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(54) **OLIVE TREE NAMED 'I 73'**

(50) Latin Name: *Olea europaea*
Varietal Denomination: **I 73**

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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.

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

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See application file for complete search history.

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(57) **ABSTRACT**

The new and distinct variety of olive tree variety 'I 73' is provided. The variety can be distinguished by its outstanding features of spreading growth habit, high yield, and high oil production.

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 73'.

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 73'.

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 73'. 'I 73' is intended for use for oil production.

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 'Arbequina' (unpatented) and a pollen parent known as 'Picual' (unpatented).

The selection was subsequently evaluated for 10 years at Córdoba, Spain.

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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.

Selection criteria were spreading growth habit, low bearing, high yield, and high oil production.

Plants of the new variety differ from plants of the seed parent 'Arbequina' primarily in the growth habit, oil yield and fruit maturation. The growth habit of 'Arbequina' is spreading while 'I 73' is drooping. The yield of 'I 73' is 2-4% higher than 'Arbequina'. The time until fully ripe fruit of 'I-73' is about one week later than 'Arbequina'. Plants of the new variety differ from plants of the pollen parent 'Picual' primarily in vigor, growth habit, and fruit maturation. The growth habit of 'Picual' is upright while 'I 73' is drooping. 'I 73' has weak vigor compared to 'Picual' which has medium-strong vigor. The time until fully ripe fruit of 'I-73' is about three weeks earlier than 'Picual'. This new variety stands out for its high production compared to its parents 'Arbequina' and 'Picual'. This variety produces fruit with medium weight which are colored dark violet at full maturity. The fruit size of 'I 73' is notably larger (>0.5-1 g) than 'Arbequina' and is similar in size to 'Picual'.

Plants of the new variety differ from the varieties mentioned in co-pending application Ser. No. 18/445,919 (for Olive Tree Variety Named 'I 72'), Ser. No. 18/445,920 (for Olive Tree Variety Named 'I 74'), and Ser. No. 18/445,927 (for Olive Tree Variety Named 'I 24'). 'I 73' differs from 'I 72', 'I 74' and 'I 24' with a higher fat yield of the fruit, and a higher yield between 2-2.5% compared to the other three varieties. In terms of growth habit, it has an open and upright growth habit, very similar to that of 'I 72', while 'I 74' has an open growth habit and 'I 24' has a weeping growth habit.

'I 73' has medium vigor, very similar to that of 'I 74', while 'I 72' has medium-low vigor, and 'I 24' has low vigor.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying photographic illustrations show the typical appearance of the new variety 'I 73'. 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 73', demonstrating the behavior of the variety when grown in a hedge line.

FIG. 2 is a photograph of the new variety 'I 73', demonstrating fruit size, fruit color, and branching habit.

FIG. 3 is a photograph of the new variety 'I 73', demonstrating leaves.

FIG. 4 is a photograph of the new variety 'I 73', demonstrating a productive branch bearing fruit.

FIG. 5 is a photograph of the new variety 'I 73', demonstrating fruits and stones. Left and center depict the side view. Right depicts stalk end view.

FIG. 6. is a photograph of the new variety 'I 73', demonstrating fruits and stones at an immature, medium maturity, and mature stage. Left and center depict the side view. Right depicts stalk end view.

DETAILED BOTANICAL DESCRIPTION

The following detailed description sets forth the distinctive characteristics of 'I 73'. The datum which defines these characteristics was 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:

- a. *Latin name*.—*Olea europaea* L.
- b. *Common name*.—Olive tree.
- c. *Variety name*.—'I 73'.

Parentage:

- a. *Female parent*.—'Arbequina' (unpatented).
- b. *Male parent*.—'Picual' (unpatented).

PLANT

General:

- a. *Height*.—250 cm (average).
- b. *Width*.—170 cm (average).
- c. *Growth habit*.—Spreading.
- d. *Vigor*.—Medium.
- e. *Tree canopy density*.—Medium.

ROOTS

General:

- f. *Rooting habit*.—Normal-Dense.
- g. *Texture*.—Fibrous.

- h. *Color designation (young roots)*.—155A.
- i. *Color designation (old roots)*.—157A.

STEMS

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General:

- j. *Branching habit*.—Spreading.
- k. *Trunk*.—i. Circumference — 8 cm. ii. Surface texture — Smooth. iii. Color — 199A.
- l. *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.
- m. *Lateral branches*.—i. Quantity — High. ii. Cross-section — 10-20 cm. 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.

FOLIAGE

General:

- n. *Arrangement*.—Opposite.
- o. *Attachment*.—Petiolate
- p. *Division*.—Simple.
- q. *Curvature*.—Straight.
- r. *Lamina*.—i. Length — 65 mm (average). ii. Width — 15 mm (average). 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.
- s. *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:

- t. *Type*.—Panicle.
- u. *Natural flowering season*.—Spring.
- v. *Flowering habit*.—1-10 days during May.
- w. *Length*.—2.5-6.5 cm.
- x. *Width*.—1-3 cm.
- y. *Quantity of florets per inflorescence*.—20-25.
- z. *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.

aa. *Pedicels*.—i. Length — 2 mm. ii. Width — 1 mm. iii. Texture — Smooth. iv. Strength — Medium. v. Color — 141D.

FLOWER BUD

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General:

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

FLOWER

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General:

ff. *Type*.—Perfect.
gg. *Shape*.—Cruciform.
hh. *Persistence*.—Medium.
ii. *Fragrance*.—Smooth and intoxicating.
jj. *Diameter*.—3-6 mm.
kk. *Height*.—2-3 mm.
ll. *Calyx*.—i. Quantity of sepals — 4. ii. Arrangement — Rotate. iii. Diameter — 1 cm.
mm. *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) — 18A. x. Color (lower surface) — 18A.
nn. *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. Color fading — None.

REPRODUCTIVE ORGANS

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General:

oo. *Androecium*.—i. Stamen quantity — 2. ii. Filament length — Approximately 0.75 mm. iii. Filament color — 17D. 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.
pp. *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

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General:

qq. *Fruit*.—i. Date of maturity — November-December. ii. Size — Medium. iii. Weight — 1.50 g

(medium). iv. Diameter — 12.5 mm (medium). v. Length — 18 mm (medium). vi. Form — Elongated. vii. Suture — None. viii. Stem cavity — Medium. ix. Stem — Medium. x. Caliper — Medium. xi. Apex — Rounded. xii. Pistil point — Obscure. xiii. Skin thickness — Less than 1 mm. xiv. Skin texture — Smooth. xv. Skin tendency to crack — None. xvi. Skin color — 140C. xvii. Flesh color — 158C. xviii. Pit color — 144C. xix. Oil/juice production — 1,000-3,000 kg of olive oil per hectare. xx. Flavor — Different/Excellent. xxi. Ripening — Medium. xxii. Nipple Intensity — Absent. xxiii. Color at full maturity — N92A.

rr. *Stone*.—i. Quantity — 1. ii. Shape — Ovate. iii. Type — Slightly asymmetric. iv. Fibers — None. v. Weight — 0.29 g (medium). vi. Length — 16 mm (medium). vii. Width — 8 mm (medium). viii. Thickness — 8 mm. ix. Apex — Acute. 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. xviii. Number of grooves on basal end — >10. xix. Distribution of grooves on basal end — Strongly grouped around suture.

DEVELOPMENT

General:

a. *Flowering season*.—14 days during April.
b. *Harvesting season*.—7 months since flowering to harvest.
c. *Time to produce a fruit bearing tree*.—2 years.
d. *Chilling requirements*.—Average/typical for olives.
e. *Hardiness*.—Average/typical for olives.
f. *Plant/fruit disease resistance*.—i. *Repilo* (*Cyclococnium oleaeaginea*) — Resistant. ii. *Verticillium* (*Verticillium dahliae*) — Moderately Resistant. iii. *Tuberculosis* (*Pseudomonas savastanoi*) — Tolerant. iv. *Cucumovirus* (CMV) (*Cucumber mosaic virus*) — Resistant. v. *Cherry leaf roll virus* (CLRV) (*Nepovirus avii*) — Resistant. vi. *Strawberry latent ringspot virus* (SLRSV) (*Strralarivirus fragariae*) — Resistant. vii. *Arabis mosaic virus* (ARMV) (*Nepovirus arabis*) — Resistant. viii. *Olive leaf spot* (*Spilocaea oleagina*) — Moderately Resistant.
g. *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.
h. *Fruit yield*.—In hedgerow system 5-15 kg of fruit/tree or 8,000-16,000 kg of fruit/ha.

The new variety 'I 73' 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 73', as illustrated and described herein.

* * * * *



FIG. 1



FIG. 2



FIG. 3

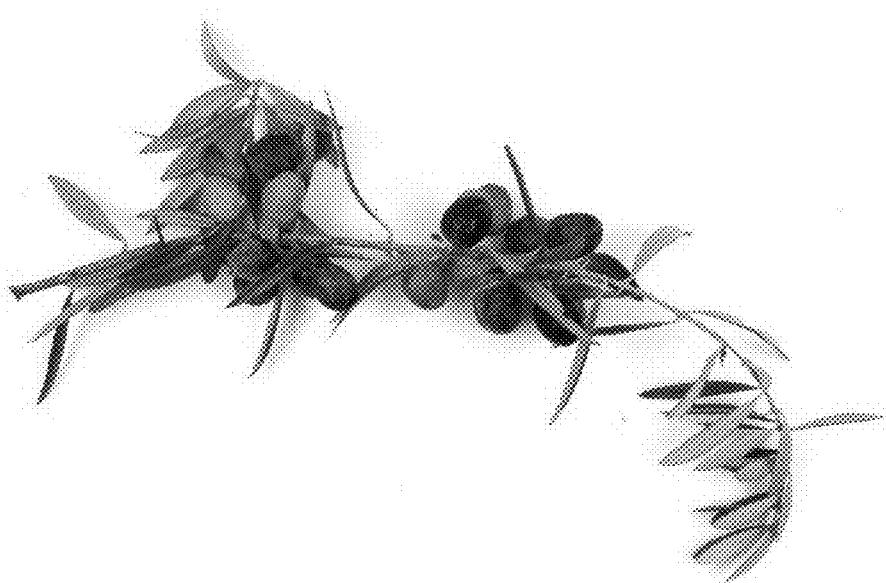


FIG. 4

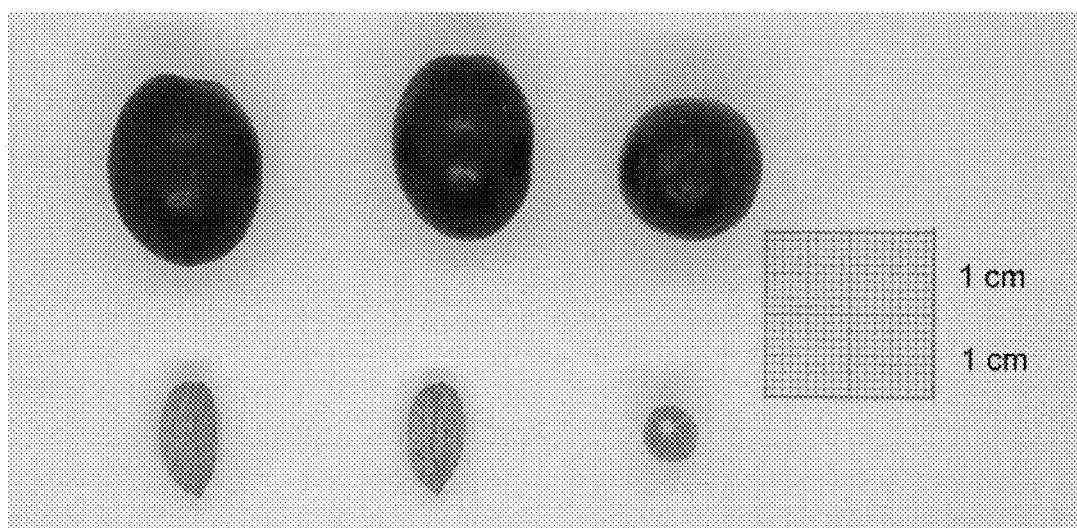


FIG. 5



FIG. 6