



## GreenSoil

GreenSoil Humin is an organic-mineral fertilizer product line enhanced with humic acid, that contains phosphorus, chlorine-free potassium, calcium, sulphur, important micronutrients and organic matter. They provide a perfect solution for different nutrient requirements in field, orchard and vegetable farming. We recommend the GreenSoil Humin products for general fertilization even for soils low in humus and nutrients.

Components of different GreenSoil Humin granulate fertilizers (%):

## Products

Product	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	SO <sub>3</sub>	Humic acid	Micronutrients	Price (€/t)
GreenSoil Humin K+Cu	7	20	-	8	24	Cu, Zn, B, Mg, Se, Fe	335,-
GreenSoil Humin PK+Cu	8	14	8	4	24	Cu, Zn, B, Mg, Se, Fe	375,-
GreenSoil Humin P+Ca	18	-	24	2	24	Cu, Zn, B, Mg, Se, Fe	495,-
GreenSoil Humin Natural	-	-	3	-	60	Cu, Zn, B, Mg, Se, Fe	295,-

The 2012 EXW prices are valid for 1.000 kg big-bags.

## Humic acid

The fertilizer's outstanding feature is its 24% humus content, which intensifies plant growth. The word in our name "humin" refers to humic acid, a natural compound found in humus. Humic acid effectively solubilizes phosphate and potassium that is present in the soil but in an unavailable form. However with GreenSoil Humin, plants can utilize not only those macro- and micro nutrients from the product, but also the phosphate and potassium solubilized by humic acid in the soil.

## Soil improvement

Additionally, GreenSoil Humin products not only nurture but improve soil: an acidic soil's pH value will be improved to neutral. This makes it highly suitable for acidic or exploited soil improvement, or even for recultivation. GreenSoil Humin stimulates sprouting seeds, promotes and increases rooting activity, enhances drought and disease resistance.

## Long lasting effect

The leaching of solutes is significantly low with the application of GreenSoil Humin products, which means nitrogen, phosphorus and potassium remain fixed in the rooting zone and available for plant uptake. Due to the humic acid content of GreenSoil Humin products, even after 78 days fewer solutes leach below rooting zone than within 14 days of using chemical fertilizers. Leaching of micronutrients was not detected during experiments. Humic acid provides a continuous nutrient uptake, while protecting solutes against leaching, which guarantees a long lasting effect and improvement of soil structure.

## Nutrients

GreenSoil Humin products' capacity of phosphorus and potassium is outstanding. Humic acid plays an important role in nutrient calculation, since it solubilizes phosphate and potassium of soil, so additional 10% phosphorus and 14% potassium can be added to the product's phosphorus and potassium content. For instance, if GreenSoil Humin K + Cu fertilizer is considered in the nutrient calculation, then 17% phosphorus and 34% potassium can be utilized by the plant.

## Application

GreenSoil Humin products are sold as 8 mm pellets; they are sold in big-bags or in 25 kg bags. The product is easy to spread with all kinds of spreaders and then cultivated to a depth of 4-12 cm in autumn or during spring time. Application rates vary between 250-300 kg/ha according to nutrient levels of the soil.



## Products

### GreenSoil Humin K + Cu components:

- 7% P<sub>2</sub>O<sub>5</sub>, increases sprouting seeds
- 20% K<sub>2</sub>O, improves crop quality and quantity; enhances resistance against diseases
- 8% SO<sub>3</sub>, increases yield production of oleaginous plants
- 24% humic acid, increases humus level of soil
- 0,4% MgO, contributes to phosphate solution
- important micronutrients: cooper, zinc, boron, selenium and iron

### GreenSoil Humin PK + Cu components:

- 8% P<sub>2</sub>O<sub>5</sub>, increases sprouting seeds
- 14% K<sub>2</sub>O, stimulates the activity of photosynthesis
- 8% CaO, makes soil less acidic
- 4% SO<sub>3</sub>, increases oil content of oleaginous plants
- 24% humic acid, increases humus level of soil
- 0,4% MgO, contributes to phosphate solution
- important micronutrients: cooper, zinc, boron, selenium and iron

### GreenSoil Humin P + Ca components:

- 18% P<sub>2</sub>O<sub>5</sub>, increases rooting activity in transplants and sprouting seeds
- 24% CaO, stimulates beneficial microbial activity in the soil; strengthens plant structure
- 2% SO<sub>3</sub>, promotes utilization of micronutrients
- 24% humic acid, increases humus level of soil
- important micronutrients: cooper, zinc, boron, selenium and iron

### GreenSoil Humin Natural components:

- 24% humic acid, increases humus level of soli, improves acidic or exploited soil
- 3% CaO, stimulates beneficial microbial activity in the soil; strengthens plant structure
- 6% SO<sub>3</sub>, promotes utilization of micronutrients
- important micronutrients: cooper, zinc, boron, selenium and iron

## R&D

Our research and product development are made together with the Faculty of Agricultural and Food Sciences of the University of West Hungary and Georgikon Faculty of the University of Pannonia, as well as with the Center for Agricultural Sciences Research Institute for Viticulture and Oenology in Badacsony.

## Contacts

For further information please visit our website under **[www.greensoil.hu](http://www.greensoil.hu)** and please feel free to contact our colleagues.

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