

# Genetics for an efficient agriculture

**ROOTPAC®**



Improved  
genetics  
and maximum  
sanitary quality

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In 1998, Agromillora started new prunus breeding program to obtain new rootstocks better adapted to stresses and with desirable agronomic characteristics to meet the needs of the industry.

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HIGH PRODUCTIVITY

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LESS VIGOR

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BETTER SOIL ADAPTATION

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TOLERANCE TO DISEASES

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Rootpac Series was the result of this program >





AGROMILLORA —Rootpac

# ROOTPAC®



**ROOTPAC** series comes from the Agromillora breeding program developed between 1996 and 2012 directed to obtain new *Prunus* rootstocks. The search for these rootstocks focused on responding to the needs of a fruit industry in constant evolution and development towards the efficiency and intensification of plantations.



**Rootpac® 20**

- Ideal for SHD
- Extensive compatibility
- Low vigour



**Rootpac® 40**

- Early ripening
- Improves the size of fruit
- Controls vigour



**Rootpac® R**

- Heavy or replanted soils
- Extensive compatibility
- High survival rate on soil with Armillaria and Rosellinia

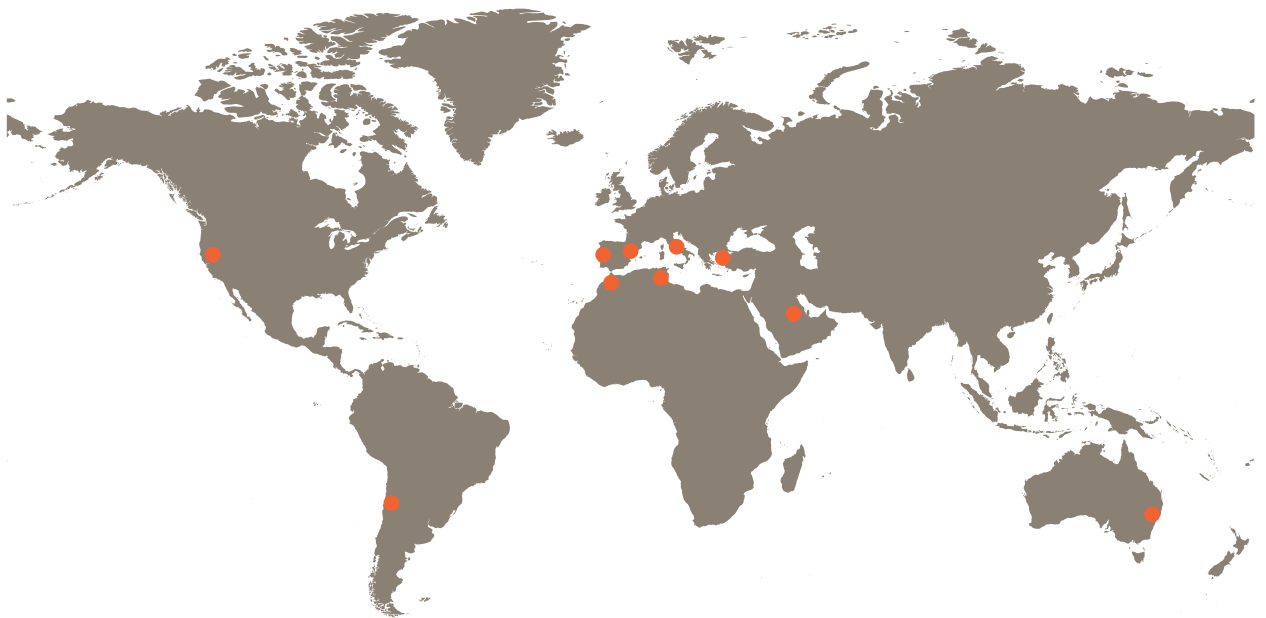
Innovation through research has been one of the priorities of our organization. The implementation of advanced biotechnological methods in the nursery industry has allowed our company to guarantee a high-quality product, adapted to compete in a global market.





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Our global presence has permitted our researchers to adapt and obtain products that fulfill the needs of specific agro-climatic regions and markets.



# ROOTPAC<sup>®</sup> 20

## Highly productive dwarfing rootstocks

### General information

- **Cross:** Plum hybrid (P. besseyi x P. cerasifera).
- **Origin:** Agromillora rootstock breeding program.

### Resistances and tolerances

- **Cold:** Tolerant.
- **Root asphyxia:** Highly tolerant.
- **Chlorosis:** Moderately tolerant.
- **Salinity:** Moderately tolerant.
- **Root-knot nematodes:** Moderately resistant.
- **Root-lesion nematodes:** Unknown.
- **Agrobacterium tumefaciens:** Sensitive.
- **Rosellinia necatrix:** Tolerant.
- **Armillaria mellea:** A certain degree of tolerance is sensed.

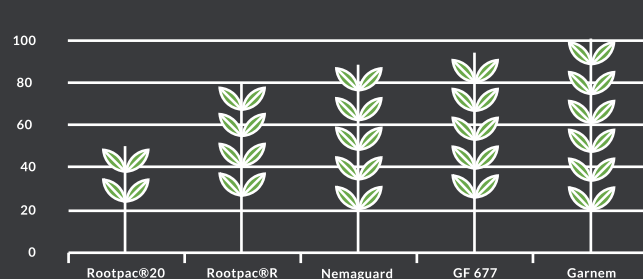




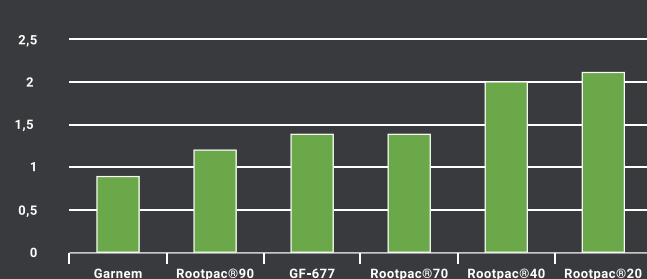
## Agronomic characteristics

- **Compatibility:** Good with varieties of peach, nectarine, Japanese plum and almond. Compatible with some varieties of apricot, although more information is needed about its affinity with more varieties.
- **Vigor:** Low, around 40-50% less than GF-677.
- **Structure:** Erect and compact.
- **Size:** Good fruit size and quality. Early ripening with most varieties.
- **Adaptability:** Very adaptable to many climate conditions and low chilling requirements.
- **Yield:** Highly productive.
- **Other features:** Ideal for SHD plantations. Good adaptation to heavy soils and cold areas.

### Vigour with respect to other roostocks



### Efficiency Kg/cm2\*



Registration in the Community Office of Plant Varieties

- Variety name: Densipac.
- Record no.: 2011/1062.

# ROOTPAC<sup>®</sup>40

## General information

- **Cross:** Hybrid (Prunus dulcis x Prunus persica) x (Prunus dulcis x Prunus persica).
- **Origin:** Agromillora rootstock breeding program.

## Resistances and tolerances

- **Chlorosis:** Moderately tolerant. High requirement of microelements.
- **Root-knot nematodes:** Moderately resistant.
- **Agrobacterium tumefaciens:** Sensitive.
- **Rosellinia necatrix:** Under study.
- **Root asphyxia:** Similar tolerance to root asphyxia as the most peach and almond hybrids.
- **Salinity:** Moderately tolerant.
- **Root-lesion nematodes:** Susceptible.
- **Armillaria mellea:** Sensitive.

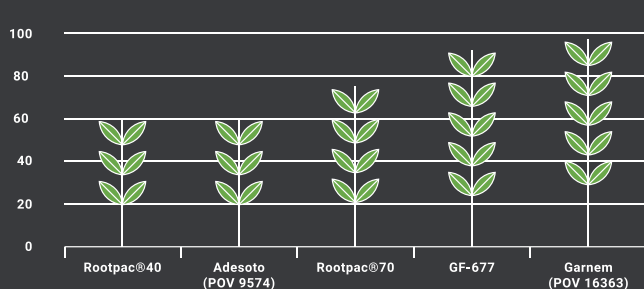




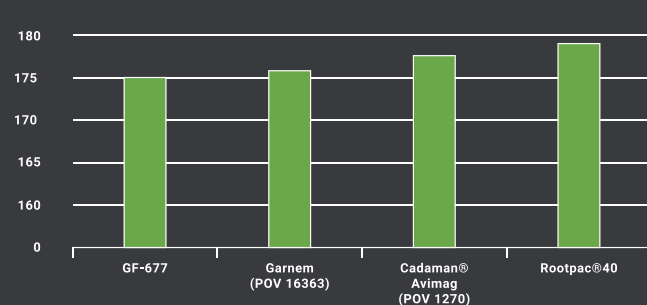
## Agronomic characteristics

- **Compatibility:** Good with varieties of peach, nectarine, almond and some varieties of Japanese plum.
- **Vigour:** Medium, around 25-30% less than GF-677, with a highly developed root system.
- **Structure:** Erect, similar to Garnem.
- **Size:** Anticipates ripening by 3 to 7 days depending on the variety. Produces good-size fruit.
- **Adaptability:** It adapts very well to all climates, but especially to warm conditions (low chilling areas).
- **Yield:** Highly productive.
- **Other features:** Green leaf rootstock. Rigid stems (early lignification) with little or no branching in early development stages. Easy handling in nursery.

### Vigour with respect to Garnem\*



### Average fruit weight (grams)\*



\* The data are obtained from different geographical areas (Tarragona, Murcia and Seville) for the 2005 and 2007 harvests.

#### Registration in the Community Office of Plant Varieties

- **Variety name:** Nanopac.
- **Record no.:** 2008/0618.

# ROOTPAC<sup>®</sup>R

## General information

- **Cross:** Plum x almond hybrid (*Prunus cerasifera* x *Prunus dulcis*).
- **Origin:** Agromillora rootstock breeding programme.

## Resistances and tolerances

- **Cold:** Tolerant.
- **Chlorosis:** Tolerant or lightly sensitive. High requirement of microelements.
- **Root-lesion nematodes:** Highly tolerant.
- **Agrobacterium tumefaciens:** Unknown, although it is probably sensitive, like most plums.
- **Rosellinia necatrix:** It has been shown to be resistant in sites highly infested with this soil fungus.
- **Armillaria mellea:** Unknown. High survival in replanting soil suggests that it has tolerance.
- **Root asphyxia:** Tolerant to root asphyxia.
- **Salinity:** Under study.
- **Root-lesion nematodes:** Lightly susceptible.

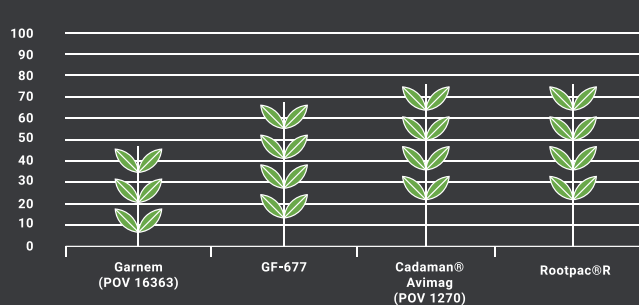




## Agronomic characteristics

- **Compatibility:** High with almonds, good with varieties of plum, peach and nectarine. Compatible with some varieties of apricot.
- **Vigour:** High with varieties of peach, nectarine and plum. Similar to Nemaguard.
- **Structure:** Open, with medium branching.
- **Size:** Anticipates ripening by 2 to 5 days depending on the variety. Results in good fruit size in plum, peach and nectarine.
- **Adaptability:** Very adaptable to various climatic conditions, with different cold requirements. Ideal for replanting sites. Adapts well to compact soils, with asphyxia.
- **Yield:** Highly productive.
- **Other features:** Green leaf rootstock, with appearance between plum and almond tree. Rigid and erect stem in early development stages.

### Accumulated production of 5 years\*



\* Data from trials in Zaragoza between 2001 and 2009.

Registration in the Community Office of Plant Varieties

- Variety name: Replantpac.
- Record no.: 2009/0230.



Agromillora.  
It's in our nature.

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At Agromillora we like to think that we can see inside things. Starting with ourselves. We know that our passion to help our customers grow has led us to embrace innovation, technology and research-applied to agriculture. In the same way, we know how to see the potential inside nature. There is potential in each tree, in each plant. Our purpose is to improve that potential, make it a reality. It's something that we carry inside-in our nature.





AGROMILLORA —Rootpac

# Improve is in our



A photograph of a modern greenhouse interior. Rows of plants in clear plastic containers are visible on metal shelving units. The plants appear to be small, green seedlings. The greenhouse has a glass roof and walls, with metal frames. The lighting is bright, suggesting natural light. The text 'element nature.' is overlaid in a large, white, sans-serif font across the center of the image.

element  
nature.



We are Agromillora, worldwide leading company in the nursery sector and a pioneer in the production and marketing of woody trees (stone fruit trees, olive trees, berries, citrus, nuts, among others), boasting the highest genetic and sanitary quality standards.

This leadership is the result of two factors: an innovative and high-tech productive system and a presence in five continents, with 11 subsidiaries and 9 laboratories worldwide. Thanks to these factors, we have become the number one supplier of propagation services for woody species in the agricultural industry.

We are strongly committed to the development of global agriculture to which we contribute value through productivity enhancements. We promote the creation of more productive, healthy and resistant plants and work to implement new agronomic solutions, such as the techniques of Super High Density. All these solutions are much more efficient and profitable for the grower.

At Agromillora, we act as a meeting point between the world breeder and producer communities. Thanks to our international structure, we help breeders market their goods to the five continents, always under strict quality controls that guarantee the propagation of these plants under the greatest genetic and sanitary guarantees.





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We never stop reinventing ourselves, whether designing new cultivation techniques with our collaborators and clients or experimenting in the development of new varieties with the main international breeders.





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