

# ProtoHumiX®

## Non-microbial Biostimulant and Inorganic Soil Improver

Manufactured by **GLK Ltd.** Produced in accordance with patented technology – **European Patent EP3135655 European Trademark No. 017182429**

### About ProtoHumiX®

ProtoHumiX® is a high-efficiency biostimulant developed through innovative technology, characterized by exceptional purity and a high concentration of humic and fulvic acids. The product fully complies with **Regulation (EU) 2019/1009** for fertilizing products, authorized for use and free movement throughout the European Union without national restrictions.

### Certificates and Standards:

- **EU Certificate No. CE-B/18/25/BS:** Non-microbial plant biostimulant (valid until March 30, 2030).
- **EU Certificate No. CE-B/6/26/BS:** Inorganic soil improver (valid until February 10, 2031).
- **Organic Farming:** Certified according to **Regulation (EU) 2020/848** and Implementing **Regulation (EU) 2021/1165**.
- **IUNG PIB Registration:** No. SE/132/2025.

### Key Benefits

- **Enhanced Fertility:** Improves soil vitality and promotes humus formation.
- **Plant Development:** Stimulates natural growth and plant vigor.
- **Productivity:** Contributes to high-quality, abundant harvests.
- **Soil Structure:** Optimizes water retention capacity and activates beneficial microflora.

- **Chemical Balance:** Stabilizes pH and improves soil buffering capacity.
- **Protection:** Reduces the mobility of heavy metals and toxins in the soil.
- **Synergy:** Fully compatible with mineral/organic fertilizers and pesticides, enhancing their efficacy.

## Innovative Technology

The production process of ProtoHumiX® is the result of cutting-edge research and next-generation technological know-how. The technology and equipment are protected by patents in 43 countries, ensuring uniqueness, consistent quality, and unsurpassed efficiency.

## Application and Efficacy

### Sustainable Agriculture

- High seed germination rates and a stronger start for seedlings.
- Increased resistance to abiotic stress factors and adverse conditions.
- Capable of reclaiming degraded soils or creating artificial substrates in low-fertility zones.
- **Reduces the need for mineral and organo-mineral fertilizers by up to 40%.**

### Floriculture and Soil Improvement

- Stimulates the development of a robust root system.
- Produces flowers with more intense colors and extended shelf life.
- High immunity against diseases and pathogens.
- Improves soil structure and nutrient availability.

**Proven Efficacy:** The use of ProtoHumiX® increases farm profitability, generating additional profit between **22% and 50% per hectare.**

## Recommended Dosage and Application

**IMPORTANT NOTE:** Use only **chlorine-free (Cl) water** for all solutions. The product is tank-mix compatible with other treatments or fertilizers.

### General Methods

Method	Dosage and Preparation	Notes
<b>Working Solution</b>	0.4% – 0.5% (40–50 ml in 10 L water)	Equivalent to 70–90 ml/ha.
<b>Soil Application</b>	90–100 ml in 20 L water / ha	Apply between harvest and sowing.
<b>Seed Treatment</b>	90–100 ml / 100 kg of seeds	Soak for 5–6 hours or use mechanized dressing.
<b>Fertigation (Root)</b>	90–100 ml in 30 L water	Drench at the base, 1–2 times monthly.
<b>Foliar Application</b>	70–90 ml/ha	Direct spray onto foliage.

## Crop-Specific Recommendations

### Field Crops

- **Cereals (Wheat, Rapeseed, Barley, etc.):** Apply at 4–6 leaf stage and before flowering.
- **Corn:** Apply at 4–6 leaf stage and during ear formation.
- **Sunflower:** Apply at 4–6 leaf stage, before flowering, and during seed formation/ripening.
- **Hemp, Flax, Tobacco:** Seed treatment (90-100 ml/100 kg); Foliar at 3-4 leaves, budding, and after 25 days.

## Vegetables and Potatoes

- **Vegetables (Tomato, Pepper, Cucumber, etc.):** Pre-transplanting (at 10–12 cm height), post-transplanting (4–6 leaf stage), at budding, and 14 days after flowering/fruiting.
- **Root Crops (Carrots, Beets):** During rosette formation and every 25–30 days.
- **Potatoes:** Tubers (300–400 ml in water / 1000 kg tubers before planting); Foliar (70–90 ml/ha at 5–7 leaves, budding, and after 25 days).

## Viticulture and Orchards

- **Vineyards:** Root application (1-2 times/month); Foliar at bud burst, after flowering, and during berry sizing.
- **Fruit and Nut Trees:** Root application (5 L solution per tree, monthly); Foliar at budding, after flowering, and during fruit growth.
- **Oil-bearing Trees (Olive, Coconut, etc.):** Root application (5 L solution per tree, monthly); Foliar at budding, after flowering, and fruit filling.

## Specialty Crops

- **Perennials (40–50 ml in 20 L water):** Spray before flowering, followed by 3–4 applications (10–14 day intervals).
- **Microgreens (10–20 ml in 10 L water):** Spray seeds and sprouts every 48 hours.

## Contact and Support

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