



## WATER RETAINING GRANULES

## ADDED VALUE FOR YOUR FRUIT AND VEGETABLE CROPS



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Polygrain

FROM 25 GRAMS PER PLANT



EFFECTIVE FOR 3 TO 5 YEARS



SAVE UP TO 50% WATER

## YOUR ADVANTAGES AT A GLANCE

EASY TO USE User-friendly and easy to understand

#### SUSTAINABLY CLIMATE-FIT

Soil-improving, ecologically compatible, high plant availability of the stored water and the nutrients dissolved in it

polygrain

#### BIODEGRADABLE

Mainly made from plant cellulose

#### AVOIDS DRYING STRESS

Absorbs and stores up to 200 x its own weight in water and enables the bridging of mycorrhizae and other beneficial microorganisms

#### FASTER AND HIGHER YIELDS

Promotes root growth and development of young plants, minimizes the risk of failure in new plantings, and increases yields

#### INCREASES THE POROSITY OF SOILS

Better aeration and higher infiltration rates

#### HIGHER MINERALISATION RATES

Has a positive effect on the biological activity of the soil

#### MAINTAINS PLANT HEALTH

Supports the use of beneficial microorganisms and reduces the demand for crop protection products

















### SIMPLE BUT EFFICIENT

POLYGRAIN is suitable as an additional **water and nutrient reservoir** for soil or substrate applications in **fruit and vege-table growing**, viticulture, arable farming, forestry, landscaping and horticulture.

POLYGRAIN **must be applied in the root area**, not on the soil surface. POLYGRAIN is sprinkled into the planting hole or planting furrow.

POLYGRAIN can be applied either as dry granules or as a hydrogel (pre-swollen POLYGRAIN). The application dose in the planting hole depends on the volume of the planting pit and filler substrate and should be between 3 and 5 g / litre of substrate as granules or between 300 and 500 ml / litre of substrate as hydrogel. Always leave a 5 cm thick top layer untreated. After applying the granules to the planting hole and planting, the treated area must be pressed down well by hand or foot. If there is no abundant rain after planting, the **treated area must be watered well** to replenish the water reservoir for the first time.

If pre-swollen POLYGRAIN is used, no additional irrigation is required. However, this form of application requires the prior preparation of the hydrogel. For this, POLYGRAIN granules are mixed with water in a ratio of 1 to 100 (1 kg POLYGRAIN per 100 liters of water). Gradually add the granules to clean water while stirring constantly, and then allow them to swell completely. To achieve maximum swelling, perform this process on the evening before the intended use.

# ROOT ADHESION WITH POLYGRAIN

The plant's roots grow towards water and encounter the swollen granules (hydrogel), allowing the fine roots to attach themselves to it. When the plant-available soil water becomes scarce, the fine roots extract water and the dissolved nutrients from the hydrogel. Thus, dry periods can be easily bridged over a period of four to six weeks.



-50% Saving water

## APPLICATION METHODS

Depending on the culture, area of application and technical possibilities, different application methods can be used.

The granules or the pre-swollen hydrogel can be introduced into new or existing systems either mechanically or manually. Simply ask our specialists at Green Legacy directly. When using POLYGRAIN as a granulate, it is important to ensure that the water reservoir is watered abundantly in order to top up the water reservoir for the first time.

### **TEST RESULT TOMATO**

A field trial by the renowned SGS Institut Fresenius in Spain in 2023 demonstrated the effectiveness of polygrain. The trial showed that the application of approx. 2 g polygrain per plant can save up to 50 % of irrigation water. Although the months of August – November 2023 were hotter than average, no losses were observed regarding the quality and quantity of the harvest.

INSTITUT

FRESENIUS

Application in the planting hole as POLYGRAIN granules

Application in the planting hole as POLYGRAIN hydrogel

SGS



The following table contains the recommended application quantities for fruit and vegetable cultivation as granules. The recommended application rate as a pre-swollen hydrogel is 1:100, analogous to the granulate application.

The range of application quantities refers to the type of soil. For permeable, less absorbent soils, it is recommended to aim for the upper end of the range.

However, the maximum application rate of 5 g / litre of filler soil should never be exceeded.

Annual crops	New planting: selective manual planting Application in the planting hole	New plantings: continuous mechanical application in the planting furrow
Outdoor tomato, cabbage	1.8 – 2.2 g / plant	50 – 56 kg / ha
Lettuce	4 – 5 g / plant	not applicable
Onion	not applicable	44 – 50 kg
Maize, potato, sugar beet	not applicable	40 – 63 kg / ha
Pumpkin (edible)	not applicable	125 – 150 kg / ha

Perennial crops	New planting: selective manual planting Application in the planting hole	New plantings: continuous mechanical application in the planting furrow
Asparagus, hops	45 – 60 kg / ha	not applicable
Strawberry (4 plants / running metre)	4.5 – 6 g / plant	not applicable
Raspberry, redcurrant	15 – 22 g / plant	not applicable
Pome fruit (spindle training)	37 – 52 g / plant	120 – 150 g / plant
Stone fruit (spindle training)	37 – 52 g / plant	120 – 150 g / plant

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#### DISTRIBUTION

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