



Hazelnut



**INCREASE YOUR CROP
YIELD EFFECTIVELY**

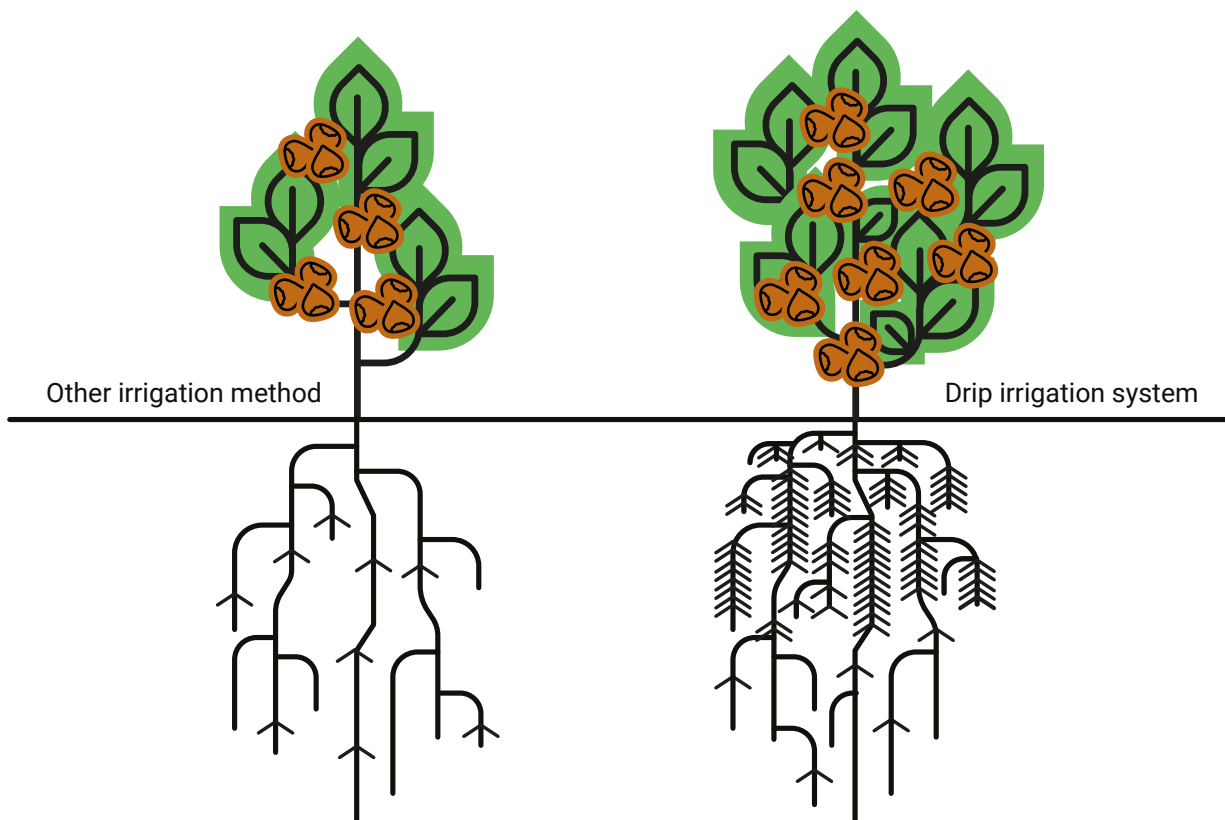


We use our knowledge to help hazelnut growers to **save time and money**, **minimize product waste**, and **maximize harvest quality and yield**. Irrigating is a complex task that depends on your region and soil type in your field.

Drip irrigation

Tool for supplying the plant requirements at the optimal time and place. It holds many benefits:

- ◆ Concentrates the roots in a defined soil volume, saving the plant's energy
- ◆ Improves the water and nutrient uptake efficiency
- ◆ Develops optimal moisture and aeration conditions.
- ◆ Increases irrigation effectiveness on uneven ground
- ◆ Reduces leaking of water and nutrients below the root zone
- ◆ Increases leaf area, rate of net photosynthesis and have a positive effect on the assimilation of nutrients, including a direct positive effect on productivity
- ◆ Increased caliber seed, less waste, and fewer defects

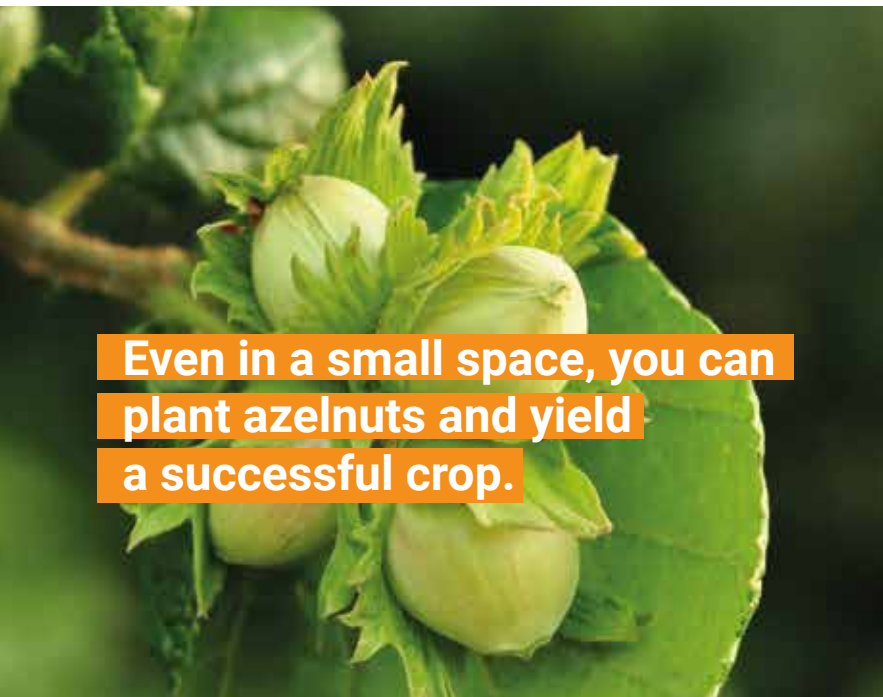




Hazelnut

Hazelnut originates from temperate areas of North America, Europe, and Asia.

Cultivation of Hazelnuts is easy, and most people discovered the nutritional and health benefits of this tree. Hazelnuts are very popular and one of the most commonly cultivated and consumed types of nuts in the world.



Even in a small space, you can plant hazelnuts and yield a successful crop.

Wild Hazelnut tree grows on well-drained soils, in areas that provide enough moisture.

Young shrubs need constant moisture and should never be allowed to fully dry out. Deep watering is necessary during dry weather.



Most important factors for growing hazelnut and achieving good yields in the long term:

- 💧 Climate
- 💧 Planting distances
- 💧 Pollination
- 💧 Fertilization
- 💧 Irrigation
- 💧 Pruning and thinning

Optimal soil type:

Well-drained and fairly low in nutrients.

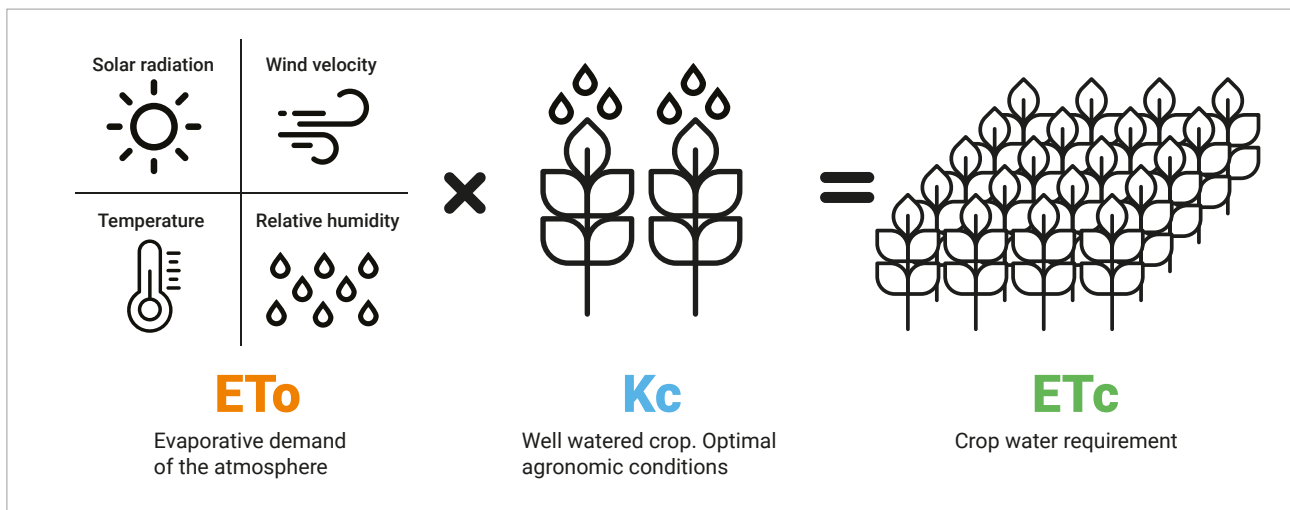
Ph levels ranging from 5.5 to 7.5. but better and more preferable is for 7 is for cultivation.



How to calculate water budget?

To calculate the water budget, you need five pieces of information:

1. Evapotranspiration (ET_o)
2. Crop factor (K_c)
3. Crop evapotranspiration (ET_c)
4. Rainfall
5. Irrigation applied



Evapotranspiration (ET_o)

The total water loss from the soil, including that by direct evaporation and that by transpiration from the surfaces of plants.

Crop factor (K_c)

Irrigation return rate coefficient with relation to evapotranspiration. The factor is comprised of crop phenological stage, soil cover and irrigation strategy, during the growing period.

Crop evapotranspiration (ET_c)

Water loss as evaporation + transpiration from disease free, well fertilized crops, grown in large fields, under optimum soil water conditions, and achieving full production under the given climatic condition.



Critical stages for water stress in the soil in hazelnut orchards

Hazelnut is highly sensitive to water deficits. Make sure not to submit significant water stress during the whole yearly vegetative cycle.

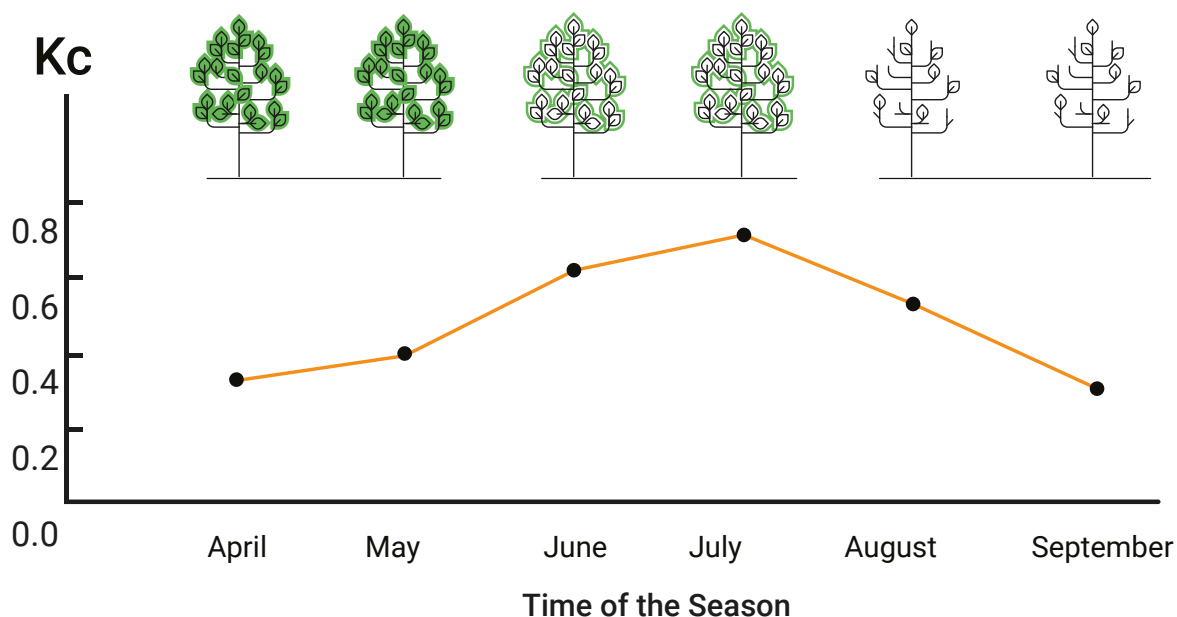
- ◆ The prime growing season of the brunches/ shoots is during the hot season.
- ◆ During June, July, and August, critical stages occur in the life cycle of the nut. This can affect the yield, quality, and the following year's yield.
- ◆ During July and August, the seed is filling the shell.

The effect of water deficiency on the hazelnut

- ◆ Reduces the development of the leaves
- ◆ Due to the closure of the stomata, the plant suffers from a photosynthesis reduction.
- ◆ Water stress might limit the assimilation of nutrients, which affects production and yield.
- ◆ Limited formation of shoots and differentiation of flower buds leads to fruit drop.
- ◆ Water stress might increase susceptibility to plant disease.

Kc values for Hazelnut

Month	April	May	June	July	August	September
Kc value	0.30	0.40	0.62	0.70	0.55	0.35





Irrigation technical recommendations



Drip Irrigation

- ◆ One lateral per row at first four to five years, after that need to add second lateral
- ◆ **Distance between drippers:**
Heavy soils: 0.75 to 1.00 m
Medium soils: 0.50-0.75 m
Light soils: 0.30-0.50 m
- ◆ **Discharge rate**
According to soil type, normally 1.35-2.35 l/h.
- ◆ **Irrigation frequency**
According to soil type, every 1-3 days.

Micro sprinkler system

The use of micro-sprinklers to irrigate nut plantations has grown considerably over recent years.

The position of sprinklers is below the canopy, and the foliage does not get wet, while at the same time, the wetting zone and irrigation volume match optimally to the tree growth stage.

Increasing wetting zone radius as the tree grows is easy and rapid, requiring only another sprinkler.



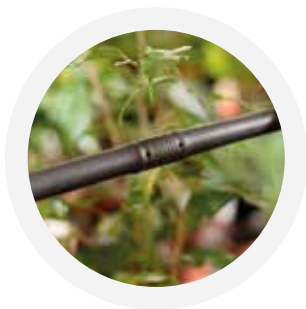


Products that will meet your needs, whatever the size of your orchard



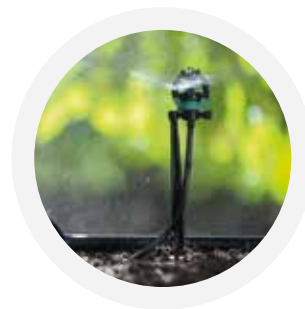
MAIN LINE

- PE pipes
- High-pressure fittings
- High-pressure valves



DRIPLINE AND ACCESSORIES

- PoliDrip PC driplines
- PoliDrip PCND driplines
- PoliDrip light PC driplines
- Low-pressure fittings and valves
- Tools and accessories



MICRO SPRINKLER SYSTEM

- Irrigation, cooling, and frost protection for orchards
- Delivers a uniform spray pattern at a low angle for under tree applications
- Built-in anti-insect device



FILTRATION

- Hydrocyclone
- Disc and screen filters (manual, semi-automatic, automatic)
- Gravel media filters (manual, automatic)



FERTIGATION

Fertigation systems appropriately dose the quantity of fertilizer necessary for the crop. No waste of expensive chemicals, labor, and machinery. No uncontrolled pollution, unnecessary soil compression, and crop damage.



AUTOMATION

We have a wide range of controllers for irrigation and fertilization control. They are configurable and with multiple possibilities of use, communication, and extension. Equipped for irrigation control, fertilization, pumping, and filter cleaning, with fault detection and detailed chronological recording of events and historical accumulation.

NOTE:

This brochure is for information purposes only, and results may vary depending on different factors. Please consult with an irrigation specialist and technical details for proper use of Poliext products.

Specifications and designs of products may change without notice. Make sure to verify the information before making any decision.



Get your orchard a good start



Tell us about your project



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