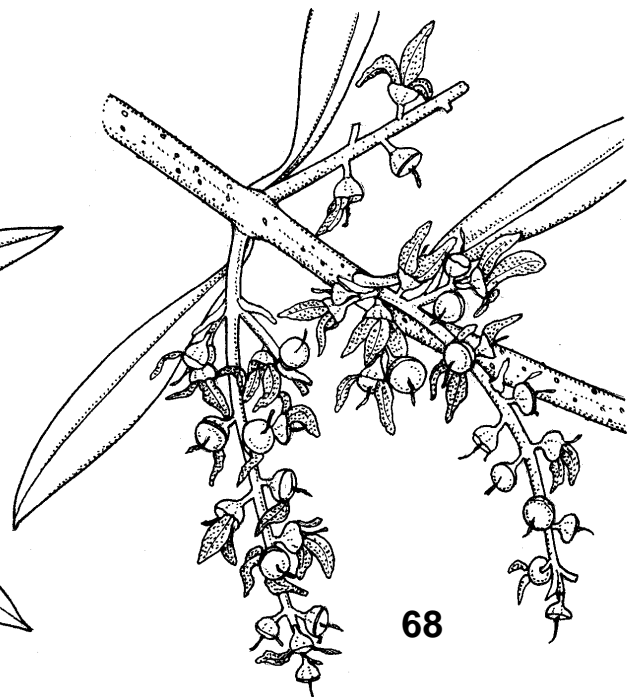
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60



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