



FLORAHUMUS
agro

Research behind efficiency



State-of-the-art **growth stimulant**

Made of 100% natural components

As a material composed of mineral and organic complexes, Humus is one of the fundamental components of the stable soil phase, conditioning many of its physical and chemical properties, improving the soil structure, sorption of ions and water retention as well as building optimal conditions for the growth of soil microbes.

The major organic constituent of humus are humic and fulvic acids and humins (totalling more than 60% of the organic soil matter).

The use of extracted humic acids as a fertiliser and soil additive in organic crops is a well-known procedure used in many countries across the world, especially the ones with sandy soils.. They are used to improve the quality of cultivated soils and, consequently, provide increased crop yields.

In certain cases, they are also used to reclaim soil intended for plant cultivation, e.g. when the soil is excessively saline, to reduce the potentiality of intake of toxic elements by the plants. The reference literature quotes such beneficial effects as plant root stimulation, intake of ions, for instance: Na^+ , Ba^{2+} , K^+ , NO_3^- , and SO_4^{2-} , and control of metabolic processes in plants.

FLORAHUMUS Agro is our answer to the needs of contemporary agriculture and an expression of our concern of the environment.





Optimal conditions for **the growth**
of soil microbes

FLORAHUMUS Agro is a natural preparation based on lignite from the Polish coal mine KWB Sieniawa deposits located in the vicinity of Łagów Lubuski, Lubuskie province.



FLORAHUMUS is a preparation tested and reviewed by:



“ *Field tests carried out on test plants (winter rapeseed) confirmed the positive effect of FLORAHUMUS growth stimulator on plant growth and cropping.* ”



Environmentally friendly product

Institute of Soil Science and Plant Cultivation, Puławy

The effectiveness of FLORAHUMUS Agro growth stimulator used as triple treatment at a dose of 200g/1000dm³ of water over the vegetation period (ie. phase of 6th leaf in autumn, after the commencement of spring vegetation, and in the flower bud phase) has been confirmed, indicating:

- 20% increase in dry matter of the above-ground part in the BBCH 52 phase;
- 23% increase in dry matter of the root part in the BBCH 52 phase;
- an increase in chlorophyll content in the leaves;
- improvement of NPK CaMg uptake by plants from soil
- 10% increase in seed yield.

Particularly interesting results were collected for the combination with NPK fertilization level reduced by 40%.

Once plants had been sprayed with the preparation, the obtained seed yield proved to be similar to the reference NPK fertilisation. Other measured characteristics were visibly higher than those of the control group.

Increase in dry mass in
above ground part by

20%

Increase in dry mass
in roots

23%

Increase in seed yield by

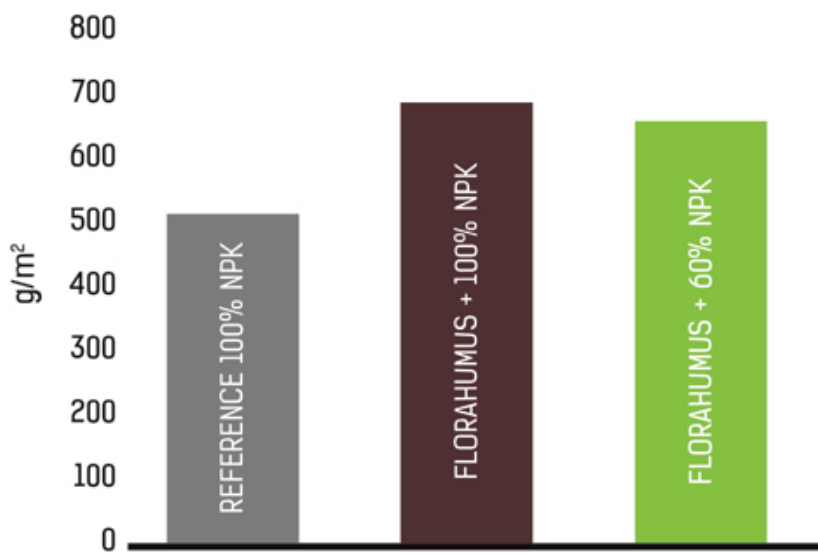
10%





Ensures an increase in **dry mass**

of roots and above-ground parts



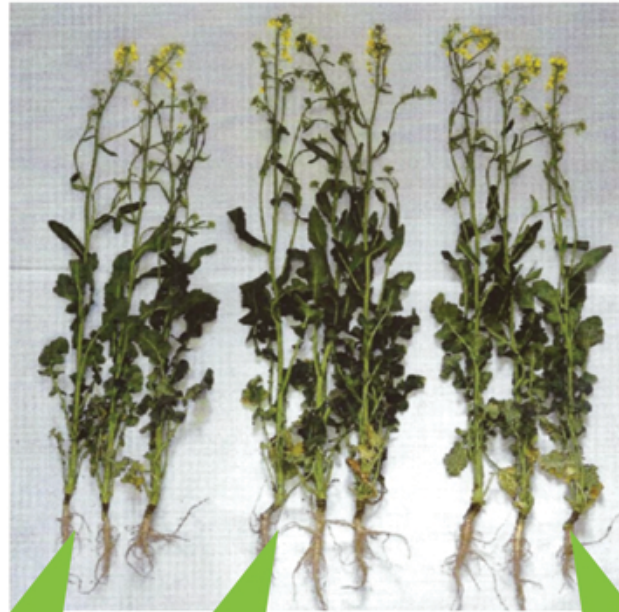
Dry mass in above-ground parts after 3 treatments



Better **growth and crops**

brought about as soon as after 3 treatments

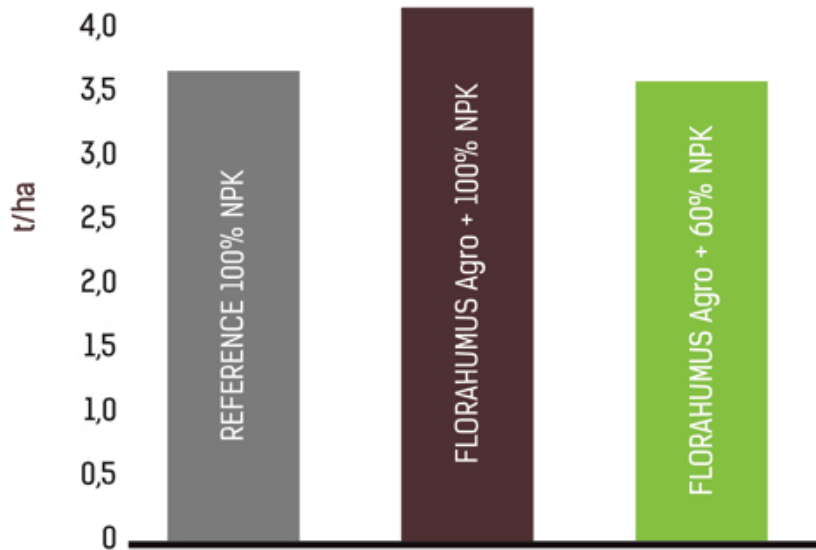
Impact of FLORAHUMUS Agro stimulator on the development of winter rapeseed in the BBCH 52 phase



REFERENCE 100% NPK

FLORAHUMUS Agro + 100% NPK

FLORAHUMUS Agro + 60% NPK



Seed crop after 3 treatments



High **quality** and safety

confirmed by IUNiG

FLORAHUMUS IS A HIGH QUALITY PREPARATION PROVIDING HIGH SAFETY

Humic acids concentration in the preparation > 95%*

Element	Content in FLORAHUMUS	Permissible content*
Chromium	8 mg/kg	100 mg/kg
Cadmium	< 0,5 mg/kg	5 mg/kg
Nickel	5,7 mg/kg	60 mg/kg
Lead	3,1 mg/kg	140 mg/kg
Mercury	0,17 mg/kg	2 mg/kg

*as per the Regulation by the Minister of Agriculture and Rural Development of 18.06.2008 (Journal of Laws No. 119, Item 765)

Quality parameters

Organic carbon – 36.64%, pH 8.5 – 10.5, humic acids > 95%*

Determined by an IUNG Laboratory – PIB % [m/m]

Has a positive influence on:

- soil structure
- water retention
- soil sorption
- chelation of heavy metals
- natural humidification and soil closing
- improvement in intake of nutrients
- mitigation of plant stress



Institute of Soil Science and Plant Cultivation
State Research Institute

* at least 95% humic acid carbon in organic carbon in the preparation.



Economical **in use**

can be used alongside other treatments*

FLORAHUMUS Agro is economical

300ml/ha

Soil spray

Soil spray before seed sowing.
To improve the effectiveness of the preparation it has to be mixed with the soil.

300ml/ha

Leaf spray

The preparation can also be used successfully over the period of intensive plant growth and in combination with other treatments*.

0,1%

Sheltered cultivation

For crops such as tomatoes or cucumbers the recommended concentration of the preparation is 0.1% (e.g. 1 litre per 1000 litres of water)

*excluding plant health products



FLORAHUMUS

PRODUCENT / MANUFACTURER

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**GOT2
GROW**



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