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Pinochet

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(54) **VARIETY OF PEACH-ALMOND TREE**
NAMED 'NANOPAC'

(50) Latin Name: [(*Prunus dulcis*×*P. persica*)×(*P. dul-*
cis×*P. persica*)]
Varietal Denomination: **Nanopac**

(75) Inventor: **Jorge Pinochet**, Barcelona (ES)

(73) Assignee: **Agromillora Iberia, S.L.**, Barcelona
(ES)

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patent is extended or adjusted under 35
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(58) **Field of Classification Search** **Plt./180,**
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Primary Examiner—Kent L Bell

(74) *Attorney, Agent, or Firm*—The Webb Law Firm

(57) **ABSTRACT**

A new and distinct hybrid peach-almond tree used as a root-
stock that exhibits root-knot nematode resistance and com-
patibility with peach, nectarine, almond, and plum varieties.

3 Drawing Sheets

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Botanical classification: [(*Prunus dulcis*×*P. persica*)×(*P.*
dulcis×*P. persica*)].

Varietal denomination: 'Nanopac'.

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cultivar
of peach-almond hybrid [(*Prunus dulcis*×*P. persica*)×(*P. dul-*
cis×*P. persica*)] used as a rootstock known by the varietal
name 'Nanopac'. The new variety was discovered in Barce-
lona, Spain in 2000 as a result of a planned breeding program.
The new variety is the result of a cross between 'Felinem'
(*Prunus dulcis*×*P. persica*) (female parent, unpatented) and
an unnamed plant from the cross of 'Marcona'×'Nemaguard'
(male parent, unpatented). The purpose of the breeding pro-
gram was to develop rootstocks that are adaptive to Mediter-
ranean conditions, with low to medium vigor, low chilling
requirements, a tolerance to calcareous soils, and good pro-
ductivity. The new variety exhibits similar good tolerance to
calcareous soils, moderate root-knot nematode resistance,
and low chilling requirements to both parents, but differs
from both parents in its almond-like leaves, medium vigor,
and the fact that it tolerates waterlogging conditions better.
Further, the new variety has similar green leaves, productivity
and root-knot nematode resistance to 'Nemaguard' (unpat-
ented), but differs from 'Nemaguard' in its almond-like
leaves, medium vigor, and tolerance to iron chlorosis. The
new variety has been trial and field tested and has been found
to retain its distinctive characteristics and remain true to type
through successive propagations. The following characteris-
tics distinguish 'Nanopac' from other varieties known to the
breeder:

1. Medium vigor with a small trunk cross-section area;
2. Almond-like leaves;
3. No suckering;
4. Better tolerance to alkaline soils and salinity than most
peach rootstocks;
5. Moderate resistance to root-knot nematodes (*Meloid-*
ogyne spp.);

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6. Induces early fruit maturation in peach varieties; and
7. Low chilling requirements.

DESCRIPTION OF THE DRAWINGS

The accompanying photographic drawings illustrate the
new variety with the color being as nearly true as is possible
with color illustrations of this type:

- FIG. 1 shows the flowers of the new variety;
FIG. 2 shows the leaves of the new variety; and
FIG. 3 is a close-up view of a bud of the new variety.

DESCRIPTION OF THE PLANT

The following detailed description sets forth the character-
istics of the new cultivar. The data which defines these char-
acteristics was collected under natural daylight on plants
produced by asexual reproductions via in vitro propagation
carried out in Barcelona, Spain. The plants were grown under
normal field conditions with drip irrigation in 5 and 40 liter
containers. Color designations are presented with reference
to the "Dictionary of Color" by A. Maerz and M. Rea Paul,
Second Edition (1950).

TREE

- Age: 8 years.
Size: 2.7 meters tall.
Vigor: Medium.
Density: Low.
Form: Compact.
Production: Abundant.
Growth type: Upright.
Bearing: Non-fruit bearing.
Pathogen resistance:
Fungal disease.—Oidium.
Insects.—Unknown.
Mites.—Unknown.
Viruses.—Unknown.

Other diseases.—Root-knot nematodes (*Meloidogyne* spp.).

Rootstock performance:

Root sprouts (suckering).—Not present.

Anchorage.—Good with a big, fibrous root system. 5

Compatibility.—Compatible with peach, nectarine, almond, and plum varieties.

Vigor.—Medium (20-25% less than ‘Nemaguard’).

Trunk:

Size.—Reduced trunk cross-sectional area; variable 10
from 13 to 15 cm. in diameter.

Surface texture.—Smooth with horizontal lenticels.

Bark color.—Plate 6, A 7.

Lenticels.—Length: 3 to 5 mm. Width: 1 to 1.5 mm.
Color: Plate 53, A 1 (Gull). Density: Highly abundant. 15

Branches:

Diameter.—Variable; from 0.5 to 2 cm. in the same season.

Surface texture.—Smooth in the current season with minor scarfskin as maturity advances. 20

Color.—Plate 14, A 3 (Sandy Beige).

Form.—Circular in diameter.

Average angle.—Acute.

Bud arrangement.—Helicoidal throughout the branch.

Lenticels.—Length: 2 to 4 mm. after the second year of 25
growth. Width: 0.5 to 1 mm. Shape: Elongated horizontally. Density: Medium to high as maturity advances. Color: Plate 46, A 1 (Cemetery Natural Grey).

Leaves: 30

Length.—10 to 12 cm.

Width.—2.5 to 3 cm.

Form.—Lanceolate.

Texture.—Smooth.

Thickness.—Medium. 35

Base.—Acute.

Apex.—Acute.

Margin.—Crenate.

Pubescence.—Upper surface: Absent. Lower surface: Absent. 40

Color.—Young leaves: Upper surface: Plate 21, L 7. Lower surface: Plate 20, I 6. Mature leaves: Upper surface: Plate 22, K 7 (Spinach Green). Lower surface: Plate 21, H 6.

Petiole.—Shape: Straight with a central groove along the 45
upper side with 1 or 2 very small sized nectaries near the base of the leaf. Length: 7 to 10 mm. Diameter: 1 to 1.5 mm. Color: Plate 20, J 3 (Shadow Green).

Veins.—Venation type: Tree type disposition. Color: Upper surface: Plate 20, L 3 (Certosa). Lower surface: Plate 20, H 1.

Flower buds:

Pedice.—Length: 1 to 2 mm. Diameter: 0.5 to 1 mm. Color: Plate 39, A 2 (Jack Rabbit).

Bud.—Length: 8 to 10 mm. Width: 6 to 8 mm. Shape: Ovoid. Color: Plate 53, B 2 (Mist).

Flowers:

Bloom timing.—February 20th in Barcelona, Spain.

Blooming period.—10 to 15 days.

Pollination requirements.—None.

Number of flowers per raceme.—Normally individual, occasionally 2 present.

Fragrance.—Low in strength and rose-like.

Petals.—Number: 5. Length: 12 to 16 mm. Width: 12 to 14 mm. Shape: Rounded. Aspect: Cupped upwards and inwards. Margin: Undulate. Texture and appearance: Smooth.

Color.—When opening: Upper surface: Plate 50, A 1. Lower surface: Plate 50, B 1. Fully opened: Upper surface: Plate 49, B 1. Lower surface: Plate 49, B 1.

Sepals.—Shape: Elliptic. Margin: Smooth. Texture: Pubescent. Length: 9 to 10 mm. Width: 4 to 5 mm. Color: Upper surface: Plate 54, J 6 (Rhododendron). Lower surface: Plate 55, E 2 (Mauve Castor).

Stamens.—Number (per flower): 25 to 30. Filament length: 11 to 14 mm.

Anthers.—Shape: Kidney-shaped. Length: 1 to 1.3 mm. Color: Plate 13, E 4 (Sudan).

Pollen.—Color: Plate 12, J 5 (Lightstone). Amount: Abundant.

Pistils.—Length: 11 to 13 mm.

Style.—Length: 9 to 10 mm. Color: Plate 5, J 6 (Harvard Crimson Jockey).

Stigma.—Shape: Rounded. Color: Plate 14, G 4 (Hemp).

Fruit description: No fruit produced to date.

Use: As a rootstock for peach, nectarine, and almond varieties.

Winter hardiness: Hardy (under the conditions in Spain).

Bud winter hardiness: Medium.

Drought tolerance: Moderately tolerant.

I claim:

1. A new and distinct variety of hybrid peach-almond tree, as illustrated and described herein.

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Fig. 1



Fig. 2



Fig. 3