

## THE SIGNIFICANCE OF HUMIC ACIDS IN NATURE

The quality and quantity of organic matter in soil is an integral factor influencing soil fertility and the overall efficiency of agricultural production. One of the most vital components of organic matter in soil are humic acids as they have been shown to play a decisive role as a bioactive agent in various soil processes. The application of humic acids in agricultural production is long-established and can be found in many organic fertilizers such as manure, compost, and peat.

However, unlike humic acids found in modern fertilizers, HUMAC® Agro contains activated humic acids with a more complex structure and in greater concentration.

Our product is manufactured from one of the purest sources of Leonardite and when this raw material is activated, the natural structure and functionality of the humic acids is preserved while avoiding the use of chemicals or additives.



# HUMAC® Agro

### A NATURAL SOIL CONDITIONER WITH HIGH CONTENT OF ACTIVATED HUMIC ACIDS MORE THAN JUST ORGANIC FERTILIZER

- ✓ **Enhanced soil structure** - Improves water management and soil aeration
- ✓ **Improves nutrient management** - significantly reduces nutrient leaching and increases bioavailability of bound up nutrients
- ✓ **Optimizes inputs** - reduces the use of mineral fertilizers by up to 50%
- ✓ **Cleaner & safer crops** - significantly reduces the uptake of toxins by crops by binding inorganic and organic toxins into stable compounds

#### Declared product composition:

**Humic acid content:** min. 62% in dry matter

**Humidity:** max. 20%

**pH value** (1% aqueous suspension): 6.5.

Contains wide spectrum of naturally occurring macro, micro & trace elements in chelate bonds.

**Packaging:** 25 kg PE bags, 500 kg & 1000 kg big bags



HUMAC® brand products

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# Restores life to soils

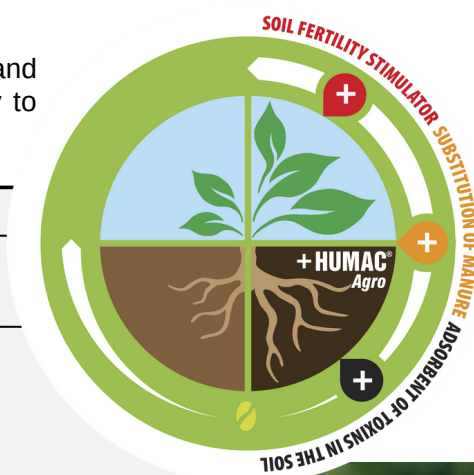
100% ORGANIC

100% natural origin without chemical processing and additives

## Scope of use, dosage, and method of application

HUMAC® Agro can be applied to all commonly grown staple and specialty crops (including ornamental greenery and lawns) except those that require significantly different soil pH compared to neutral (e.g. blueberries). **The basic dosage of the product is 200 - 500 kg / ha.** Due to the fact that humic acids require several months to fully reveal their positive effect on soil and plants, it is best to apply the product between autumn and early spring before planting (however, it can be applied at any time during the growing season). For best results, it is recommended to work the product into the top 10 cm of soil. If conditions do not allow this type of application, the product can easily be spread on the soil surface. Repeat applications are recommended after every 3 – 4 years. During this period, it is recommended to reduce the volume of all mineral fertilizers and especially nitrogen fertilizers by up to 30 - 50 % in the area where HUMAC® Agro was applied, when compared to regular application rates.

HUMAC® Agro has a positive effect on soil fertility, production quality, and overall profitability of crop production. In addition to its use, it is necessary to observe the generally applicable principles for sustainable agriculture.



Dosage of HUMAC® Agro - agriculture / forestry / ornamental horticulture	
Basic dosage on arable land depending on the content of humic substances in the soil	200 - 500 kg / ha
Leafy vegetables (salad, spinach), Brassicaceae vegetables (cabbage, kale, cauliflower, broccoli), cucurbits & nightshade (cucumber, tomato, pepper, pumpkin, egg plant), legumes	350 - 500 kg / ha
Root vegetables and intensive crops (red beets, carrots, celery, parsley and potatoes)	300 - 400 kg / ha
Fruit crops and vineyards - area application	350 - 500 kg / ha
Fruit and ornamental trees and shrubs, vineyard - application to individual plants	10 - 40 kg / 100 pcs application during or after planting to individual plants
Field crops (cereals, maize, rape, sunflower, soybeans, etc.)	200 - 500 kg / ha
Herbs	250 - 300 kg / ha
Ornamental plants and shrubs	2 - 3 kg / 100m <sup>2</sup>
Deciduous and coniferous trees	2 - 3 kg / 10 pcs = 20 - 30 kg / 100 pcs when planting to the roots
Lawn	200 - 500 kg / ha
Composting	3 - 5 % of the product is gradually added to composted mass
Replacement of manure in the dose of 40 - 50 t / ha	400 - 500 kg / ha
Soils without topsoil and reactive soils	1 - 3 t / ha with mineral fertilizers and grass seeds repeatedly for 2 - 3 years.

Please feel free to contact us for B2B distribution opportunities

