# SPECIAL HAZEL PLANT





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Nocciolo Service is a professional team working to promote and develop hazelnut cultivation in Italy.

**We provide** the following services: technical support to hazelnut grafting, personalised feasibility studies, soil assessment and analysis.

**We supply certified** and guaranteed potted and bare root hazelnut trees in Italy and abroad. Varieties include Tonda Gentile delle Langhe, Tonda Giffoni, Tonda Gentile Romana and Nocchione.

In collaboration with some major suppliers of plants accredited as part of the '**PROGETTO NOCCIOLA ITALIA FERRERO'** hazelnut certification programme, we supply hazelnut trees grown according to a specific protocol and the FERRERO-ISMEA-CIVI ITALIA certification.

We provide hazeInut grafting turnkey solutions: from soil preparation to planting.

### **HAZELNUT TREES**

Hazelnut trees are generally grown as a bushy shrub; they have a large root system with a depth that varies according to the characteristics of the soil.

They have both male flowers – called aments – which produce pollen, and female flowers – brilliant red feathery tufts – on the same tree. Hazelnut trees are wind pollinated. They are suitable for almost all soil types and can adapt to different situations, that's why they are easy to grow.

Hazelnut trees prefer well-drained soils with a neutral pH (from 6.8 to 7.2), but they also grow on acidic and alkaline soils (up to pH 8).

They do not tolerate compact and wet soils characterised by water stagnation, which causes asphyxiation and root rot. A hazelnut plant grown according to rational methods will not begin to produce a harvest until at least 4-5 years after planting and usually won't reach full production until the 7-8 years, depending on the variety. There are hazelnut orchards that, with adequate pruning techniques, continue to produce hazelnuts even after 40-50 years





### **PROPAGATION AND E SELECTION OF NURSERY PRODUCTS**



Currently, the simplest and most popular system used in Piedmont for propagating hazelnuts consists in using shoots from certified stumps, which are called mother plants.

The shoots produced are then selected so that they can take root in the nursery. When they are planted at the nursery, the shoots are trimmed to about 30 cm, so that they can develop a large root system.

After spending one or two years in the nursery, the hazelnut seedlings are ready to be planted outside. The shoots used in our nursery must come from certified mother plants in order to preserve the characteristics of a variety and meet the required phytosanitary conditions.

Hazelnut grafting success depends on the plants selected, which must be healthy, uniform, with a good root system, free from parasites and guaranteed from a varietal point of view.

That is why seedlings should be purchased from nurseries 'accredited' according to current legislation, and that can provide certified quality products.



**Certified hazelnut trees** 





### **HAZELNUT GRAFTING**

Grafting is a crucial step which deserves attention, as it is at this stage that some important decisions that could affect the entire production and economic cycle of your future hazelnut orchard are made. The low productivity of some hazelnut orchards is the result of poorly executed or roughly executed grafting, without adequate technical knowledge and preparation.

### **SOIL PREPARATION**

The best season to prepare the soil for grafting is summer (July/August), as the soil is dry, and deep ripping is the preferred method. Depending on its specific characteristics, the soil should be deep ripped to 80-100 cm. Then, the soil is tilled by means of disk harrows or rotary tillers.

After completing this process, the soil is finally ready for hazelnut grafting.



Soil preparation

### PLANTING

After preparing the soil, grafting is designed based on the selected layout (the distance between one row of trees and the other and between one tree and the other).

Hazelnut seedlings should preferably be planted in autumn, in November and December.

If an irrigation system is available, they can also be planted in spring. After tracing the soil, the holes are dug by hand or by means of mini excavators, with a width of about 40 cm and a depth of 35 to 40 cm, avoiding the use of augers, where possible.

Usually, sticks or canes are placed on the side of each tree, to support and identify it.







### LAYOUTS

For hazelnut trees, like for all other fruit species, there is no standard layout. However, choosing the wrong layout or training system could affect the entire life and production cycle of the plant. The choice of the layout depends on several factors, including:

- soil fertility,
- the selected training system,
- the availability of an irrigation system,
- the need to use special machines, such as, for example, mechanical self-propelled harvesters.

Today, following the mechanization of many agricultural practices, such as pruning and harvesting, the distances between one row of plants and another and between the trees on the same row have significantly changed.

The most widely used layouts are: 6,0 x 4,0 – 5,5 x 4,0 – 5,0 x 4,0.

It should be noted that, when using more 'free' training systems – such as bush forms – the layout should be selected taking into account the fact that plants need more light and ventilation. Although still little used in Piedmont, 'high density' planting systems, characterised by a greater number of plants, ensure early hazelnut production.



# N nocciolo Service



Young hazelnut trees

SUPPLY of certified hazelnut trees

## HAZELNUT GRAFTING 'turnkey' solutions

nocciolo Service



# CERTIFIED ORGANIC hazelnut trees

your certified hazelnut plants

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