



US00PP36778P2

(12) **United States Plant Patent**
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(10) **Patent No.:** **US PP36,778 P2**
(45) **Date of Patent:** **Jul. 1, 2025**

(54) **OLIVE TREE NAMED 'I 100'**

(50) Latin Name: ***Olea europaea***

Varietal Denomination: **I 100**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **18/445,924**

(22) Filed: **Mar. 27, 2024**

(51) **Int. Cl.**

A01H 5/08 (2018.01)

A01H 6/00 (2018.01)

(52) **U.S. Cl.** **USPC** **Plt./158**

(58) **Field of Classification Search**

USPC **Plt./158**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP19,511 P2 12/2008 Navero et al.

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(57) **ABSTRACT**

The new and distinct variety of olive tree variety 'I 100' is provided. The variety can be distinguished by its outstanding features of low vigor, high yield, and high oil content.

6 Drawing Sheets

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Latin name of the genus and species:
Botanical classification: a. Genus—*Olea*. b. Species—*europaea*.

Variety denomination: The new olive tree claimed is of the variety denominated 'I 100'.

REFERENCE TO RELATED APPLICATIONS

Co-pending applications U.S. application Ser. No. 18/445,921 filed Mar. 27, 2024, and U.S. application Ser. No. 18/445,929 filed Mar. 27, 2024, disclose olive tree varieties named 'I 99' and 'I 101', respectively; such applications are related inasmuch as they have the same parentage, similar distinguishing characteristics, and are closely related to the claimed variety.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a new and distinct variety of olive tree, which has been given the variety denomination of 'I 100'.

Background of the Related Art

Olive oil continues to increase in popularity. Accordingly, there is a continuing need to develop new and improved olive oils to meet the increased demand for use in various food types and in cooking. Many olive varieties are self-sterile. As a result, there is a need for the development of new olive varieties which are self-pollination and produce a high yield of new and improved olive oil for commercialization.

SUMMARY OF THE INVENTION

The present invention relates to a new and distinct variety of olive tree, which has been given the variety denomination of 'I 100'. 'I 100' is intended for use for oil production.

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The new olive tree variety is a selection resulting from a sexual cross of olive trees at Córdoba, Spain in 2008 involving a seed parent known as 'Arbosana' (unpatented) and a pollen parent known as 'Chiquitita' (U.S. Plant Pat. No. 19,511 P2).

The selection was subsequently evaluated for 11 years at Córdoba, Spain.

10 Asexual reproduction of the new variety by cutting propagation since 2014 at Córdoba, Spain has demonstrated that the new variety reproduces true to type with all of the morphological characteristics, as herein described, firmly fixed and retained through successive generations of such asexual propagation.

15 Selection criteria were low vigor, high yield, and high oil content.

20 Plants of the new variety differ from plants of the seed parent 'Arbosana' primarily in vigor and growth habit. The new variety has low vigor and a drooping growth habit, similar to that of 'Chiquitita', while 'Arbosana' has a higher vigor and an open growth habit. This new variety stands out for its high production compared to its parents 'Arbosana' and 'Chiquitita', the new variety has an oil production level 25 of 15-18%, which is higher than that of either parent. This variety produces fruit with medium weight which are dark brown to black color, whereas in 'Arbosana' the color is violet at full maturity. 'I-100' has a leaf color similar to 'Arbosana' (yellowish green), whereas 'Chiquitita' has a 30 dark green leaf color. On the other hand, the fruit ripening of 'I-100' is similar to that of 'Arbosana' and around 4 weeks later than 'Chiquitita'.

35 Plants of the new variety differ as shown in Table 1 from the varieties described in co-pending applications Ser. No. 18/445,921 (for Olive Tree Variety Named '199') and Ser. No. 18/445,929 (for Olive Tree Variety Named 'I 101').

TABLE 1

Characteristic	'I 100'	'I 99'	'I 101'
Parentage	'Arbosana' X 'Chiquitita'	'Arbosana' X 'Chiquitita'	'Arbosana' X 'Chiquitita'
Bearing habit	Between creeping and hanging	Between creeping and hanging	Pendant (weeping)
Fruit weight	Low	Low	Low
Color of fruit at full maturity	Dark violet	Black	Dark violet
Fruit symmetry	Symmetrical	Symmetrical	Slightly asymmetrical
Fruit apex shape	Acute	Acute	Obtuse
Fruit protuberance	Absent or slight	Absent or slight	Moderate
Stone length/width ratio	Slightly elongated	Slightly elongated	Slightly elongated
Stone weight	Low	Low	Low
Stone mucron	Present	Present	Present
Stone surface roughness	Slightly present	Slightly present	Slightly present

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying photographic illustrations show the typical appearance of the new variety 'I 100'. The colors are as nearly true as is reasonably possible in a color representation of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description which accurately describes the colors of the new plant.

FIG. 1 is a photograph of the new variety 'I 100', demonstrating fruits and stones.

FIG. 2 is a photograph of the new variety 'I 100', demonstrating spreading growth habit.

FIG. 3 is a photograph of the new variety 'I 100', demonstrating fruit, fruit color, and branching habit.

FIG. 4 is a photograph of the new variety 'I 100', demonstrating fruit and fruit color.

FIG. 5 is a photograph of the new variety 'I 100', demonstrating behavior when grown in a hedge line.

FIG. 6 is a photograph of the new variety 'I 100', demonstrating behavior when grown in a hedge line.

DETAILED BOTANICAL DESCRIPTION

The following detailed description sets forth the distinctive characteristics of 'I 100'. The data which define these characteristics were collected from asexual reproductions of the original selection. Dimensions, sizes, colors, and other characteristics are approximations and averages set forth as accurately as possible. The plant history was taken on plants approximately 5 years and 8 months of age, and the descriptions relate to plants grown in Córdoba, Spain. Color notations are in reference to the standard Color Chart is that of The Royal Horticultural Society (R.H.S. Colour Chart, 2015 edition. London, England).

Classification:

- Latin name*.—*Olea europaea* L.
- Common name*.—Olive tree.
- Variety name*.—'I 100'.

Parentage:

- Female parent*.—'Arbosana' (unpatented).
- Male parent*.—'Chiquitita' (U.S. Plant Pat. No. 19,511 P2).

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PLANT

General:

- Height*.—245 cm (average).
- Width*.—150 cm (average).
- Growth habit*.—Drooping.
- Vigor*.—Low-medium.
- Tree canopy density*.—Dense.

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ROOTS

General:

- Rooting habit*.—Normal-Dense
- Texture*.—Fibrous.
- Color designation (young roots)*.—155A.
- Color designation (old roots)*.—157A.

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STEMS

General:

- Branching habit*.—Spreading.
- Trunk*.—i. Circumference — 8 cm. ii. Surface texture — Smooth. iii. Color — 199A.
- Main stems*.—i. Quantity — Dependent on the management and pruning. ii. Aspect — Smooth. iii. Strength — Robust. iv. Cross-section — Rounded Small. v. Circumference — 6 cm (diameter) at 50 cm. vi. Surface texture (young stems) — Smooth. vii. Surface texture (mature stems) — Smooth with lenticels. viii. Color designation (young stems) — 157A. ix. Color designation (mature stems) — 157B. x. Lenticels — Many, 1 mm long, 0.5 mm wide. xi. Internode length — Ranging from 5-12 cm.
- Lateral branches*.—i. Quantity — Abundant. ii. Cross-section — Oval. iii. Length — 80-180 cm. iv. Internode length — Ranging from 2-3 cm. v. Texture — Smooth with raised lenticels. vi. Aspect — Outward. vii. Strength — Flexible. viii. Color (young lateral branches) — 196D. ix. Color (mature lateral branches) — 197D. x. Pubescence — None.

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FOLIAGE

General:

- Arrangement*.—Opposite.
- Attachment*.—Petiolate.
- Division*.—Simple.
- Lamina*.—i. Length — Average 50 mm. ii. Width — Average 10 mm. iii. Thickness — 1.5-2 mm. iv. Shape — Acuminate. v. Aspect — Straight. vi. Apex — Acuminate. vii. Base — Cuneate. viii. Margin — Entire (smooth). ix. Texture of upper surface — Smooth. x. Texture of lower surface — Slightly pubescent. xi. Color of young lamina (upper surface) — 141B. xii. Color of young lamina (lower surface) — 142B. xiii. Color of mature lamina (upper surface) — 143B. xiv. Color of mature lamina (lower surface) — 142B. xv. Venation pattern — Pinnate.

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r. *Petiole*.—i. Length — 2 mm. ii. Diameter — 1.2 mm. iii. Texture — Smooth. iv. Strength — Medium. v. Color — 142B.

INFLORESCENCE

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General:

s. *Type*.—Panicle.t. *Natural flowering season*.—Spring.u. *Bloom time*.—Abundant flowering in 1-10 days at 10 end of April.v. *Length*.—2.5-6.5 cm.w. *Width*.—1-3 cm.x. *Quantity of florets per inflorescence*.—20-25.y. *Peduncle*.—i. Length — 2.5-6.5 cm. ii. Width — 1.2 cm. iii. Texture — Smooth. iv. Strength — Medium. v. Color — 141D. vi. Diameter — 1.2 cm.z. *Pedicels*.—i. Length — 2 mm. ii. Width — 1 mm. iii. Texture — Smooth. iv. Strength — Medium. v. 20 Color — 141D.

FLOWER BUD

General:

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aa. *Shape*.—Globular.bb. *Length*.—2-4 mm.cc. *Width*.—2 mm.dd. *Color*.—157A.

FLOWER

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General:

ee. *Type*.—Perfect.ff. *Shape*.—Cruciform.gg. *Persistence*.—Medium.hh. *Fragrance*.—Smooth and intoxicating.ii. *Diameter*.—3-6 mm.jj. *Height*.—2-3 mm.kk. *Calyx*.—i. Quantity of sepals — 4. ii. Arrangement — Rotate. iii. Diameter — 1 cm.ll. *Sepals*.—i. Sepal fusion-Fused. ii. Length — 1 mm.

iii. Width — 1 mm. iv. Shape — Bell shape. v. Apex — Obtuse. vi. Base — Cuneate. vii. Margin — Entire. viii. Texture — Smooth. ix. Color (upper surface) — 149A. x. Color (lower surface) — 149A.

mm. *Petals*.—i. Arrangement — Rotate. ii. Quantity — 4. iii. Fusion — Sympetalous petals fused at the proximal half of the corolla. iv. Shape — Acute. v. Apex — Acute. vi. Base — Cuneate. vii. Margin —

Entire. viii. Texture — Smooth. ix. Color when opening (upper surface) — NN155D. x. Color when opening (lower surface) — NN155D. xi. Color when fully opened (upper surface) — NN155D. xii. Color when fully opened (lower surface) — NN155D. xiii. 55 Color fading — None.

REPRODUCTIVE ORGANS

General:

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nn. *Androecium*.—i. Stamen quantity — 2. ii. Filament length — Approximately 0.75 mm. iii. Filament color — 130B. iv. Anther attachment — Basifixed. v. Anther shape — Hemispherical. vi. Anther size — 1 mm. vii. Anther color — 2A. viii. Abundance of pollen — Abundant. ix. Pollen color — 2A.

oo. *Gynoecium*.—i. Pistil quantity — 1. ii. Stigma shape — Bifid cone shape. iii. Stigma length — Approximately 0.75 mm. iv. Stigma color — 145D. v. Style size — Approximately 0.75 mm. vi. Style color — 145D. vii. Ovary position — Superior. viii. Ovary shape — Round. ix. Ovary diameter — Approximately 0.75 mm. x. Ovary color — 145D.

SEED AND FRUIT

General:

pp. *Fruit*.—i. Date of maturity — November-December. ii. Size — Medium. iii. Weight — 1.50 g (medium). iv. Diameter — 15 mm (medium). v. Length — 18 mm (medium). vi. Form — Ovoidal. vii. Suture — None. viii. Stem cavity — Medium. ix. Stem — 1.0 cm length, 1.0 mm diameter. x. Caliper — Medium. xi. Apex — Slightly. xii. Pistil point — Obscure. xiii. Skin thickness — Less than 1 mm. xiv. Skin texture — Smooth. xv. Skin tendency to crack — None. xvi. Skin color — 83A. xvii. Flesh color — 158C. xviii. Pit color — 144C. xix. Oil/juice production — 1,200 grams of oil per plant. xx. Flavor — Very good organoleptic characteristics and is characterized by being fruity and sweet with a fairly balanced bitterness and spiciness. xxi. Ripening — Evidenced by a gradual change in coloration, which commences at the apex and progresses towards the base.

qq. *Stone*.—i. Quantity — 1. ii. Shape — Ovate. iii. Type — Slightly asymmetric. iv. Fibers — None. v. Weight — 0.32 g (medium). vi. Length — 14 mm (medium). vii. Width — 9 mm (medium). viii. Thickness — 9 mm. ix. Apex — Rounded. x. Base — Truncate. xi. Color — 162B. xii. Texture — Slightly grooved. xiii. Mucron — Present. xiv. Suture — Present. xv. Sides — Round. xvi. Ridges — Absent. xvii. Tendency to split — None.

DEVELOPMENT

General:

a. *Flowering season*.—1-10 days during May.b. *Harvesting season*.—7 months from flowering to harvest.c. *Time to produce a fruit bearing tree*.—3 years.d. *Chilling requirements*.—Average/typical for olives.e. *Plant/fruit disease resistance*.—i. *Verticillium (Verticillium dahliae)* — Moderately Resistant. ii. *Tuber-culosis (Pseudomonas savastanoi)* — Moderately Resistant. iii. *Olive leaf spot (Spilocaea oleagina)* — Moderately Resistant.f. *Fruit market use*.—Oil with intense fruitiness and apple-green color. It has aromas of banana, apple and hints of almond shells. It is sweet and balanced on the palate, slightly bitter and slightly spicier.g. *Fruit yield*.—5-20 kg/tree, 6,000-22,000 kg of fruit/ha.h. *Hardiness*.—Preferably adapted between 30 and 45 degrees on the north and south meridians. 2023 USDA Plant Hardiness Zone Map: 8a-11b.

The new variety 'I 100' has not been observed under all possible environmental conditions to date. Accordingly, it is possible that the phenotypic expression may vary somewhat with changes in light intensity and duration, cultural practices, and other environmental conditions.

The invention claimed is:

1. A new and distinct variety of olive tree named 'I 100', as illustrated and described herein.

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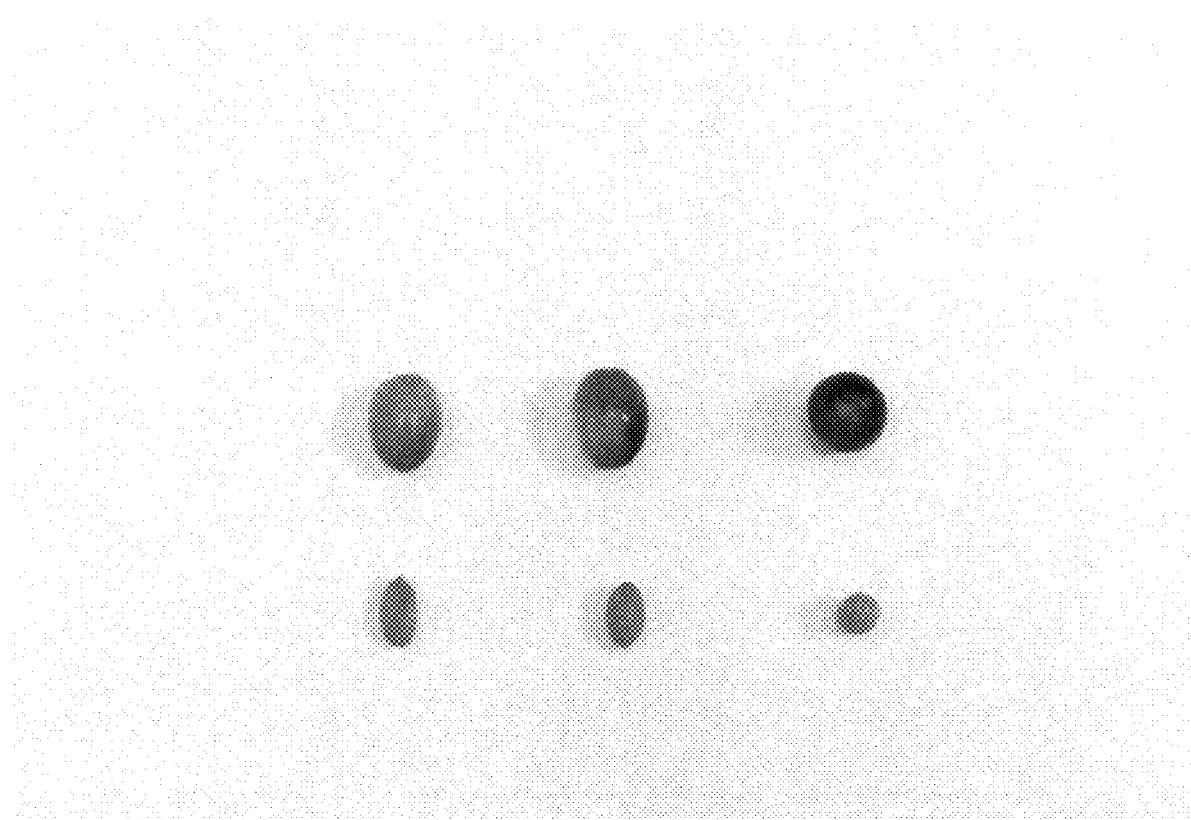


FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6