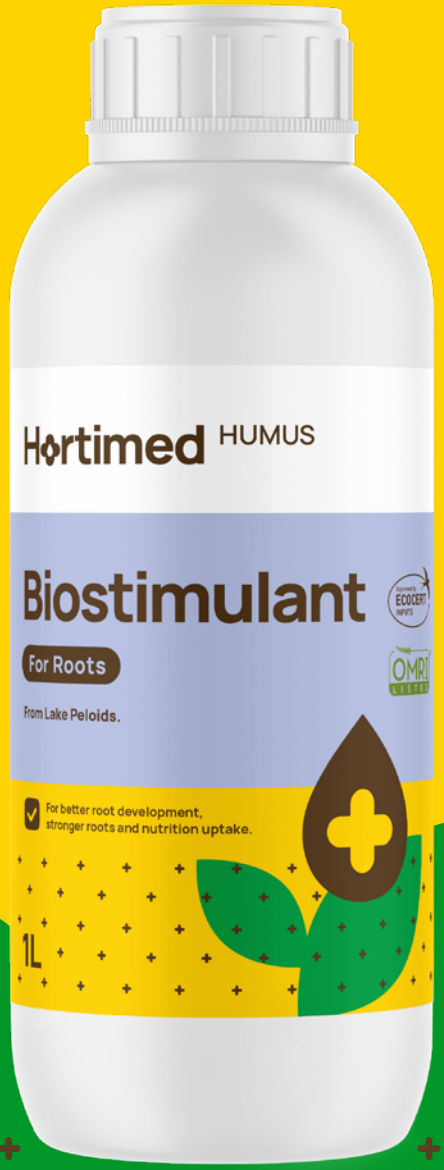
Hortimed HUMUS

Biostimulant

From Sapropel

Provides excellent soil conditioning and improves root development of all plants

Soil Reinvented



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HUMIC PRODUCTS TRADE ASSOCIATION ESTABLISHED 2010

Biostimulant

Provides excellent soil conditioning and improves root development of all plants

Description

Hortimed HUMUS Biostimulant contains biologically active substances such as humic acids and fulvic acids, which provide mild yet effective support for plants at all growth stages. It stimulates root formation and enhances water and nutrient uptake during the early development stages, while also providing additional support to reduce environmental stress. Moreover, it serves as an excellent source for improving both the quality and overall yield of crops.

Compatible with a wide range of fertilizers, plant protection products and plant growth regulators.

Ideal for field & greenhouse use.

What are Sapropel? Sapropel are freshwater organic-rich sediments that are found at the bottom of the water basins. Sapropel are a clean and environmentally friendly natural material.

This resource forms over thousands of years when water plants and other organisms decompose in anaerobic conditions and mix with mineral components supplied from the water basin.

Key benefits

- Support for seeds at germination, healthy root system development,that provides better water uptake, more efficient nutrient uptake from soil or substrate;
- Improved nutrient uptake due to efficient cation exchange capacity, provided by humic and fulvic acids;
- Improves fertilizer efficacy, in different fertilization systems, as foliar, fertigation, drip irrigation;
- Especially effective at beginning of growth, after winter, drought periods, as well improves poor substrate and soil quality.

Application

Seed treatment: Replace part of water used for seed treatment with biostimulant 1-2 L per ton of seeds

Foliar application use 2 L per/ha, per one application, 3-4 times in season. Use at least 200 L/ha water. Recommended spray nozzle size 0.03-0.09 mm, sprayer pressure 1.5 – 6 Bar.

In furrow application - use 2 L per/ha, recommended spray nozzle size 0.03-0.09 mm.

Fertigation: use 10 L of extract per application, 3-4 applications, depending on crop cycle.

Drip irrigation: use 10 L of extract per application, 3-4 applications, depending on crop cycle.

Contents

Dry matter	9.0 %
Moisture	91.0 %
pH	12.9
Total humic acids (as received)	3.9 %
Total humic acids (on dry matter)	43.3 %
Organic matter (as received)	4.1 %
Total potassium (expressed as K_2O)	2.3 %
Density	1.05 g/cm³

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Recommended application time and rates*

Crop	Application timing	Rate	Efficacy
Cereals	At sowing, as additive to seed treatment, to improve seed germination rate and speed.	1 L-2 L per 1 ton of seeds	Improves germination and root development
	After winter, or at tillering stage, BBCH 19-34, in tank mix with other products	2 L/ha	To improve tillering, nutrient and water uptake
Oilseed canola	Before winter, after emergence BBCH 11-14, after renewal of vegetation in spring	2 L/ha	Larger size of root neck, overwintering, better regeneration after winter, more efficient nutrient uptake
	Active development stages, e.g.side shoot formation, BBCH 20-30	2 L/ha	
Beans, peas	Additive to seed treatment	1 L-2 L per 1 ton of seeds	Better establishment, root development
	After emergence, especially in poor quality soils	2 L/ha	
Potatoes	After emergence, and at tuber formation BBCH 39-42	2 L/ha	More efficient nutrient uptake,at key development stages
Leafy vegetables	After emergence or transplanting, repeat after 10-14 days, or after cutting (spinach, sorrel, rucola), every 10-14 days, or after heavy rain falls, watering	2 L/ha	Higher content of active substances, helps regrow, establish after transplanting, could be used 3-4 times, as necessary
Root vegetables	After emergence or transplanting, repeat application after 10-14 days		
Fruit trees (apple, pear, cherry, plums, apricots et.c.)	At planting, or after winter, repeat application after 10-14 days	2 L/ha per 2 m of tree length, adapt spray volume to crop size	Improves new shoot growing, improves amount of marketable yield, fruit size
Soft fruits (strawberry, raspberry, blueberry, etc.)	At planting, after leaf cut, pruning, repeat after 10-14 days	2 L/ha	Reduces heat, cold stress during flowering, improves pollination
	After heavy rainfalls, intensive watering, especially at high substrate salinity levels. Could be used separately		Root system health, development
	After harvest,before winter season, could be used in tank mix with beneficial microorganisms		To improve soil condition, and provide healthy root system
Nursery plants	After winter or drought period, renewal of vegetation After transplanting, and repeat after 10-14 days Could be used at every tray, pot size change during growth cycle	2 L/ha or 10 L/ha drip irrigation, fertigation	To improve development, and root formation, plant overal development and quality
Greenhouses	As first application after crop sowing, transplanting	2 L/ha or 10 L/ha drip irrigation, fertigation	Increases root formation, growth, crop establishment Helps survive longer growth cycles
	Repeat 10-14 days after transplanting		
	Between harvest times, to improve survival trough season		
Annual flowers in private and public landscapes	After transplanting, and repeat after 10-14 days Midseason applications, when necesary, to enrich soil, after long term watering	2 L/ha	To improve growth, establishment, and flowering in midseason
Woody perennials in private and public landscapes	After transplanting, and repeat after 10-14 days After winter, drought periods, to reduce salt stress	2 L/ha or 10 L/ha drip irrigation, fertigation	Improves tree health in city environment Reduces salt stress in soils with high salt content

* Recommendations may vary, depending on soil properties, crop, local conditions at growing site

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Product use guide. Key development stages of plants

Product	Seeding	Transplanting	Early development	Leaf and shoot development	Flowering	Ripening	After harvest
Biostimulant from Sapropel	• additive to seed treatment • in furrow applications	Directly after transplanting and repeat 7-14 days later	In addition to fertilizers	In addition to fertilizers	At high salinity, or to overcome drought stress	At high salinity, or to overcome drought stress	In addition to fertilizers
Amino Biostimulant with 12.8% Amino Acids	After emergence, and repeat 10-14 days later	Directly after transplanting and repeat 7-14 days later ir environmental conditions not favourable	Heat, frost, high salinity caused stress	Could be used in tank mix with Organomineral fertilizer	In addition to boron, fungicide treatments	To reduce heat stress and promote calcium uptake	In addition to fertilizers

Short guide to product use at different conditions

Product	Seeding	Transplanting	Early development	Leaf and shoot development	Flowering	Ripening	After harvest	High salinity	Heat stress	Drought stress	Mechanical damage	Herbicide damage
Biostimulant from Sapropel	+++	+++	+++	++	+	++	+++	+++	++	+++	++	++
Amino Biostimulant with 12.8% Amino Acids	+++	++	++	++	+++	+++	++	++	+++	+++	+++	+++

* For organic use
** Don't use if high salinity stress caused by fertilizer overdose