



Polygrain
by Green Legacy

WATER RETAINING GRANULES

ADDED VALUE FOR
YOUR VITICULTURE

**ALL-IN-ONE SOLUTION:
CELLULOSE + SUPERABSORBENT
+ STARTER FERTILIZER**

YOUR ADVANTAGES AT A GLANCE

AVOIDS DRYING STRESS

POLYGRAIN is a superabsorbent capable of storing up to 200 times its weight in water, enabling the bridging of long dry periods.

SAVES WATER AND FERTILIZER

Water and fertilizers are used more efficiently, allowing savings of up to 50 % on irrigation water and fertilizers.

LONG-TERM EFFECT

POLYGRAIN consists of three components. The main component is plant cellulose, followed by a conventional superabsorbent. This combination ensures both short- and long-term effects (3 to 5 years). Additionally, POLYGRAIN contains a water-soluble starter fertilizer with NPK + Mg.

IMPROVES AND ACCELERATES GROWTH

POLYGRAIN promotes the healthy development of young plants and seedlings during early growth stages, especially during extended drought periods.

PRESERVES PLANT HEALTH

Supports the use of mycorrhizae and other beneficial microorganisms, reducing the need for plant protection agents.

FASTER AND HIGHER YIELDS

Promotes root growth and development of young plants, minimizing the risk of plant loss and increasing harvest yields.

IMPROVES SOIL STRUCTURE

Enhances soil porosity, aeration, and water infiltration, facilitating root growth and reducing water loss through surface runoff.

HIGHER MINERALIZATION RATES

Improves the mineralization rate of organic matter in the soil and the stability of soil aggregates.

ECOLOGICALLY RESPONSIBLE

It is safe, non-toxic, and does not harm the environment.

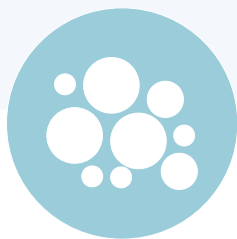
BIODEGRADABLE

Over time, POLYGRAIN undergoes a slow and complete degradation by soil microorganisms, leaving no harmful residues.

EASY TO APPLY

Simple to apply either manually or with machinery.

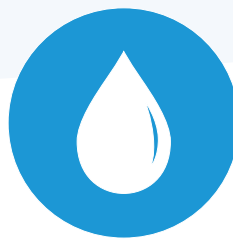




**FROM 15 GRAMS
PER PLANT**



**EFFECTIVE FOR
3 TO 5 YEARS**



**SAVE UP TO
50% WATER**



MODE OF ACTION

The water retainer POLYGRAIN is an all-in-one solution capable of creating an additional reserve of water and nutrients in soils and substrates for plants. It can absorb and retain up to 200 times its own weight in water, as well as the nutrients dissolved in it. This additional reserve allows plants to grow undisturbed even during prolonged dry periods.

SIMPLE BUT EFFICIENT

POLYGRAIN can be applied in the form of dry granules or pre-hydrated hydrogel (see recommendations below for hydrogel preparation). It is always applied in the root zone of plants and not on the soil surface.

POLYGRAIN is a hydrogel suitable for new plantations, established plantations, as well as for the production of seedlings in nurseries.

METHOD AND QUANTITY OF APPLICATION IN NEW PLANTATIONS

The method and quantity of application vary depending on the planting technique used (manual or mechanical application), the size of the root ball, and the soil texture.

MANUAL PLANTING AND REPLANTING

When using a hole auger or planting shovel, the planting hole should be at least twice as wide as the root ball or bare roots, with a depth of at least the height of the root ball or bare roots plus a minimum of 10 cm.

Bare-root Plants and Smaller Potted Plants (Root Ball Ø ≤ 12 cm)

Before planting, apply the product by hand to the bottom of the planting hole, mixing it well with the surrounding loose soil. Then proceed with planting.

In these cases, the application quantity depends on the volume of loose soil at the bottom of the hole (lower layer with a minimum height of 10 cm). This ranges from 3 to 5 g of granules per liter of soil or 300 to 500 ml of hydrogel per liter of soil.

Larger Potted Plants (Root Ball Ø > 12 cm)

For larger potted plants (Root Ball Ø > 12 cm), apply the product throughout the planting hole, except for a final top layer of 5 cm in height.

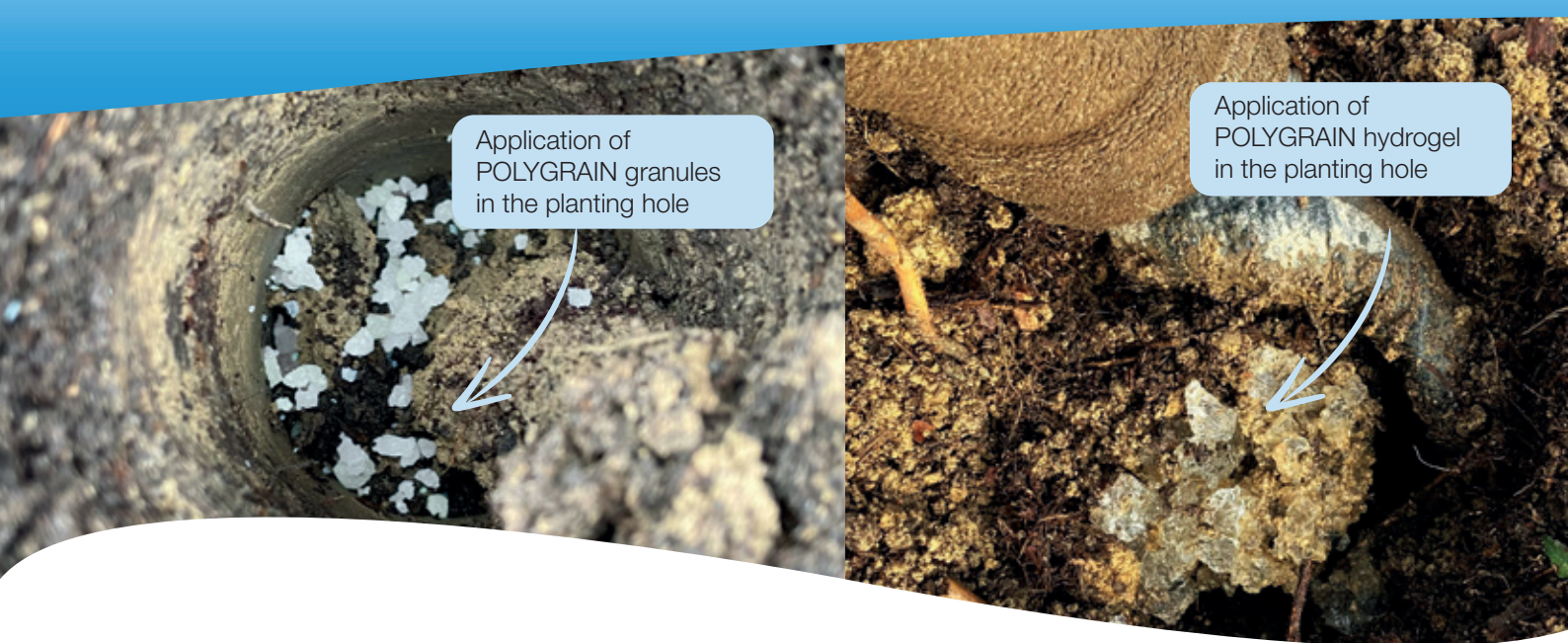
In this case, the product is evenly mixed with the backfill soil from the planting hole, always leaving a small untreated portion of 5 cm for the final top layer of the hole.

All Types of Seedlings

In all cases, it is recommended to use a dose of 3 to 5 g of granules or 300 to 500 ml of hydrogel per liter of backfill soil, except for the final 5 cm top layer.

After planting the seedling and filling the planting hole with treated soil or substrate (always leaving the untreated final 5 cm top layer), lightly compact the planting area with your foot to prevent the formation of air pockets in the soil and to ensure good root-to-soil adhesion.

In the absence of abundant rainfall following planting, the treated area should be well watered to allow the granules to fully swell for the first time upon contact with water.



Application of
POLYGRAIN granules
in the planting hole

Application of
POLYGRAIN hydrogel
in the planting hole

Hydrogel Preparation

To prepare the hydrogel, mix POLYGRAIN granules with clean water, stirring constantly, maintaining a ratio of 1 to 100 (1 kg of POLYGRAIN per 100 liters of water) until it is fully swollen. For maximum swelling, it is recommended to carry out this process the night before the planned application.

MECHANICAL PLANTING

Mechanical planting operations for vine seedlings can be divided into two types:

The **first option** involves manually applying the desired amount of POLYGRAIN granules just before the planter inserts the seedling into the planting furrow.

The **second option** is to automate the application of the desired amount of POLYGRAIN granules into the planting furrow using a microgranulator with an automatic dosing device mounted on the planter.

APPLICATION METHODS IN EXISTING INSTALLATIONS

In existing vineyards, POLYGRAIN can be applied either as dry granules or in hydrogel form.

MANUAL APPLICATION

To apply the product manually, dig four holes around the vine, each 20 x 20 cm wide and 30 to 40 cm deep. The holes should be at least 20 cm away from the trunk and from each other. If a drip irrigation system is installed, whenever possible, the holes should be located beneath the drippers.

CAUTION: Dig carefully to avoid damaging the lateral roots.

Next, place the desired amount of granules or hydrogel at the bottom of the hole, mixing them slightly with the surrounding loose soil at the base. Then refill the hole with the excavated soil and compact the treated area well with your foot. Finally, water the treated area thoroughly.

MECHANICAL APPLICATION

The mechanical application in continuous lines is performed at the end of autumn during soil loosening operations using a subsoiler with tines 30 to 40 cm deep. To ensure treatment on both sides of the vine, the outer tines of the subsoiler should be equipped with trailing sowing shares connected via tubes to a microgranulator mounted on the subsoiler.

CAUTION: When using the subsoiler, it is important to maintain a minimum distance of 20 cm from the vine trunk. Within one year, it is recommended to carry out soil loosening operations in every second service row of the vineyard.



APPLICATION QUANTITIES

Recommended application rates in forestry for Central and Eastern Europe

Planting method	New plantings		Replanting		Existing Vineyards	
	<ul style="list-style-type: none"> Manual spot application in the planting hole Mechanical application localized in the planting furrow 		<ul style="list-style-type: none"> Manual spot application in the planting hole 		<ul style="list-style-type: none"> Selective manual application in four holes 30 – 40 cm deep Mechanical continuous inear application at a depth of 30 – 40 cm (deep subsoiler)¹ 	
In the form of	granules	hydrogel	granules	hydrogel	granules	hydrogel
Loess, clay, or calcareous soils	15 g / vine ²	1,5 l / vine	20 g / vine ²	2 l / vine	120 g / vine	12 l / vine
Sand, gravel, or slate soils	20 g / vine ²	2 l / vine	25 g / vine ²	2,5 l / vine	150 g / vine	15 l / vine

¹ For continuous linear application by machine, we recommend using 30% more product than for manual spot application.
² The maximum application rate of 5 g/liter of backfill soil must not be exceeded under any circumstances. This means that with an application rate of 20g per plant and a dosage of 5 g/liter of backfill soil, the volume of backfill soil in the planting hole (excluding the top layer) must be at least 4 liters (reverse calculation: 20 g/planting hole : 4 liters of backfill soil = 5.0 g/liter of backfill soil). For smaller planting holes, the maximum application rate per planting hole must be reduced accordingly (calculation example: 3.0 liters of backfill soil x 5 g/liter of backfill soil = 15 g/planting hole).

JUST CONTACT OUR SPECIALIST ADVISOR:

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