

 **INTERMAG**



CATALOG

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Presence
in over 48
countries



38 years of experience
in the agricultural
industry



100%
Polish company

EFFECTIVENESS THROUGH KNOWLEDGE

Since 1988, we have consistently invested in developing plant cultivation technologies that combine science, practice, and innovation. Our goal is to provide farmers with effective, safe, and advanced products that support plant health, efficient production and fertile soil.

Today, **INTERMAG** employs 180 people, including almost 20 R&D specialists who use state-of-the-art laboratory and production equipment to develop new solutions every day. This work has resulted in dozens of national and international patents, confirming the uniqueness and innovativeness of our technologies.

Thanks to our ability to combine scientific knowledge with agricultural practice, **INTERMAG** is able to support farmers in making their farms more competitive and helping them to develop through the use of modern technologies.

COMPANY PROFILE AND MARKET POSITION



Innovations for agriculture and horticulture

INTERMAG develops and produces modern biostimulants, microbiological bioproducts, specialised fertilisers, and agrochemicals. The company's solutions combine innovative technology, high quality, and practical effectiveness to meet the needs of modern agriculture.



A Leader in agricultural innovation

We focus on bold thinking, careful analysis of emerging trends, and the consistent implementation of technologies that enhance production efficiency. By combining expert knowledge with a practical, goal-driven approach, we create solutions that anticipate market needs and actively shape the future direction of modern agriculture.



Advisory Team

We provide a wide range of services to support our products, such as training, field demonstrations, seminars, and individual consultations, through our **INTERMAG** advisory team. We actively participate in industry trade fairs, where we advise clients and showcase innovative solutions. We work closely with farmers, offering our knowledge, professional support, and practical tips to help them achieve better results and implement modern technologies effectively.



Customer satisfaction – our overarching value

Customer needs and feedback inspire us to continually improve our offerings and create innovative solutions that enhance the profitability of agricultural production. Thanks to our in-depth knowledge of the market, we respond quickly to its changing requirements, emphasising the practical application of our recommendations – including the compatibility of fertilisation and plant protection programmes, and the possibility of combining agrochemicals.



Striving for Excellence

Our products have been cited in over 150 scientific papers, confirming their innovative nature and recognition within the scientific community. We collaborate with more than 30 leading scientific institutions worldwide, including the University of Granada, and the University of Technology in Graz, University of Turin, University of Maribor, Natural History Museum in London, combining science and practice to create solutions for the agriculture of the future.



UNIVERSIDAD
DE GRANADA



UNIVERSITÀ
DI TORINO



PRODUCTION AND TECHNOLOGICAL INFRASTRUCTURE



Production infrastructure

INTERMAG owns and operates two state-of-the-art production facilities in southern Poland. These plants are equipped with advanced technology for producing fertilisers in liquid, crystalline, water-soluble, and granular formulations, as well as fertiliser chelates and microbiological bioproducts. The fully automated and controlled processes comply with ISO 9001 and ISO 14001 standards, ensuring the highest quality and production safety.



Research and Development Centre

Three specialised research teams work in laboratories equipped with climate chambers, plant stress simulation devices, and climate tunnels with automatic microclimate control, as well as laboratories dedicated to formulation, analysis, biotechnology, and biology.



Logistics Infrastructure

INTERMAG's logistics operations are supported by fully integrated IT systems that manage every stage of the process - from the receipt of raw materials to the shipment of finished products. This modern infrastructure guarantees efficiency, flexibility, and punctual deliveries to both domestic and international markets.



INTERMAG'S FLAGSHIP PRODUCTS

Biostimulants

- **TYTANIT®** – a patented yield biostimulant containing the **aTIUM®** molecule, which catalyses plant physiological processes and improves yield.
- **OPTYSIL®** – an immunity biostimulant containing an active form of silicon, whose effectiveness derives from the unique **duoSIL®** formula.
- **OPTYSIL® LONGLIFE** – a biostimulant that extends the shelf life of fruit and vegetables, containing a unique combination of active silicon in the **duoSIL®** formula and organic calcium.
- **VANADOO®** – a biostimulant containing the **avADIUM™** molecule, designed for crops with underground plant parts and supporting the development of storage organs.



Bioproducts

- **BACTIM® SOIL** – a bioproduct that accelerates the decomposition of crop residues and enriches the soil.
- **BACTIM® ENDOFIX** – a bioproduct containing nitrogen-fixing endophytic bacteria that support plant biostimulation.
- **BACTIM® HORTI** – a microbiological product for horticultural crops that improves plant health and yield.
- **MYCOTIM® VIGOR** and **MYCOTIM® NEMABLOCK WP** – mycorrhizal products that promote plant growth and development, and boost resistance to diseases and pests.

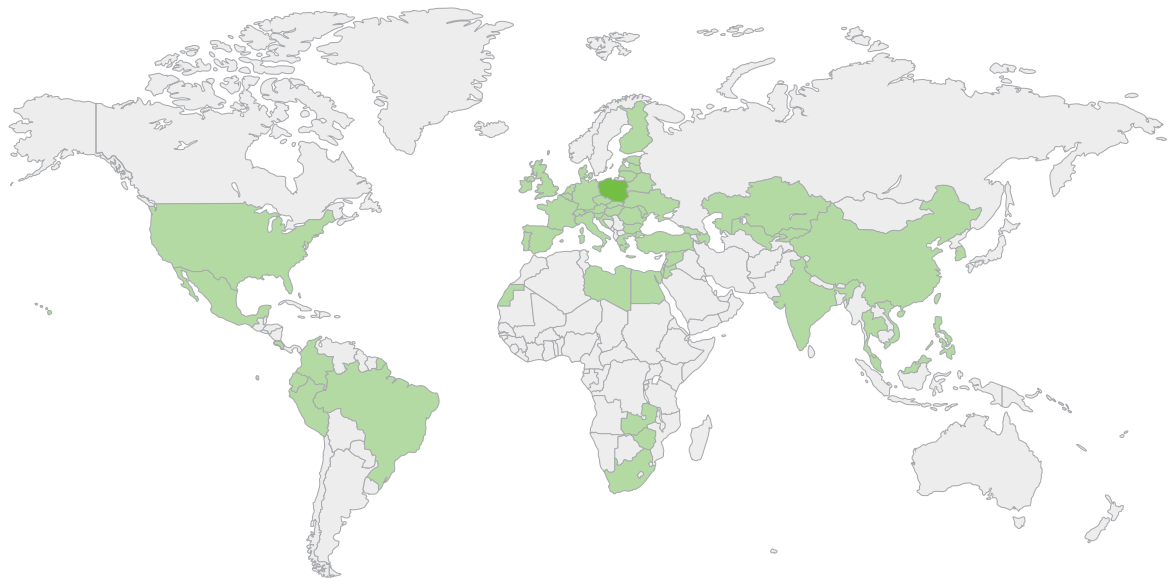


Innovative Fertilisers

- **PLONVIT®** series with **NUTRIBOOST™** technology – foliar fertilisers containing a balanced complex of micronutrients complexed with gluconic acid to provide effective crop nutrition.
- **AMINO ULTRA®** with **GCAA** technology – micronutrient fertilisers containing glycine for ultra-fast plant nutrition.



INTERNATIONAL EXPANSION AND PARTNERSHIPS



EFFECTIVENESS THROUGH KNOWLEDGE

The company's success is built on three pillars:



Innovation



Quality



Partnership



TYTANIT®

YIELD BIOSTIMULANT

TYTANIT® is an effective, fast-acting, and efficient yield biostimulant. It activates and strengthens natural physiological processes in plants, enhancing both the quality and quantity of the yield.

TYTANIT® contains the innovative molecule **aTIUM®** – a unique, bioavailable, organic titanium compound.



aTIUM® ensures:

- high yields, confirmed by numerous studies
- excellent miscibility with other agrochemicals
- high effectiveness.



Available package sizes: **0.1; 0.2; 0.5; 1; 5 L**

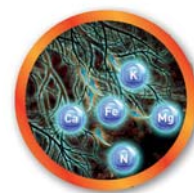
TYTANIT® – key benefits:



IMPROVED POLLINATION



ENHANCED PHOTOSYNTHESIS



INCREASED NUTRIENT UPTAKE

TYTANIT® – direction of use:

CROPS



TYTANIT® is recommended for use in all agricultural, fruit and vegetable crops as foliar applications and/or fertigation.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–4	0,2–0,4 L/ha
FERTIGATION – FIELD GROWN PLANTS	Every 2–3 weeks	0,5 L/ha
FERTIGATION – SOILLESS FARMING	Several times during growing season	0,5 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

TYTANIT® – effectiveness confirmed by research:

TYTANIT® increases biomass growth by intensifying photosynthesis.

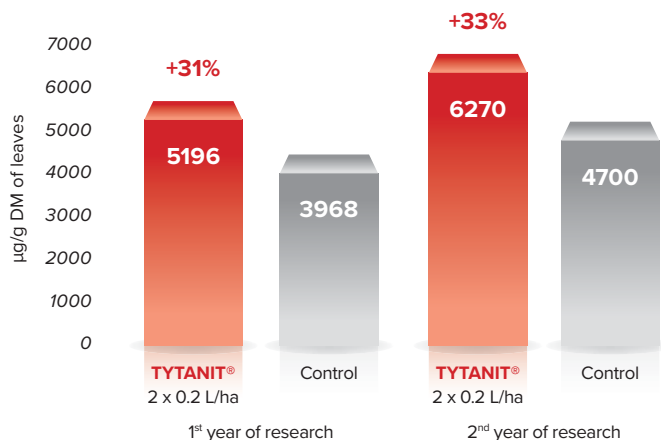
Effect of TYTANIT® application on biomass growth of winter wheat flag leaves.

Test farm, Poland.



Effect of TYTANIT® application on chlorophyll content in grapevine leaves.

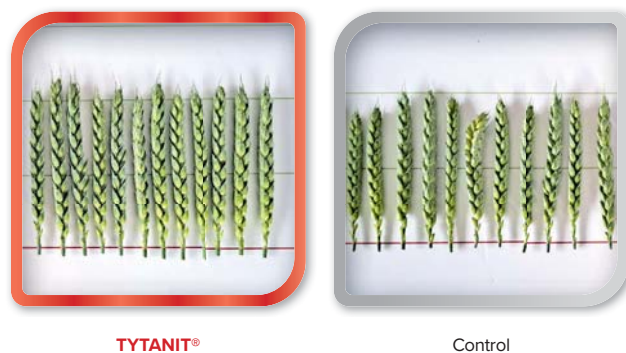
University of Maribor, Slovenia.



TYTANIT® enhances pollination efficiency by increasing pollen viability and improving pollen germination capacity.

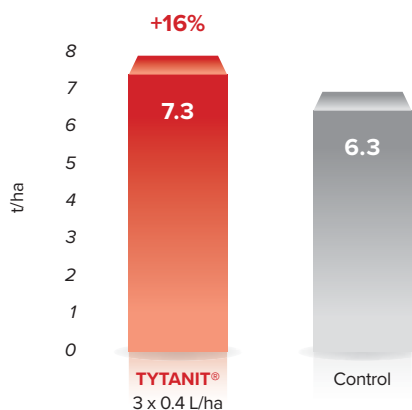
Effect of TYTANIT® application on ear development and grain filling of winter wheat.

Test farm, Poland.



Effect of TYTANIT® application on yield of winter wheat (cv. Figura).

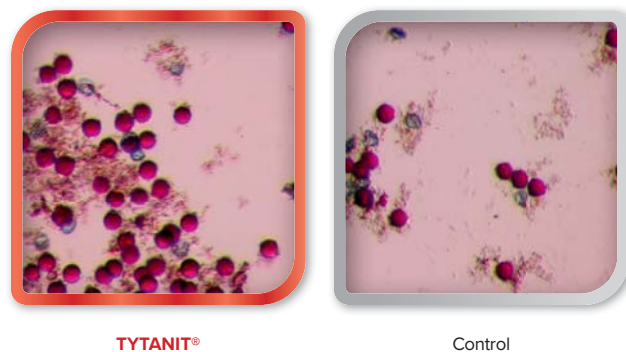
Institute of Plant Protection, Poland.



TYTANIT® ensures higher yield and better quality.

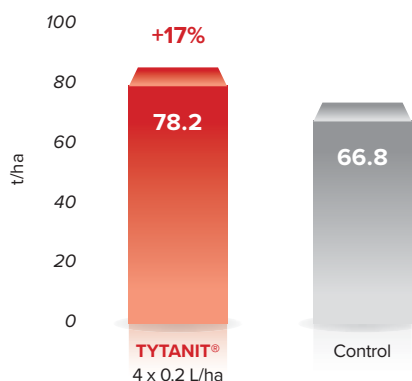
Effect of TYTANIT® application on viable tomato pollen grains under in vitro conditions.

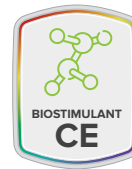
University of Agriculture in Kraków, Poland.



Effect of TYTANIT® application on marketable yield of tomato (cv. Volna F1).

The National Institute of Horticultural Research in Skierniewice, Poland.





OPTYSIL®

IMMUNITY BIOSTIMULANT

OPTYSIL® is an innovative biostimulant that increases plant tolerance to unfavourable growing conditions. It has a particularly positive impact on reducing abiotic stresses (e.g. periodic water shortages) and biotic stresses caused by pathogens and pests.



OPTYSIL® is approved for use in organic farming.

OPTYSIL® contains the unique **duoSIL®** formula – an active, highly bioavailable form of silicon that is easily absorbed by plants.



duoSIL® ensures:

- a high content of plant-available silicon
- unique and exceptional stability
- very good solubility and miscibility with agrochemicals, thanks to its neutral pH.



Available package sizes: **0.25; 0.5; 1; 5; 10 L**

OPTYSIL® – key benefits:



INCREASED PLANT TOLERANCE TO DROUGHT AND LOW TEMPERATURES AND LESS SUSCEPTIBILITY TO PATHOGEN PENETRATION



LOWER PLANT SUSCEPTIBILITY TO MECHANICAL DAMAGES



BETTER YIELD QUALITY

OPTYSIL® – direction of use:



OPTYSIL® is recommended for use in all agricultural, fruit and vegetable crops as foliar applications and/or fertigation.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–5	0.5 L/ha
FERTIGATION – FIELD GROWN PLANTS	Every 2 weeks	1–2 L/ha
FERTIGATION – SOILLESS FARMING	Flooding of slabs and several times during the growing season	1–2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

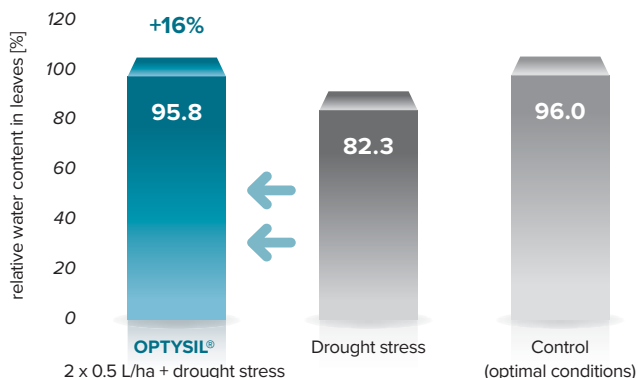
OPTYSIL® – effectiveness confirmed by research:

OPTYSIL® increases plant tolerance to drought and low temperatures.

Effect of **OPTYSIL®** application on the relative water content in wheat leaves under drought stress.

Institute of Plant Physiology, Polish Academy of Sciences in Kraków, Poland.

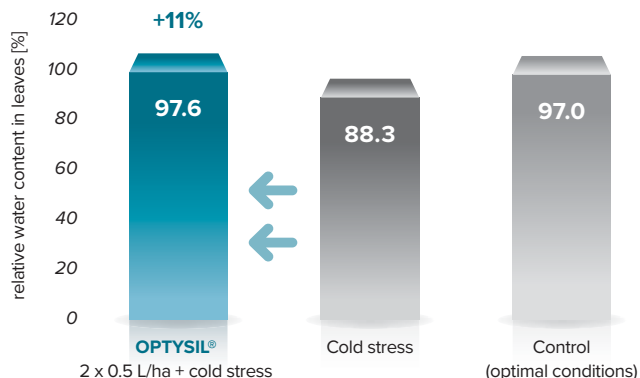
Drought stress conditions: soil moisture at 35% MWHC.



Effect of **OPTYSIL®** application on the relative water content in wheat leaves under cold stress.

Institute of Plant Physiology, Polish Academy of Sciences in Kraków, Poland.

Cold stress conditions: temperature 3°C.



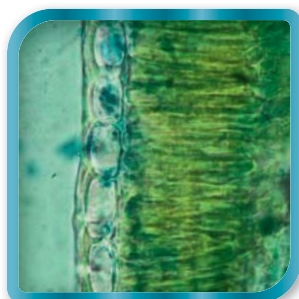
OPTYSIL® reduces the susceptibility of plants to mechanical damage.

Effect of **OPTYSIL®** application on the thickness of the leaf epidermis.

Test farm, Mexico.

Effect of **OPTYSIL®** application on reducing wheat lodging.

Test Farm, Italy.



OPTYSIL®



Control



OPTYSIL®

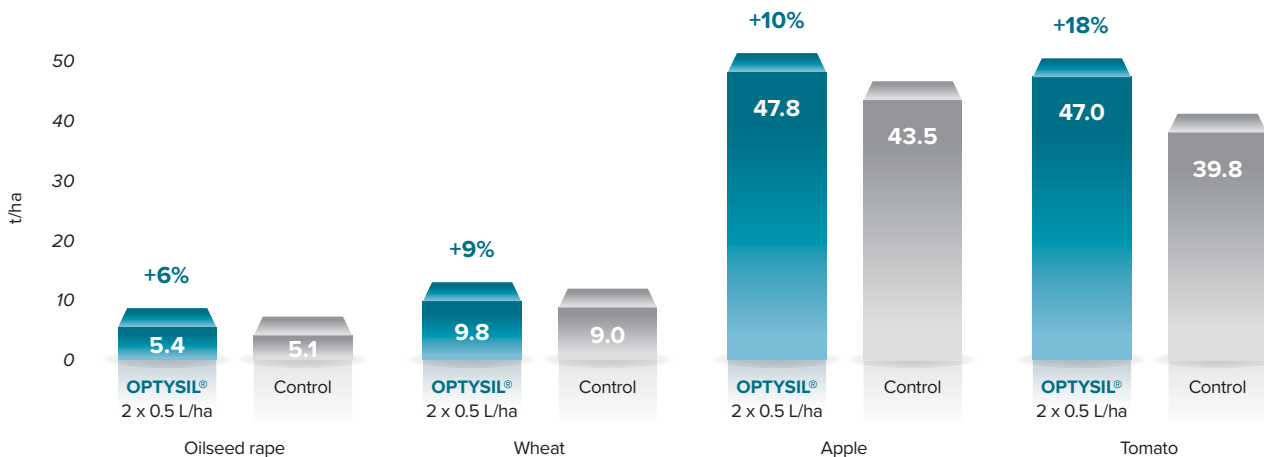


Control

OPTYSIL® strengthens crops, increasing their resistance to biotic and abiotic stresses. This results in reduced yield losses and improved yield quality.

Comparison of average marketable yield per hectare for selected plant species after **OPTYSIL®** application.

Research Center for Cultivar Testing, The National Institute of Horticultural Research in Skierniewice, Poland.





OPTYSIL® LONGLIFE

SHELF-LIFE EXTENDER

OPTYSIL® LONGLIFE is intended to increase the shelf life of fruits and vegetables and to improve the storage and quality characteristics of the yield.

OPTYSIL® LONGLIFE contains a unique combination of silicon in the **duoSIL®** formula and calcium formate.



This combination ensures:

- high content of plant-available silicon
- a source of highly effective calcium
- unique stability and excellent miscibility with other agrochemicals.



Available package sizes: **1; 5 kg**

OPTYSIL® LONGLIFE – key benefits:



LONGER
POST-HARVEST
SHELF LIFE



HIGHER RESISTANCE
TO MECHANICAL
DAMAGES



BETTER QUALITY
OF FRUIT
AND VEGETABLES

OPTYSIL® LONGLIFE – direction of use:

CROPS



OPTYSIL® LONGLIFE is recommended for use in fruit and vegetable crops as a foliar spray during the formation and development of plant parts intended for harvesting (e.g. fruit, storage organs).

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–5	1–1.5 kg/ha

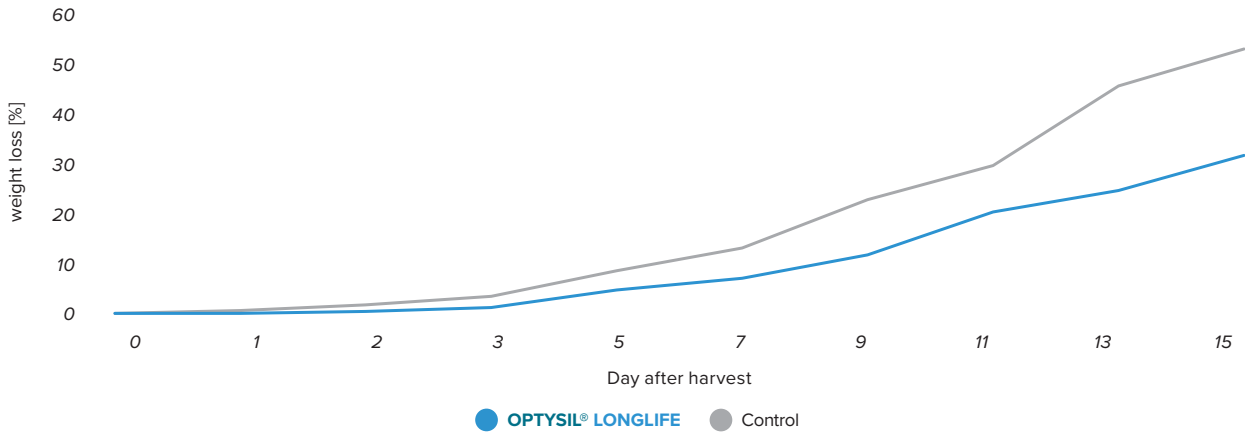
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

OPTYSIL® LONGLIFE – effectiveness confirmed by research:

OPTYSIL® LONGLIFE extends the post-harvest shelf life of fruits and vegetables.

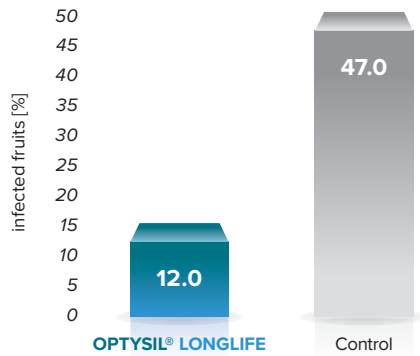
Effect of OPTYSIL® LONGLIFE application on reducing weight loss in blueberries during storage.

Test farm, Poland.



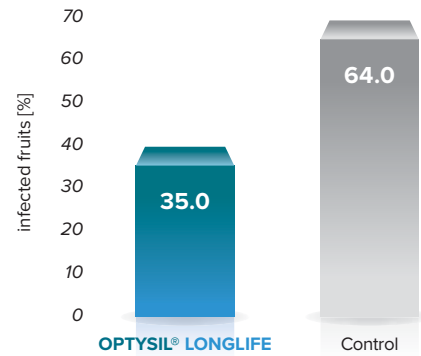
Effect of OPTYSIL® LONGLIFE application on reduction of the symptoms of storage diseases of blueberry.

Test farm, Poland.



Effect of OPTYSIL® LONGLIFE application on reduction of the symptoms of storage diseases of raspberry.

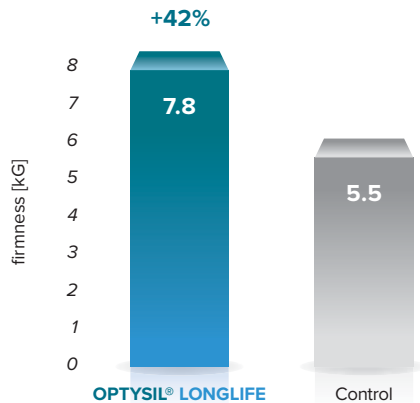
Test farm, Poland.



OPTYSIL® LONGLIFE improves plant resistance to mechanical damage.

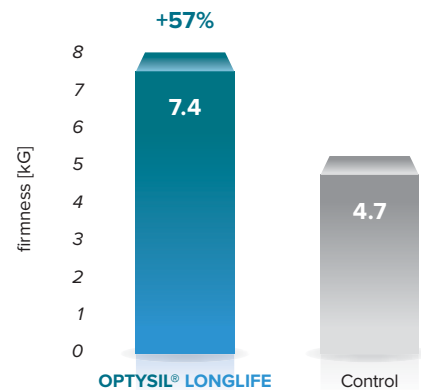
Effect of OPTYSIL® LONGLIFE application on firmness of apple (cv. Gala), immediately after harvest.

Test farm, Poland.



Effect of OPTYSIL® LONGLIFE application on firmness of apple (cv. Gala) after storage.

Test Farm, Poland.





TYTANIT® MAX

YIELD BIOSTIMULANT

TYTANIT® MAX is a highly concentrated, powdered analogue of the **TYTANIT®** biostimulant, offering the same mode of action in a dry, easy-to-apply formulation.

TYTANIT® MAX is an effective, fast-acting, and efficient yield biostimulant. It activates and strengthens natural physiological processes in plants, enhancing both the quality and quantity of the yield.



aTIUM® ensures:

- high yields, confirmed by numerous studies
- excellent miscibility with other agrochemicals
- high effectiveness.



Available package sizes: **0.1; 0.5 kg**

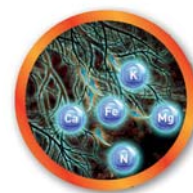
TYTANIT® MAX – key benefits:



IMPROVED POLLINATION



ENHANCED PHOTOSYNTHESIS



INCREASED NUTRIENT UPTAKE

TYTANIT® MAX – direction of use:

CROPS



TYTANIT® MAX is recommended for use in all agricultural, fruit and vegetable crops as foliar applications and/or fertigation.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–4	0.1 kg/ha
FERTIGATION – FIELD GROWN PLANTS	Every 2–3 weeks	0.25 kg/ha
FERTIGATION – SOILLESS FARMING	Several times during growing season	0.25 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

OPTYSIL® AMINO

IMMUNITY BIOSTIMULANT WITH AMINO-ACID

OPTYSIL® AMINO increase plant tolerance to unfavourable growing conditions and supports plant recovery after stress.

Thanks to its unique formulation – combining **duoSIL®**, an active and highly bio-available form of silicon easily absorbed by plants, with a high content of plant-derived amino acids – the product offers a wide range of applications, both preventive and intervention.



Available package sizes: **0.25; 0.5; 1; 5; 10 L**



This combination ensures:

- high content of plant-available silicon
- a source of biologically active amino acids
- synergistic effectiveness of silicon and amino acids.

OPTYSIL® AMINO – key benefits:



INCREASED PLANT TOLERANCE TO STRESS CONDITIONS



FAST PLANT RECOVERY AFTER STRESS CONDITION



BETTER YIELD QUALITY

OPTYSIL® AMINO – direction of use:

CROPS



OPTYSIL® AMINO is recommended for use in all agricultural, fruit and vegetable crops as foliar applications.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–5	1–1.2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

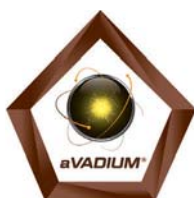


VANADOO®

STORAGE ORGANS BIOSTIMULANT

VANADOO® is an innovative and unique biostimulant for plants with underground storage organs intended for harvest. Thanks to the **aVADIUM®** molecule, it has a positive effect on the yield and quality of these storage organs.

VANADOO® contains the unique **aVADIUM®** molecule - an organic, bioavailable vanadium compound that ensures the effective activity of this element.



aVADIUM® ensures:

- stimulation of storage organs and underground plant parts
- increased content of storage substances (including sugars) in underground plant parts
- visible improvement in yield size and quality.



Available package sizes: **0.25; 0.5; 1; 5 L**

VANADOO® – key benefits:



INTENSIFIED SUGAR SYNTHESIS



IMPROVED SUGAR TRANSPORT TO STORAGE ORGANS



INCREASED SUGAR ACCUMULATION IN STORAGE ORGANS

VANADOO® – direction of use:

CROPS



VANADOO® recommended for foliar application to plant species that form underground storage organs intended for harvest.

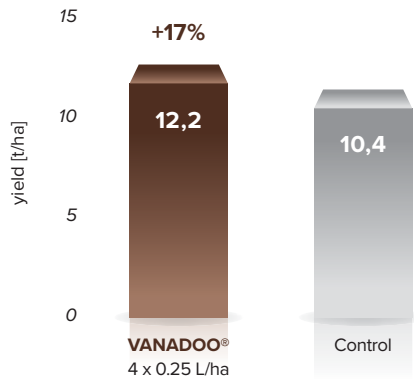
	Direction of use	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–3	0.25 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

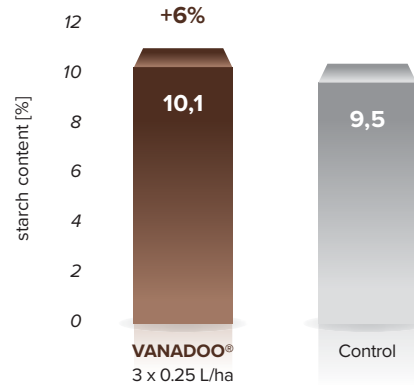
VANADOO® – effectiveness confirmed by research:

VANADOO® increases content of storage substances (including sugars) in underground plant parts.

Effect of VANADOO® application on sugar yield from sugar beet cultivation.
Institute of Soil Science and Plant Cultivation in Puławy, Poland.



Effect of VANADOO® application on starch content in potato.
Test farm, Poland.



VANADOO® enhances the uniform development of underground storage organs.

Effect of VANADOO® application on carrots size and uniformity.
Test farm, Poland.



VANADOO®



Control



VANADOO®

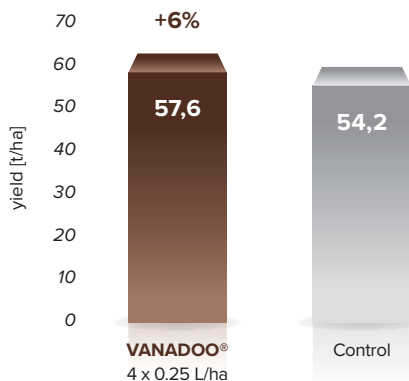


Control

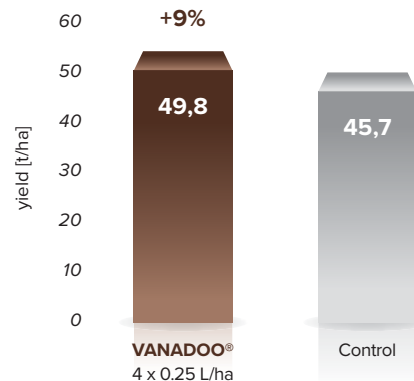
Effect of VANADOO® application on potato size and uniformity.
Test farm, Poland.

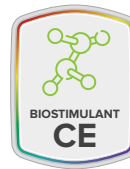
VANADOO® ensures higher yield and better quality.

Effect of VANADOO® application on carrot yield.
Test farm, Poland.



Effect of VANADOO® application on potato yield.
Research Center for Cultivar Testing, Poland.





PLANTICINE®

PLANT IMMUNIZER

PLANTICINE® is a unique biostimulant of natural defence mechanisms – it activates internal immunity, preparing plants for pathogen attacks.



PLANTICINE® is approved for use in organic farming.

PLANTICINE® contains the unique **BioVaxin®** formula – bioactive, natural oligogalacturonides that effectively activate plant innate immunity.



BioVaxin® ensures:

- innovative stimulation of natural plant defence mechanisms
- activation of ISR (Induced Systemic Resistance) and SAR (Systemic Acquired Resistance)
- effective plant resistance to pathogen attack.

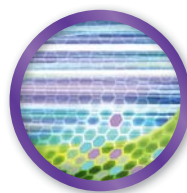


Available package sizes: **1; 5; 10 L**

PLANTICINE® – key benefits:



ACTIVATION OF NATURAL PLANT DEFENCE MECHANISMS



SYNTHESIS OF DEFENCE PROTEINS (PR)



HIGHER RESISTANCE TO PATHOGEN ATTACKS

PLANTICINE® – direction of use:



PLANTICINE® is recommended for use in all agriculture, fruit and vegetable crops as foliar applications.

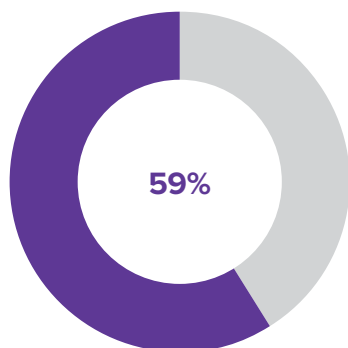
	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–6	2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

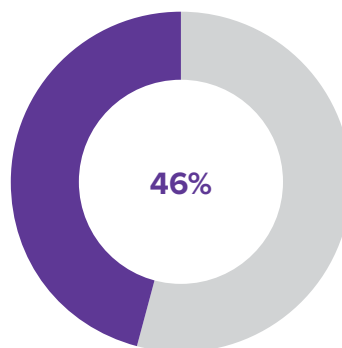
PLANTICINE® – effectiveness confirmed by research:

PLANTICINE® increases the natural resistance of plants to pathogen attack.

Effect of PLANTICINE® application on reducing damage caused by red spider mite (*Tetranychus urticae*).
NEF Science in Skierniewice, Poland.



Less damage
on strawberry plants



Less damage
on cucumber plants

Effect of PLANTICINE® application on reducing leaf damage caused by western flower thrips (*Frankliniella occidentalis*) in greenhouse cucumber cultivation.
NEF Science in Skierniewice, Poland.

Effect of PLANTICINE® application on reducing fruit damage caused by western flower thrips (*Frankliniella occidentalis*) in greenhouse cucumber cultivation.
NEF Science in Skierniewice, Poland.



PLANTICINE®



Control



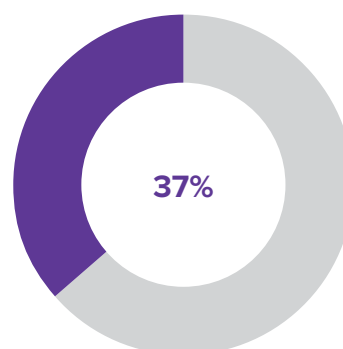
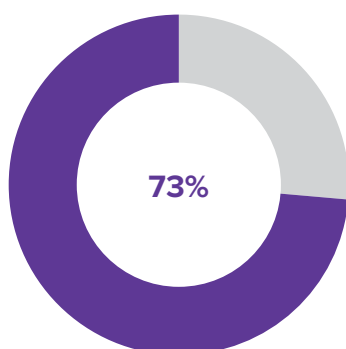
PLANTICINE®



Control

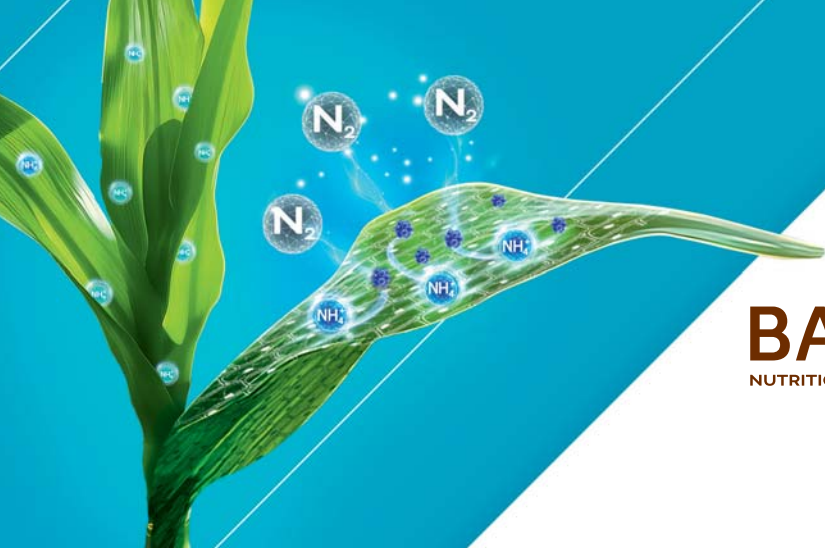
Effect of PLANTICINE® application on reducing downy mildew symptoms on cucumber leaves.
The National Institute of Horticultural Research in Skierniewice, Poland.

Effect of PLANTICINE® application on reducing powdery mildew symptoms on cucumber leaves.
The National Institute of Horticultural Research in Skierniewice, Poland.





Learn more



BACTIM® ENDOFIX

NUTRITION TECHNOLOGY

NITROGEN PRODUCTION DIRECTLY IN THE PLANT

BACTIM® ENDOFIX is a unique microbial bioproduct containing *Paenibacillus polymyxa* bacteria that can colonise any plant species and supply them with additional nitrogen fixed directly from the air. The bacteria remain active throughout the growing season – from application to harvest – even under conditions where nitrogen uptake from the soil is limited. This reduces the risk of nitrogen deficiency during the growing period, maximises yield potential, and improves plant vigour and health.



BACTIM® ENDOFIX is approved for use in organic farming.

BACTIM® ENDOFIX provides plants with nitrogen in the form of readily absorbable ammonium ions (NH_4^+) throughout the growing season.



BACTIM® ENDOFIX – composition:

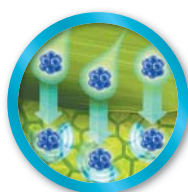
Available package sizes: **1; 5 L**

BIOPRODUCT COMPOSITION

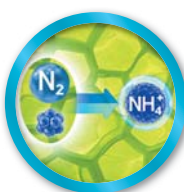
BACTIM® ENDOFIX

contains selected strain of *Paenibacillus polymyxa* – at least 10^8 CFU/mL

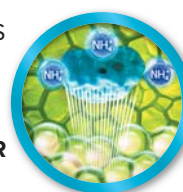
BACTIM® ENDOFIX – key benefits:



PENETRATES THROUGH THE STOMATA INTO THE INTERIOR OF PLANTS, **COLONIZING THE INTERCELLULAR SPACES** OF LEAVES, STEMS, ROOTS



QUICKLY AND EFFICIENTLY CONVERTS ATMOSPHERIC NITROGEN INTO EASILY ASSIMILABLE **AMMONIUM IONS OVER A WIDE TEMPERATURE RANGE OF 6–36°C**



THE ADDITIONAL NITROGEN IS USED BY THE PLANT TO **BUILD PROTEINS AND TO SYNTHESIZE AMINO ACIDS**

BACTIM® ENDOFIX – direction of use:

CROPS

BACTIM® ENDOFIX is recommended for use in all agricultural, fruit and vegetable crops as a foliar application. Application should begin at the start of the growing season. The product can be used together with foliar fertilisers and most agrochemicals.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 1–2

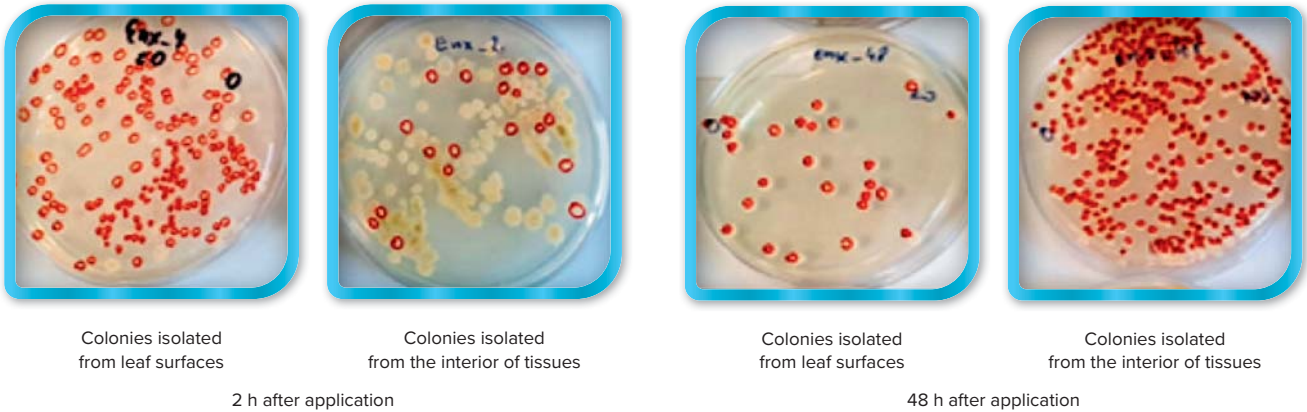
400 mL/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

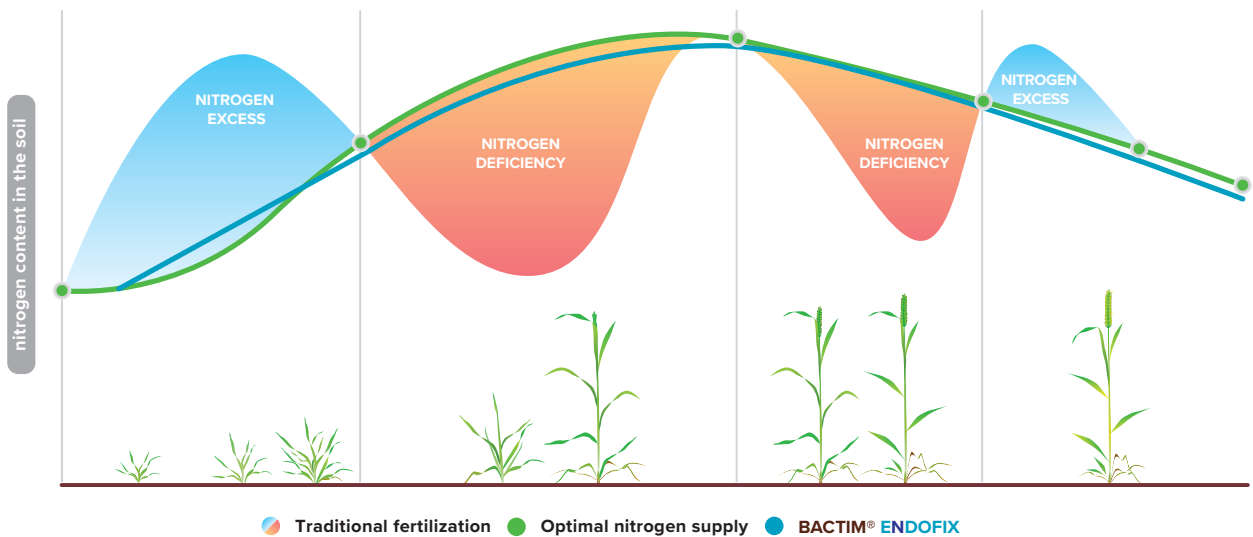
BACTIM® ENDOFIX – effectiveness confirmed by research:

BACTIM® ENDOFIX ensures that the bacteria migrate and colonise plant tissues rapidly, within two hours after application.

Petri dishes with colonies of *Paenibacillus polymyxa* bacteria, isolated from the leaf surface and internal tissues of maize, 2 hours and 48 hours after **BACTIM® ENDOFIX** application.

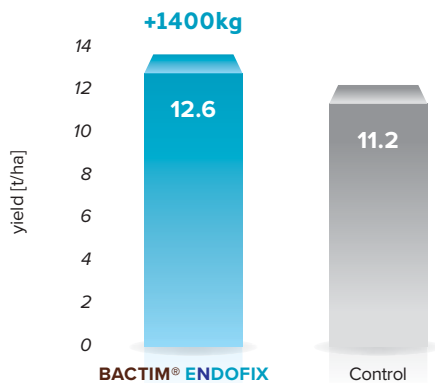


BACTIM® ENDOFIX stabilises nitrogen levels throughout the growing season.



BACTIM® ENDOFIX increases the nitrogen content of plants, improving their vigour and condition and increasing their yields.

Effect of BACTIM® ENDOFIX application on winter wheat yield.
Test farm, Poland.



Effect of BACTIM® ENDOFIX on development and vigour of winter wheat.
Test farm, Poland.





Learn more



BACTIM[®] SOIL

NUTRITION TECHNOLOGY

EFFECTIVE SOIL REGENERATION

BACTIM[®] SOIL is a microbial bioproduct intended to accelerate the revitalisation of “tired” soils – those at various levels of degradation caused by intensive cultivation and unbalanced fertilisation.

BACTIM[®] SOIL contains a consortium of *Bacillus spp.* naturally occurring in the soil environment. The product also includes a humic substances that supports the growth of microorganisms immediately after application.



BACTIM[®] SOIL is approved for use in organic farming.



Available package sizes: **5; 20 L**

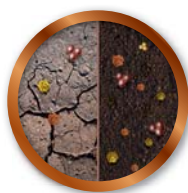
BACTIM[®] SOIL – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] SOIL

contains selected strain of *Bacillus spp.*
– at least 5×10^8 CFU/mL

BACTIM[®] SOIL – key benefits:



REGENERATION OF DEGRADED SOIL



BETTER WATER RETENTION IN SOIL



BETTER UTILIZATION OF NUTRIENTS

BACTIM[®] SOIL – direction of use:

CROPS



BACTIM[®] SOIL is recommended for post-harvest and pre-sowing applications. The product may also be applied post-emergence, during the early stages of plant development.

DIRECTION OF USE

SINGLE DOSE

SOIL SPRAYING

Post-harvest, pre-sowing or post-emergence

1–2 L/ha

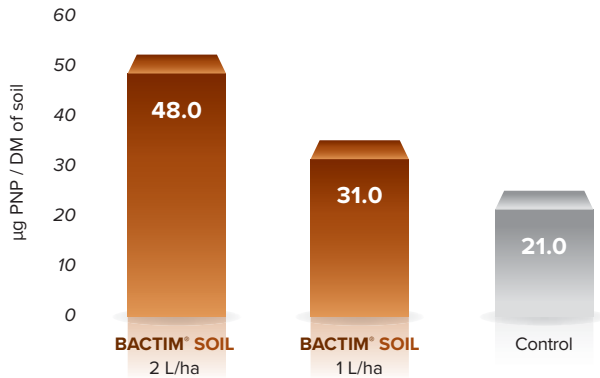
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM® SOIL – effectiveness confirmed by research:

BACTIM® SOIL effectively revitalises the soil and enhances its biological activity.

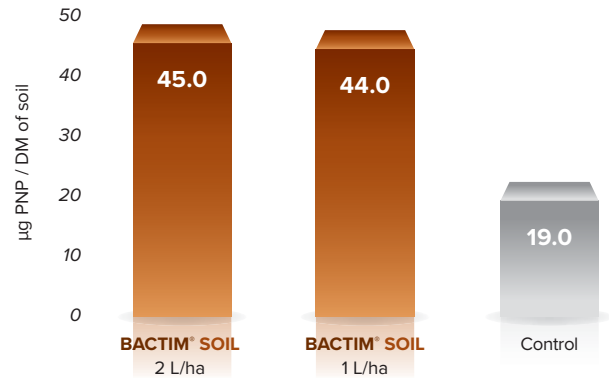
Effect of BACTIM® SOIL application on soil enzymatic activity (alkaline phosphatase) under winter rapeseed cultivation.

Institute of Soil Science and Plant Cultivation in Puławy, Poland.



Effect of BACTIM® SOIL application on soil enzymatic activity (alkaline phosphatase) under winter wheat cultivation.

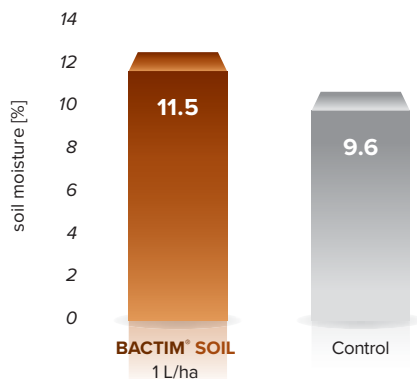
Institute of Soil Science and Plant Cultivation in Puławy, Poland.



BACTIM® SOIL has a positive effect on the physico-chemical properties of the soil.

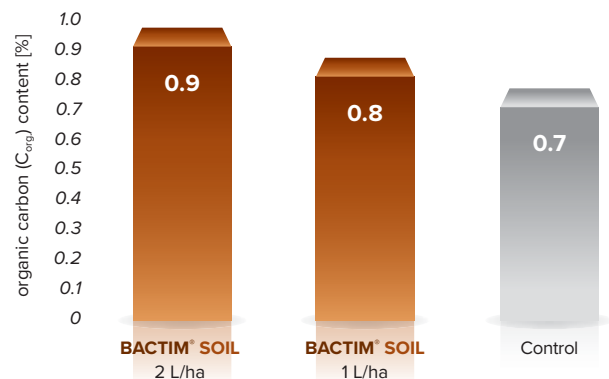
Effect of BACTIM® SOIL application on soil moisture under maize cultivation.

Institute of Soil Science and Plant Cultivation in Puławy, Poland.



Effect of BACTIM® SOIL application on the organic carbon (C_{org}) content in soil under winter rapeseed cultivation.

Institute of Soil Science and Plant Cultivation in Puławy, Poland.



BACTIM® SOIL supports plant growth and development by improving soil properties.

Effect of BACTIM® SOIL pre-sowing application on the early growth and development of winter wheat.

Internal test INTERMAG.





Learn more

MYCOTIM[®] VIGOR

MYCORRHIZA TECHNOLOGY

MICROBIAL BIOPRODUCT FOR ENHANCING CROP YIELD

MYCOTIM[®] VIGOR contains a set of mycorrhizal fungi and rhizosphere bacteria that support plant growth and development, and also improve plant health.

MYCOTIM[®] VIGOR is particularly recommended for vegetables, fruit trees and shrubs. It is also suitable for producing vegetative seedlings, watering seedlings, and cultivation under cover.

MYCOTIM[®] VIGOR – key benefits:

- improved nutrient and water supply to plants
- enhanced physical and chemical properties of the soil
- reduced plant susceptibility to abiotic and biotic stresses
- increased crop quality and quantity
- promoted microbial activity and enhanced soil biodiversity.



Available package sizes: **1 kg**

MYCOTIM[®] VIGOR – composition:

	BIOPRODUCT COMPOSITION	MYCORRHIZATION EFFICIENCY [%]
MYCOTIM[®] VIGOR	Mycorrhizal fungi (AMF)	60±5

MYCOTIM[®] VIGOR does not contain genetically modified microorganisms. The microorganisms in the product originate from the natural soil environment.

MYCOTIM[®] VIGOR – direction of use:

CROPS



MYCOTIM[®] VIGOR is available in powder form which, after dissolving in water, is used for watering and/or fertigating plants.

	DIRECTION OF USE	SINGLE DOSE
FERTIGATION	Number of treatment: 2–4	2 kg/ha/application
WATERING SEEDLINGS	Number of treatment: 1	0,3–0,5% (300–500 g/100 L of water)

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

MYCOTIM® VIGOR – effectiveness confirmed by research:

MYCOTIM® VIGOR improves root system size and mycorrhisation.

Effect of MYCOTIM® VIGOR application on pepper plant development after field planting.

Test farm, Poland.

Effect of MYCOTIM® VIGOR on root system development in tomato seedlings.

Test farm, Poland.



MYCOTIM® VIGOR



Control



MYCOTIM® VIGOR



Control

Effect of MYCOTIM® VIGOR application on root system development in pepper plants.

Test farm, Poland.

Effect of MYCOTIM® VIGOR application on root system development in tomato plants.

Test farm, Poland.



MYCOTIM® VIGOR



Control



MYCOTIM® VIGOR



Control

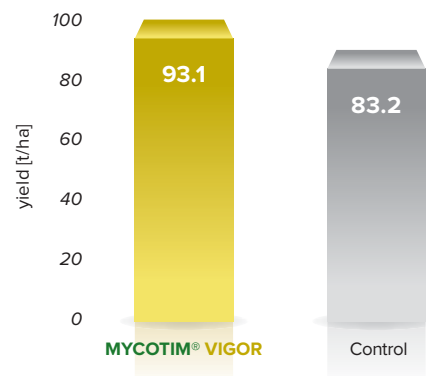
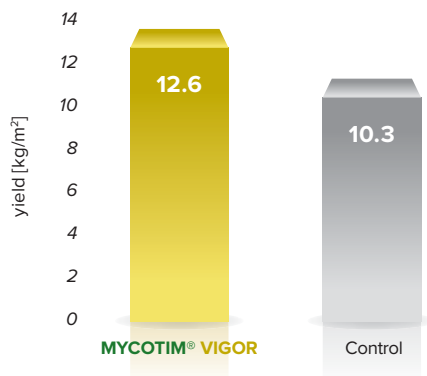
MYCOTIM® VIGOR ensures higher yield and better quality.

Effect of MYCOTIM® VIGOR application on tomato yield.

Central Research Center for Cultivar Research, Poland.

Effect of MYCOTIM® VIGOR application on pepper marketable yield.

Central Research Center for Cultivar Research, Poland.





BACTIM[®] NUTRI N+

NUTRITION TECHNOLOGY

SOIL NITROGEN FIXING BIOSTIMULANT

BACTIM[®] NUTRI N+ is enriched with selected *Azotobacter sp.*, which efficiently fix atmospheric nitrogen and increase its availability in the soil.



BACTIM[®] NUTRI N+ is approved for use in organic farming.

BACTIM[®] NUTRI N+ improves the nitrogen nutritional status of plants and enhances both the quality and quantity of the yield.

BACTIM[®] NUTRI N+ – composition:

BIOPRODUCT COMPOSITION

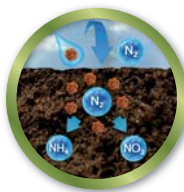
BACTIM[®] NUTRI N+

contains selected strain of *Azotobacter sp.*
– at least 10⁷ CFU/mL

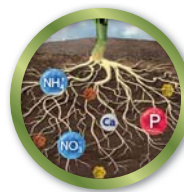


Available package sizes: **1L**

BACTIM[®] NUTRI N+ – key benefits:



BETTER NITROGEN SUPPLY OF PLANTS



BETTER PLANT GROWTH AND DEVELOPMENT

BACTIM[®] NUTRI N+ – direction of use:

CROPS 

BACTIM[®] NUTRI N+ should be applied by spraying the soil before sowing or planting. The product may also be applied after emergence or planting, during the early developmental stages of the crop.

	DIRECTION OF USE	SINGLE DOSE
SOIL SPRAYING	Number of treatment: 1	400 mL/ha
FERTIGATION	Several times during the growing season	400 mL/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



BACTIM[®] NUTRI P+

NUTRITION TECHNOLOGY

EFFECTIVE PHOSPHOROUS SOLUBILIZER

BACTIM[®] NUTRI P+ is an innovative microbial bioproduct containing selected *Bacillus spp.* strains that specialise in converting inaccessible forms of phosphorus (organic and mineral) into the easily absorbed phosphate ion ($H_2PO_4^-$).

Thanks to their ability to dissolve calcium, iron and aluminium phosphates and to mineralise organic compounds, these bacteria increase the availability of phosphorus in the rhizosphere throughout the growing season and support the proper development of the root system.



BACTIM[®] NUTRI P+ is approved for use in organic farming.



Available package sizes: **5; 20 L**

BACTIM[®] NUTRI P+ – composition:

BIOPRODUCT COMPOSITION

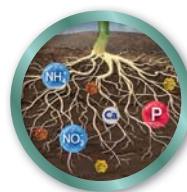
BACTIM[®] NUTRI P+

contains selected strain of *Bacillus spp.*
– at least 5×10^8 CFU/mL

BACTIM[®] NUTRI P+ – key benefits:



BETTER PHOSPHORUS SUPPLY OF PLANTS



BETTER PLANT GROWTH AND DEVELOPMENT

BACTIM[®] NUTRI P+ – direction of use:



BACTIM[®] NUTRI P+ should be applied by spraying the soil before sowing or planting. The product may also be applied after emergence or planting, during the early developmental stages of the crop.

DIRECTION OF USE

SINGLE DOSE

SOIL SPRAYING

Number of treatments: 1

2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



BACTIM[®] SAFE PK

NUTRITION TECHNOLOGY

SOIL PHOSPHORUS AND POTASSIUM MOBILIZATION

BACTIM[®] SAFE PK is a microbiological product that contains selected *Bacillus spp.* bacteria.

These bacteria enhance the efficiency of NPK fertiliser use due to their unique properties. It effectively solubilizes immobilized phosphorus and potassium, increasing their availability in a form accessible to plants.

The major beneficial effects of using **BACTIM[®] SAFE PK** are:

- more efficient use of applied NPK fertiliser
- improved soil structure and water retention
- prevention of nutrient re-immobilization caused by high or low soil pH
- improved plant growth and development.



Available package sizes: **5 kg**

BACTIM[®] SAFE PK – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] SAFE PK

contains selected strains of *Bacillus spp.*
– 10⁹ cfu/mg

BACTIM[®] SAFE PK – direction of use:

CROPS



BACTIM[®] SAFE PK should be applied by spraying the soil before sowing or planting. The product may also be applied after emergence or planting, during the early developmental stages of the crop.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 1–2

200 g/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



NEW



Learn more

BACTIM[®] DELTA

GUARD TECHNOLOGY

MICROBIOLOGICAL BIOPRODUCT – ENHANCING PLANT IMMUNITY AND LIMITING PEST DAMAGE

BACTIM[®] DELTA is a microbial bioproduct containing selected strains of *Bacillus spp.*

The microorganisms in the bioproduct colonise the leaf surface and the rhizosphere, creating a biological barrier that negatively affects the development and feeding of pests (primarily lepidopteran larvae), while simultaneously activating natural plant resistance (ISR – Induced Systemic Resistance).

BACTIM[®] DELTA supports plant health and vigour, enabling crops to cope better with pest pressure and other stress factors.

BACTIM[®] DELTA – key benefits:

- reduced damage to leaf and generative tissues
- activation of systemic resistance (ISR), strengthening natural plant defence mechanisms
- improved plant health and vigour under biotic stress
- increased photosynthetic efficiency and improved nutrient utilisation.



Available package sizes: **1 kg**

BACTIM[®] DELTA – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] DELTA

contains selected strain of *Bacillus spp.*
– at least 1×10^{13} CFU/kg

BACTIM[®] DELTA – direction of use:

CROPS



BACTIM[®] DELTA is intended for preventive use or for emergency application when larvae hatch and begin feeding, as a foliar spray in agricultural, fruit, vegetable and ornamental crops.

Apply the product in the evening or under low-intensity UV radiation.

Do not mix with bactericidal fungicides.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 2–5

1 kg/ha
in 300–600 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

BACTIM[®] HORTI

GUARD TECHNOLOGY

MIKROBIAL SUPPORT FOR HORTICULTURAL CROPS



BACTIM[®] HORTI is a multifunctional microbial bioproduct designed for horticultural crops. Its unique formula improves plant health and helps maximise yield potential.

BACTIM[®] HORTI forms a beneficial microbiological barrier on above-ground plant parts, naturally enhancing plant health. The microorganisms contained in the product stimulate plant growth, increasing plant vigour and improving yield.



Available package sizes: **5 L**

BACTIM[®] HORTI – composition:

BIOPRODUCT COMPOSITION

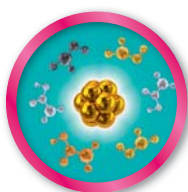
BACTIM[®] HORTI

contains selected strain of *Bacillus spp.*
– at least 10⁸ CFU/mL

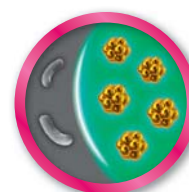
BACTIM[®] HORTI – key benefits:



COLONISES THE PLANT SURFACE, LIMITING THE SPACE FOR PATHOGEN GROWTH



STIMULATES PLANT METABOLISM AND INCREASES THEIR SYSTEMIC RESISTANCE (ISR)



REDUCES THE HARMFULNESS OF PATHOGENS

BACTIM[®] HORTI – direction of use:

CROPS

BACTIM[®] HORTI is recommended for use in all horticultural crops as a foliar application. The first treatment should be applied during the initial phase of leaf development. A fine-droplet spray is recommended. Avoid direct sunlight during application and carry it out in the evening.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 2–4

2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM® HORTI – effectiveness confirmed by research:

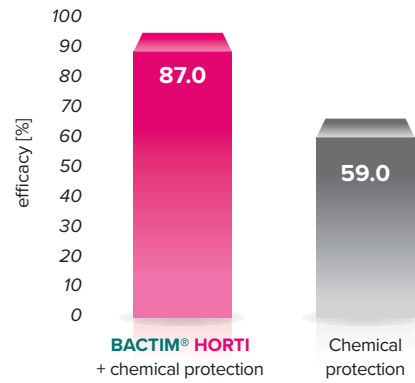
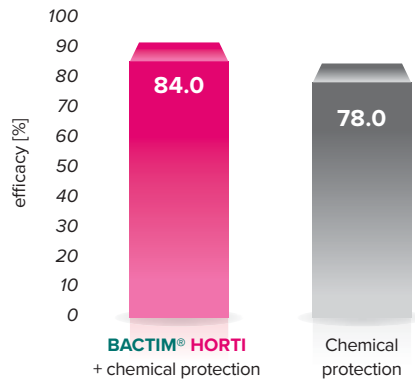
BACTIM® HORTI effectively reduces disease pressure.

Effect of BACTIM® HORTI in reducing powdery mildew (*Erysiphe heraclei*) symptoms on carrot leaves.

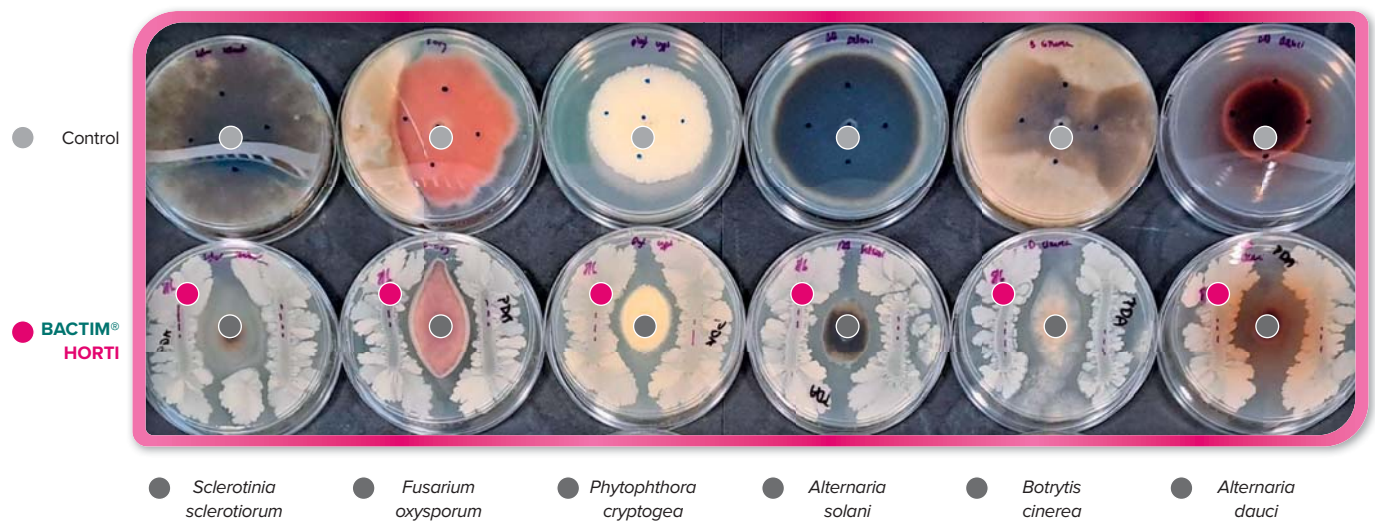
The National Institute of Horticultural Research in Skierniewice, Poland.

Effect of BACTIM® HORTI in reducing symptoms of gray mould (*Botrytis cinerea*) in strawberry fruit.

The National Institute of Horticultural Research in Skierniewice, Poland.



Effect of **BACTIM® HORTI** on reducing the development of major horticultural plant diseases – plate test for antibiosis.



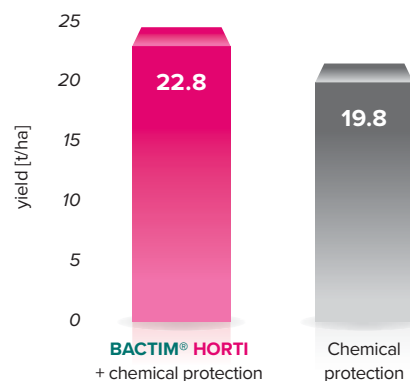
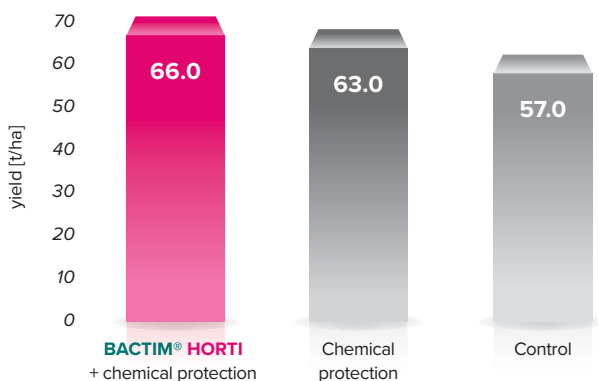
BACTIM® HORTI ensures higher yield

Effect of BACTIM® HORTI on carrot yield.

The National Institute of Horticultural Research in Skierniewice, Poland.

Effect of BACTIM® HORTI on strawberry marketable yield.

The National Institute of Horticultural Research in Skierniewice, Poland.





Learn more



BACTIM® FERTI

GUARD TECHNOLOGY

MICROBIAL SUPPORT FOR FERTIGATED CROPS

BACTIM® FERTI is a microbial bioproduct designed for fertigated crops. Its unique formula, based on carefully selected microorganisms, creates a natural barrier in the soil around the root system, reducing the impact of soil-borne diseases.

BACTIM® FERTI improves water and nutrient utilisation and has a positive effect on soil properties.



Available package sizes: **5; 20 L**

BACTIM® FERTI – composition:

BIOPRODUCT COMPOSITION

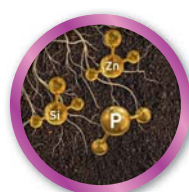
BACTIM® FERTI

contains selected strain of *Bacillus spp.*
– at least 10^8 CFU/mL

BACTIM® FERTI – key benefits:



CREATES NATURAL BARRIERS AROUND THE ROOT SYSTEM



SOLUBILIZES PHOSPHORUS, ZINC AND SILICON, INCREASING THEIR AVAILABILITY IN THE SOIL



INCREASES PLANT VIGOR AND YIELD

BACTIM® FERTI – direction of use:



BACTIM® FERTI is intended for use in fertigated crops. The first treatment should be made after planting the seedlings. The product can be applied either in the irrigation cycle or with the nutrient solution, depending on the preference and needs of the crop.

FERTIGATION

DIRECTION OF USE

SINGLE DOSE

Number of treatments: 2–4

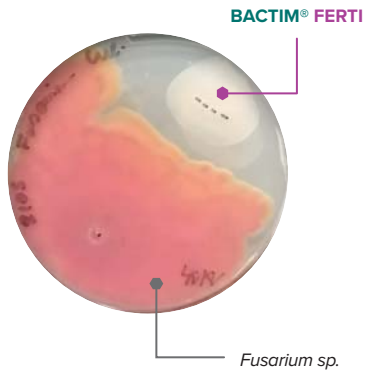
2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM® FERTI – effectiveness confirmed by research:

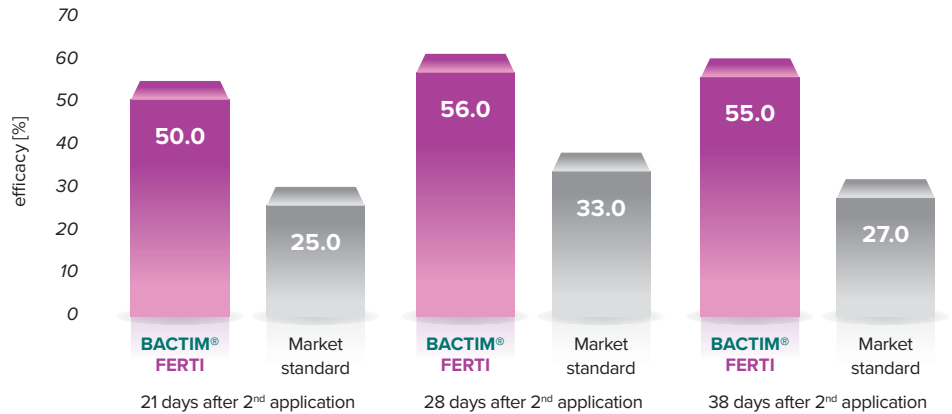
BACTIM® FERTI effectively reduces disease pressure.

Effect of **BACTIM® FERTI** on reducing the development of *Fusarium sp.* – plate test for antibiosis.



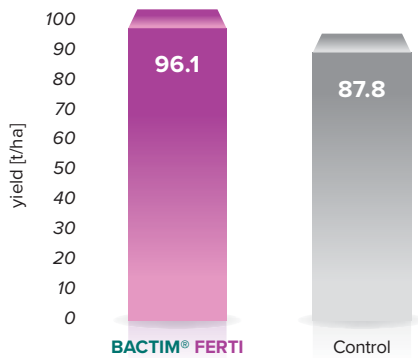
Effect of **BACTIM® FERTI** on reducing the development of *Fusarium sp.* in pepper cultivation.

Internal test, INTERMAG.



Effect of **BACTIM® FERTI** on the marketable yield of tomato in field cultivation.

Test farm, Poland.



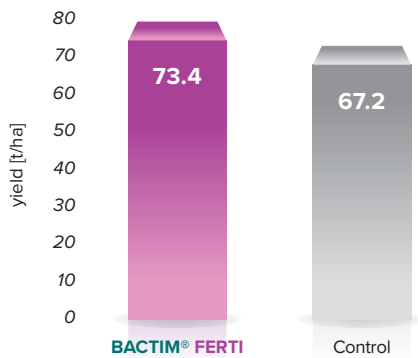
Effect of **BACTIM® FERTI** on the development and vigour of tomato in field cultivation.

Test farm, Poland.



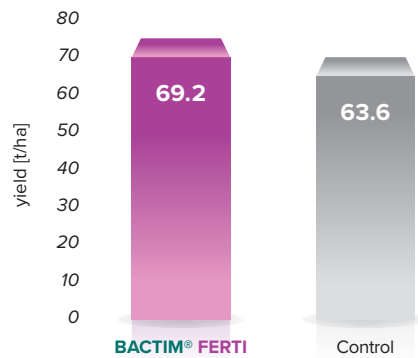
Effect of **BACTIM® FERTI** on marketable yield of carrot.

Test farm, Poland.



Effect of **BACTIM® FERTI** on marketable yield of onion.

Test farm, Poland.





Learn more

BACTIM[®] OMNIS

GUARD TECHNOLOGY

MICROBIAL STIMULANT THAT REDUCES THE INFECTION POTENTIAL OF AGRICULTURAL CROPS

BACTIM[®] OMNIS is a multifunctional microbial bioproduct intended for use in agricultural crops.

The bacteria contained in the product rapidly colonise above-ground plant parts, creating a natural barrier that reduces the harmful effects of fungal diseases.

BACTIM[®] OMNIS provides:

- increased crop health
- reduced impact of diseases affecting above-ground plant parts and soil-borne diseases
- improved plant vigour
- increased yield potential.

BACTIM[®] OMNIS – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] OMNIS

contains selected strain of *Bacillus spp.*
– at least 5×10^8 CFU/mL



Available package sizes: **1; 5; 20 L**

BACTIM[®] OMNIS – key benefits:

Bacteria contained in the bioproduct:



COLONIZE THE SURFACE OF PLANTS, FORMING A MICROBIOLOGICAL BARRIER



DEMONSTRATE ANTIBIOTIC PROPERTIES AGAINST PLANT PATHOGENS



PRODUCE SUBSTANCES WITH A BIOSTIMULATING EFFECT ON PLANT METABOLISM

BACTIM[®] OMNIS – direction of use:

CROPS

BACTIM[®] OMNIS is recommended for use in all agricultural crops as a foliar application. The product can also be applied by spraying the soil before sowing. The number of treatments and the timing of application should be adjusted to the intensity of stress factors and to the sensitivity of the varieties and species.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 2–3

2 L/ha

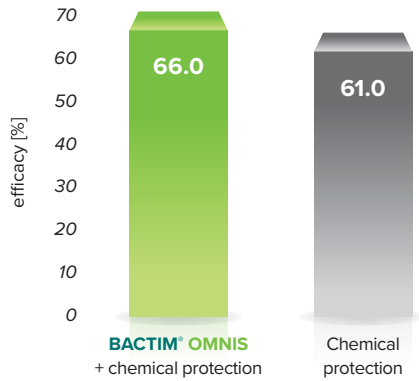
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM[®] OMNIS – effectiveness confirmed by research:

BACTIM[®] OMNIS effectively reduces disease pressure.

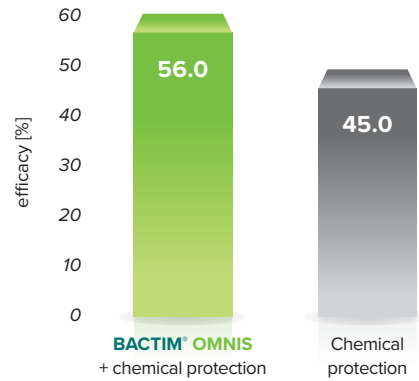
Effect of BACTIM[®] OMNIS on reducing powdery mildew (*Blumeria graminis*) infection in winter wheat.

Test farm, Poland.



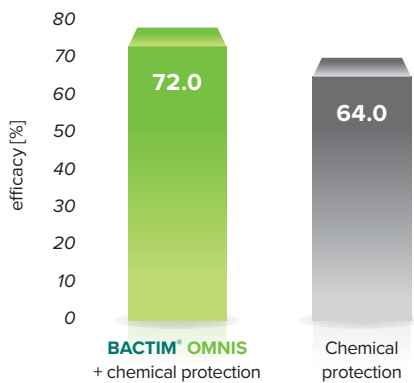
Effect of BACTIM[®] OMNIS on reducing powdery mildew (*Blumeria graminis*) infection in winter wheat.

Institute of Plant Protection, Poland.



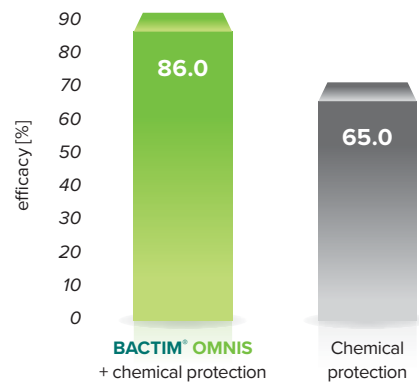
Effect of BACTIM[®] OMNIS on reducing stem rot (*Sclerotinia sclerotiorum*) infection in oilseed rape.

Institute of Plant Protection, Poland.



Effect of BACTIM[®] OMNIS on reducing eyespot (*Oculimacula*) in winter wheat.

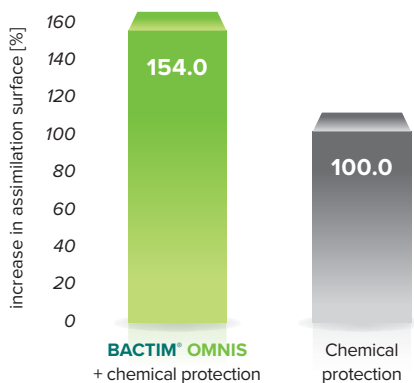
Test farm, Poland.



BACTIM[®] OMNIS boosts fungicide effectiveness and increases yield.

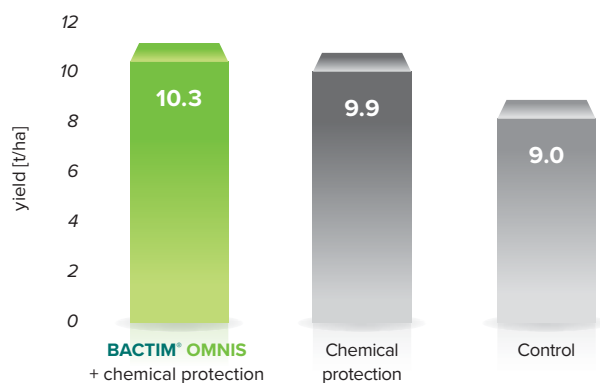
Effect of BACTIM[®] OMNIS on the increase in the assimilation area of winter wheat.

Test farm, Poland.



Effect of BACTIM[®] OMNIS in protection technology on winter wheat yield.

Test farm, Poland.





Learn more



BACTIM® PANTOEA CARE

GUARD TECHNOLOGY

MICROBIAL ENHANCER OF PLANT HEALTH

BACTIM® PANTOEA CARE contains a high concentration of unique *Pantoea* spp. strains, characterised by their ability to rapidly colonise above-ground plant parts and form a natural barrier that reduces the harmful effects of pathogens.

These bacteria produce active metabolites that enhance the plant's natural immunity, resulting in improved plant health, stronger development, higher yields and extended post-harvest shelf life.



Available package sizes: **0.5 kg**

BACTIM® PANTOEA CARE – composition:

BIOPRODUCT COMPOSITION

BACTIM® PANTOEA CARE

Pantoea agglomerans, *Pantoea allii* – 10⁹ CFU/g

BACTIM® PANTOEA CARE – key benefits:



MULTIPLICATION
OF BENEFICIAL BACTERIA
AND COLONISATION
OF PLANT SURFACE



REDUCING HARMFULNESS
OF PATHOGENS



LONGER POST-HARVEST
SHELF LIFE

BACTIM® PANTOEA CARE – direction of use:

CROPS



The product is intended for use as a foliar spray – a fine or medium droplet treatment. Use unchlorinated water. Avoid applications in full sunlight, applications should be made in the morning or evening. Do not combine with copper and silver based products.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 2–6

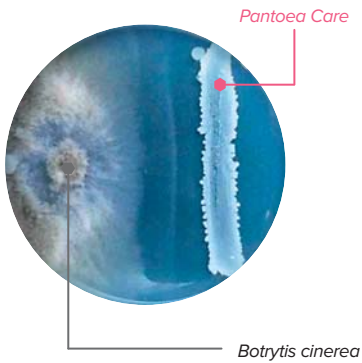
0.5 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

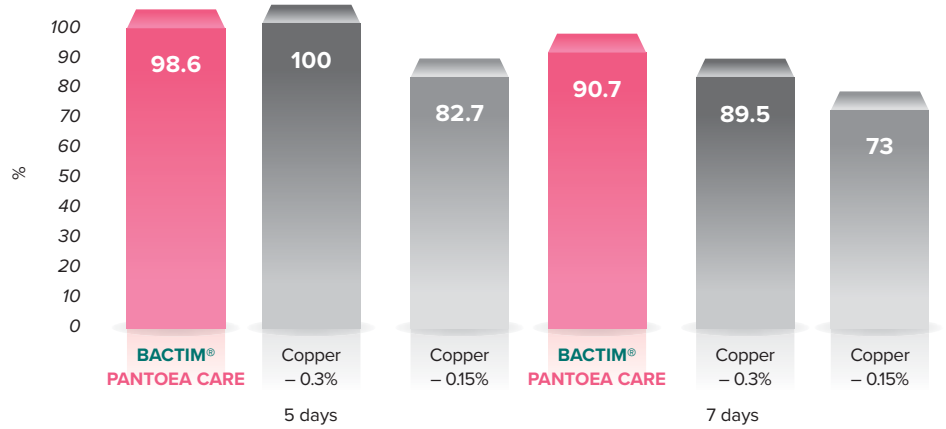
BACTIM® PANTOEA CARE – effectiveness confirmed by research:

BACTIM® PANTOEA CARE effectively reduces disease pressure.

Effect of **BACTIM® PANTOEA CARE** on reducing development of *Botrytis cinerea* – plate test for antibiosis.

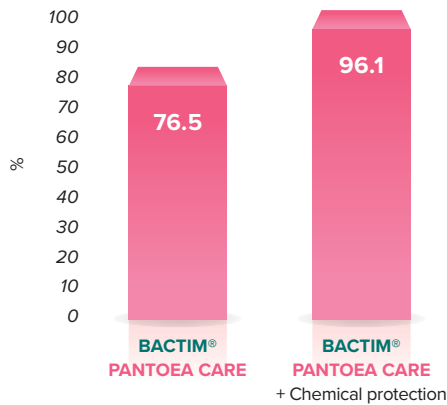


Effect of **BACTIM® PANTOEA CARE** in reducing *Erwinia amylovora* on pear fruit buds. Pear var. Conference, Skierniewice, Poland.



Effect of **BACTIM® PANTOEA CARE** on reducing the *Borystis cinerea* (bunch rot, grey mould) infections in grapevine [%]. Institute of Horticulture, Poland.

Reduction of fire blight on the surface of pear slices treated with a suspension of *Pantoaea* bacteria, 7 days after infection.



BACTIM® PANTOEA CARE

Control

Effect of **BACTIM® PANTOEA CARE** on *Borystis cinerea* germination in distilled water. Observation after 24h. Institute of Horticulture, Poland.

Effect of **BACTIM® PANTOEA CARE** on reducing *Borystis cinerea* infections on apple tree flowers [%]. Institute of Horticulture, Poland.



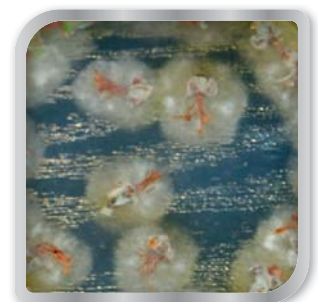
BACTIM® PANTOEA CARE inhibition of spore germination



Control germinating spores



BACTIM® PANTOEA CARE



Control



Learn more



BACTIM[®] VERSUS

GUARD TECHNOLOGY

MICROBIAL ENHANCER OF PLANT HEALTH

BACTIM[®] VERSUS contains a high concentration of unique *Bacillus sp.* and *Pantoea sp.* strains that act synergistically.

The product reduces the harmful effects of fungal and bacterial diseases, synthesises biostimulating compounds and increases the effectiveness of standard protection programmes.



Available package sizes: **5 L**

BACTIM[®] VERSUS – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] VERSUS

Pantoea sp., *Bacillus sp.* – 10⁹ cfu/mL

BACTIM[®] VERSUS – key benefits:



FORM A BIOFILM
THAT PROVIDES
A NATURAL
BARRIER



REDUCE
THE NEGATIVE
IMPACT OF
PATHOGENS



**BETTER PLANT
GROWTH**

BACTIM[®] VERSUS – direction of use:

CROPS

The product is intended for use as a foliar spray – a fine or medium droplet treatment. Use unchlorinated water. Avoid applications in full sunlight, applications should be made in the morning or evening. Do not combine with copper and silver based products.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 3–5

1 L/ha

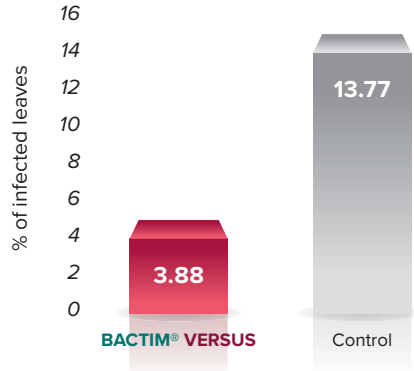
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM® VERSUS – effectiveness confirmed by research:

BACTIM® VERSUS effectively reduces disease pressure.

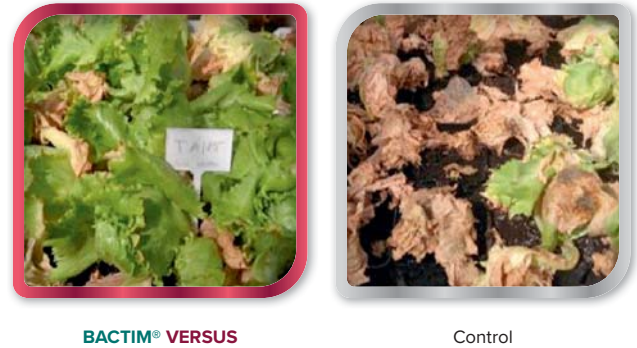
Effect of **BACTIM® VERSUS** on reducing the *Altenaria sp.* (black spot) infections on cabbage [%].

Institute of Horticulture, Poland.



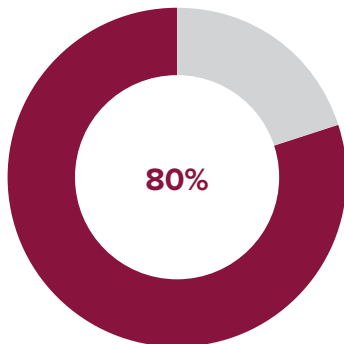
Effect of **BACTIM® VERSUS** on reducing the *Sclerotinia sclerotiorum* (white mold) infections in lettuce.

Institute of Horticulture, Poland.



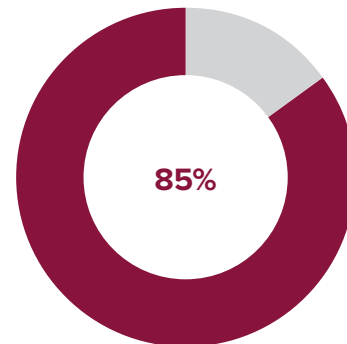
Effect of **BACTIM® VERSUS** application as part of a protection programme on reducing post-harvest symptoms of grey mould in raspberry.

The National Institute of Horticultural Research in Skierniewice, Poland.



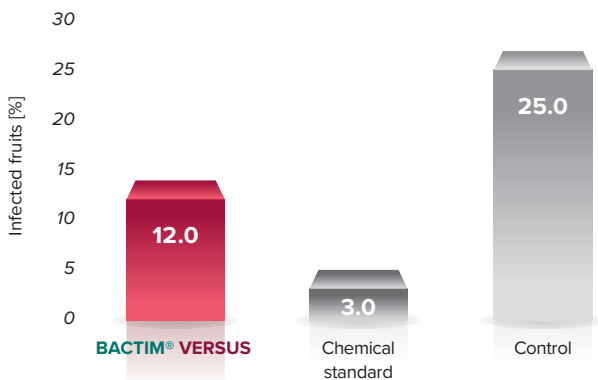
Effect of **BACTIM® VERSUS** application as part of a protection programme on reducing post-harvest symptoms of anthracnose in blueberry.

The National Institute of Horticultural Research in Skierniewice, Poland.



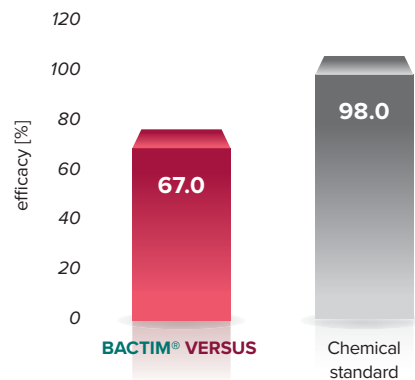
Effect of **BACTIM® VERSUS** on reducing development of post-harvest infection in strawberry, 7 days after harvest.

The National Institute of Horticultural Research in Skierniewice, Poland.



Effect of **BACTIM® VERSUS** in reducing symptoms of powdery mildew on carrot leaves.

The National Institute of Horticultural Research in Skierniewice, Poland.





NEW



Learn more

BACTIM[®] NEMABLOCK SL

GUARD TECHNOLOGY

MICROBIAL BIOPRODUCT THAT REDUCES THE HARMFUL EFFECTS OF PARASITIC SOIL NEMATODES

BACTIM[®] NEMABLOCK SL is an innovative, liquid microbial bioproduct intended for use in agricultural, vegetable and fruit crops.

It contains a selected *Bacillus spp.* strain with high biological activity against plant-parasitic nematodes.

The bacteria colonise the rhizosphere, forming a biological barrier around the roots that restricts nematode larval penetration. They additionally support root system health by promoting tissue regeneration and enhancing nutrient uptake capacity.

BACTIM[®] NEMABLOCK SL – key benefits:

- significant reduction in soil plant-parasitic nematode pressure
- protection of the root system and reduction of root damage
- improved plant vigour and health
- increased quantity and quality of marketable yields.

Bacillus spp. bacteria act through a complex combination of direct and indirect mechanisms:

- colonising the root surface and creating a biological barrier
- reducing damage caused by plant-parasitic nematodes
- stimulating plant growth by producing natural phytohormones.



Available package sizes: **1; 5 L**

BACTIM[®] NEMABLOCK SL – composition:

BIOPRODUCT COMPOSITION

BACTIM[®] NEMABLOCK SL

contains selected strain of *Bacillus spp.*
– 10⁸ CFU/mL

BACTIM[®] NEMABLOCK SL – direction of use:

CROPS



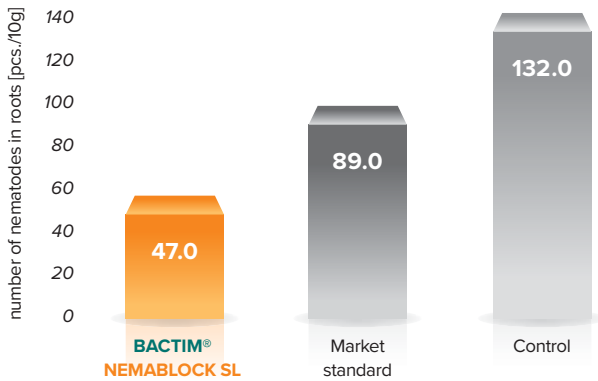
BACTIM[®] NEMABLOCK SL is recommended for all plant species grown in areas susceptible to plant-parasitic nematodes.

	DIRECTION OF USE	SINGLE DOSE
SOIL SPRAYING	Number of treatments: 2	5 L/ha in 300–500 L of water
FERTIGATION	Number of treatments: 2–4	5 L/ha

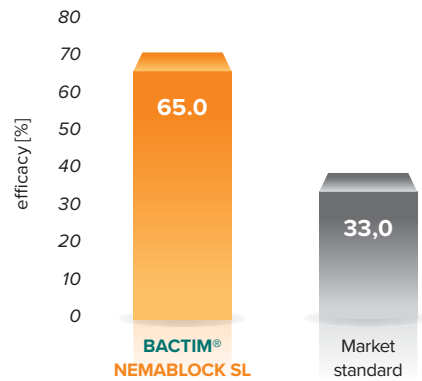
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

BACTIM® NEMABLOCK SL – effectiveness confirmed by research:

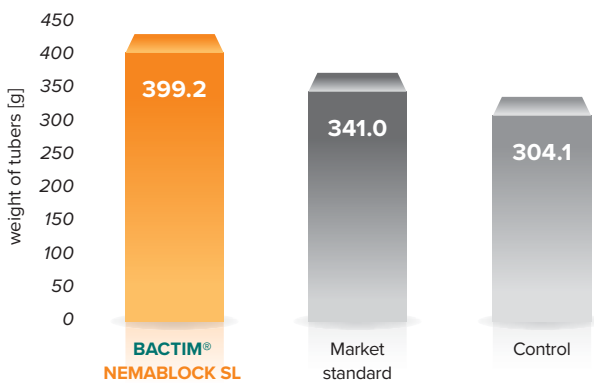
Effect of BACTIM® NEMABLOCK SL on reducing the number of parasitic nematodes in potato roots.
NEFscience in Skierniewice, Poland.



Effect of BACTIM® NEMABLOCK SL in reducing infection of the potato root system by pathogenic nematodes.
NEFscience in Skierniewice, Poland.



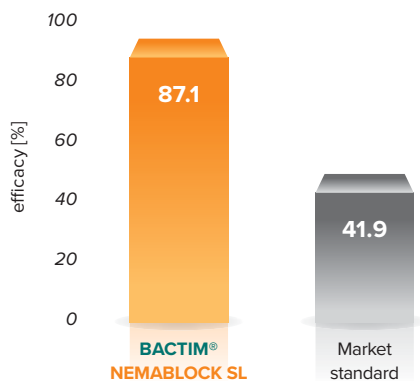
Effect of BACTIM® NEMABLOCK SL on average potato tuber weight.
NEFscience in Skierniewice, Poland.



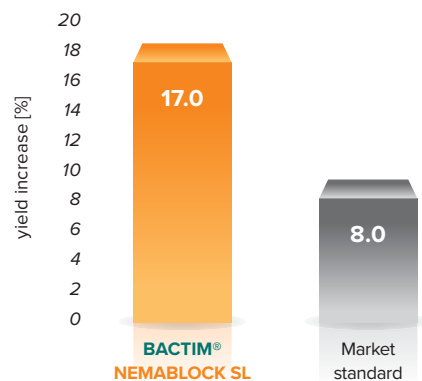
Effect of BACTIM® NEMABLOCK SL on potato emergence and biomass development.
NEFscience in Skierniewice, Poland.



Effect of BACTIM® NEMABLOCK SL in reducing the number of parasitic nematodes (rootworms) in carrot roots.
NEFscience in Skierniewice, Poland.



Effect of BACTIM® NEMABLOCK SL on increasing carrot yield.
NEFscience in Skierniewice, Poland.





Learn more

MYCOTIM® NEMABLOCK WP

GUARD TECHNOLOGY

MICROBIAL BIOPRODUCT THAT REDUCES THE IMPACT OF PLANT-PARASITIC NEMATODES

MYCOTIM® NEMABLOCK WP is a bioproduct containing a unique consortium of mycorrhizal fungi and rhizosphere bacteria with multifaceted activity.

It is particularly recommended for areas prone to plant-parasitic nematodes, helping to reduce their harmful effects and supporting plant growth and development.

MYCOTIM® NEMABLOCK WP – key benefits:

- reduced plant-parasitic nematode harmfulness
- increased plant resistance to root system diseases
- improved plant nutrient and water uptake
- improved soil physico-chemical properties
- improved yield and quality of fruit and vegetable crops.



Available package sizes: **1 kg**

MYCOTIM® NEMABLOCK WP – composition:

	BIOPRODUCT COMPOSITION	MYCORRHIZATION EFFICIENCY (%)
MYCOTIM® NEMABLOCK WP	Mycorrhizal fungi (AMF)	80±5

MYCOTIM® NEMABLOCK WP does not contain genetically modified microorganisms. The microorganisms in the product originate from the natural soil environment.

MYCOTIM® NEMABLOCK WP

CROPS



– direction of use:

MYCOTIM® NEMABLOCK WP is available in powder form which, after dissolving in water, is used for watering and/or fertigating plants.

	DIRECTION OF USE	SINGLE DOSE
FERTIGATION	During the vegetation period	2 kg/ha/application
WATERING SEEDLINGS	Solution	0.3–0.5% (300–500 g/100 L of water)

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

MYCOTIM® NEMABLOCK WP – effectiveness confirmed by research:

MYCOTIM® NEMABLOCK WP improves plant health and development.

Effect of MYCOTIM® NEMABLOCK WP application on parsley emergence and initial development.

Test farm, Poland.

Effect of MYCOTIM® NEMABLOCK WP application on celery biomass development.

Central Research Center for Cultivar Testing, Poland.



MYCOTIM® NEMABLOCK WP



Control



MYCOTIM® NEMABLOCK WP



Control

MYCOTIM® NEMABLOCK WP reduces the harmful effects of nematodes and increases plant resistance to root system diseases.

Effect of MYCOTIM® NEMABLOCK WP application on reducing parsley root damage caused by parasitic nematodes.

Test farm, Poland.

Effect of MYCOTIM® NEMABLOCK WP application on reducing the colonisation of the parsley root system by parasiting nematodes.

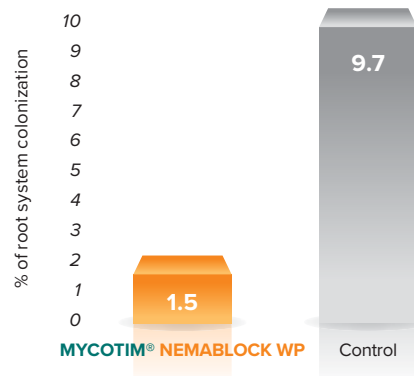
Test farm, Poland.



MYCOTIM® NEMABLOCK WP



Control



MYCOTIM® NEMABLOCK WP improves the quality of vegetables and fruits.

Effect of MYCOTIM® NEMABLOCK WP application on carrot root size.

Test farm, Poland.

Effect of MYCOTIM® NEMABLOCK WP application on average carrot root weight.

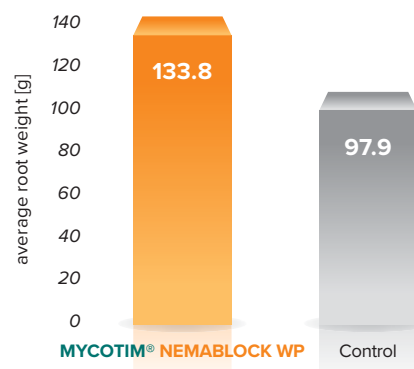
Test farm, Poland.



MYCOTIM® NEMABLOCK WP



Control





Learn more

PRIMSEED® MULTI

SEED TREATMENT FERTILISER

PRIMSEED® MULTI is a specialised mineral fertiliser intended for seed treatment.

PRIMSEED® MULTI provide macro- and micronutrients in appropriate quantities and ratios, adapted to the needs of germinating seeds. The nutrients applied to the seeds' surfaces are used during germination to enhance plant health and initial development. **PRIMSEED® MULTI** colors the treated seeds, thus enabling better identification of seed material.

PRIMSEED® MULTI – key benefits:

- providing germinating seeds with essential nutrients
- accelerating and stimulating germination and early plant development
- enabling plants to establish roots quickly and effectively
- intensive colouring of treated seeds
- safe and easy to use.



Available package sizes: **1; 5; 10; 20 L**

PRIMSEED® MULTI – composition:

	CONTENT OF NUTRIENTS [g/L]								
	K ₂ O	MgO	SO ₃	Na ₂ O	B	Fe	Mn	Mo	Zn
PRIMSEED® MULTI	17.7	20	47.2	11.8	2.4	9.4	3.5	0.7	5.9

PRIMSEED® MULTI – direction of use:

CROPS



PRIMSEED® MULTI is a fertiliser intended for seed preparation. It colours treated seeds for easier identification and can be used together with **PRIMSEED® BIOM CEREALS**.

	DIRECTION OF USE	SINGLE DOSE
SEED TREATMENT	Use seed treatment machines or mechanical mixers	0.2–0.3 L + 0.5–1.2 L of water / 100 kg of seeds

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

PRIMSEED® MULTI – effectiveness confirmed by research:

PRIMSEED® MULTI promotes strong germination and early seedling development.

Effect of PRIMSEED® MULTI on emergence of winter wheat.

Internal test, INTERMAG



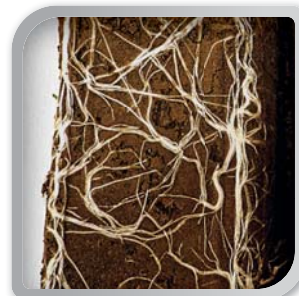
Fungicide treatment + PRIMSEED® MULTI



Fungicide treatment



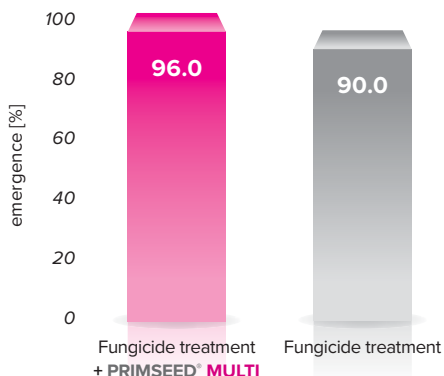
Fungicide treatment + PRIMSEED® MULTI



Fungicide treatment

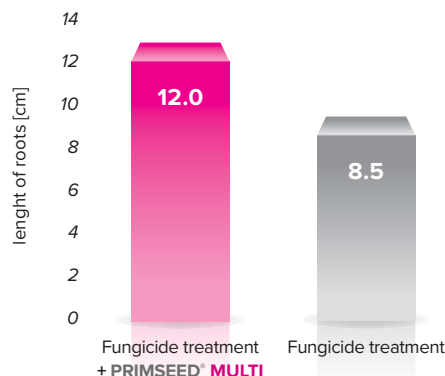
Effect of PRIMSEED® MULTI on emergence of winter wheat.

Test farm, Romania.



Effect of PRIMSEED® MULTI on the length of roots of winter wheat.

Test farm, Romania.



Effect of PRIMSEED® MULTI on early growth of winter wheat.

Test farm, Romania.



Fungicide treatment + PRIMSEED® MULTI



Fungicide treatment



Fungicide treatment + PRIMSEED® MULTI



Fungicide treatment



PRIMSEED® BIOM SOYBEAN

BRADYRHIZOBIUM SOYBEAN SEED INOCULANT

PRIMSEED® **BIOM SOYBEAN** is an inoculant for soybean seed treatment during seed preparation, containing selected and highly effective strains of *Bradyrhizobium* bacteria.

PRIMSEED® **BIOM SOYBEAN** ensures effective colonisation of soybean roots by beneficial nodule-forming bacteria.

Additionally, during the growing season, to intensify soybean growth and development, we recommend the specialised **PLONVIT® LEGUMES** foliar fertiliser (p. 60). It contains a complete set of micronutrients essential for soybeans, as well as cobalt, which supports the process of atmospheric nitrogen fixation.

PRIMSEED® **BIOM SOYBEAN** – composition:

COMPOSITION	CONTENT
<i>Bradyrhizobium japonicum</i>	at least
<i>Bradyrhizobium elkanii</i>	6 x 10 ⁹ CFU/mL

PRIMSEED® BIOM SOYBEAN



Available package sizes: **0.5; 1L**

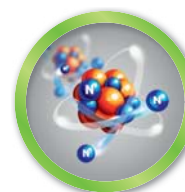
PRIMSEED® **BIOM SOYBEAN** – key benefits:



UNIFORM AND DURABLE SEED COATING



EFFECTIVE FORMATION OF NODULES ON THE ROOT SYSTEM



EFFICIENT FIXATION OF ATMOSPHERIC NITROGEN

PRIMSEED® **BIOM SOYBEAN** – direction of use:

CROPS

PRIMSEED® **BIOM SOYBEAN** is intended for the treatment of soybean seeds.

SEED TREATMENT

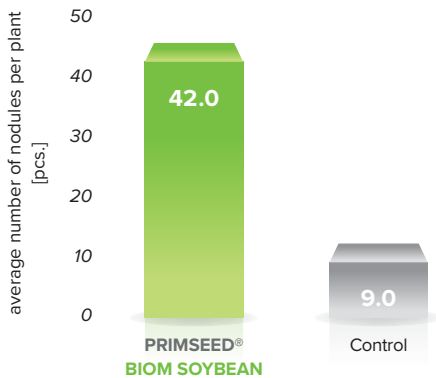
DIRECTION OF USE	SINGLE DOSE
Use seed treatment machines or mechanical mixers	0.2 L inoculant + 1–1.2 L of water / 100 kg of seeds

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

PRIMSEED® BIOM SOYBEAN – effectiveness confirmed by research:

Effect of PRIMSEED® BIOM SOYBEAN on average number of nodules.

Central Research Center for Cultivar Research, Poland.



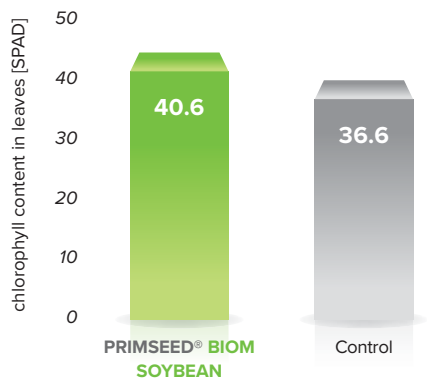
Effect of PRIMSEED® BIOM SOYBEAN application on efficacy of nodulation formation on the soybean root system.

Central Research Center for Cultivar Research, Poland.



Effect of PRIMSEED® BIOM SOYBEAN application on chlorophyll content in leaves.

Central Research Center for Cultivar Research, Poland.



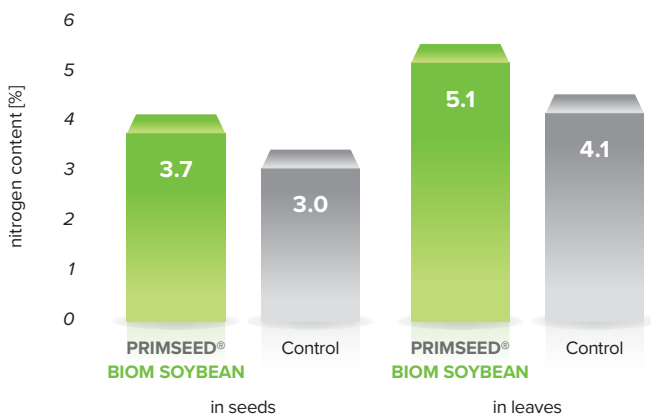
Effect of PRIMSEED® BIOM SOYBEAN application on the development of above-ground soybean biomass.

Central Research Center for Cultivar Research, Poland.



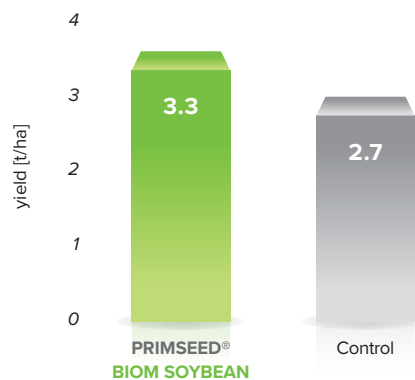
Effect of PRIMSEED® BIOM SOYBEAN application on nitrogen content in leaves and seeds.

Central Research Center for Cultivar Research, Poland.



Effect of PRIMSEED® BIOM SOYBEAN application on soybean yield.

Central Research Center for Cultivar Research, Poland.



NEW



Learn more



Learn more

PRIMSEED® BIOM PEA, LUPINE

INOCULANTS INTENDED FOR SEED TREATMENT
OF PEAS, BROAD BEANS, FABA BEANS OND LUPINE

PRIMSEED® BIOM PEA and PRIMSEED® BIOM LUPINE are inoculants intended for seed treatment of peas, broad beans, faba beans and lupine. They contain selected strains of *Rhizobium spp.* that rapidly form symbiosis. These bacteria fix atmospheric nitrogen and make it available to the plant in an assimilable form, supporting root development and biomass growth.

PRIMSEED® BIOM PEA and PRIMSEED® BIOM LUPINE – key benefits:

- effective root nodulation in peas, broad beans, faba beans and lupine
- increased plant capacity to fix atmospheric nitrogen
- reduced need for nitrogen fertilisation.

Additionally, during the growing season, to intensify plant growth and development, we recommend the specialised **PLONVIT® LEGUMES** foliar fertiliser (p. 60). It contains a complete set of micronutrients essential for these species, as well as cobalt, which supports the process of atmospheric nitrogen fixation.



Available package sizes: **0.5; 1L**

PRIMSEED® PEA and LUPINE – composition:

	COMPOSITION	CONTENT
PRIMSEED® BIOM PEA	<i>Rhizobium spp.</i>	1 x 10 ⁸ CFU/mL
PRIMSEED BIOM LUPINE	<i>Rhizobium spp.</i>	1 x 10 ⁸ CFU/mL

PRIMSEED® PEA and LUPINE – direction of use:

CROPS



PRIMSEED® BIOM PEA and PRIMSEED® BIOM LUPINE are intended for the treatment of peas, broad beans, faba beans and lupine seeds.

	DIRECTION OF USE	SINGLE DOSE
SEED TREATMENT	Use seed treatment machines or mechanical mixers	0.2 L inoculant + 1–1.2 L of water / 100 kg of seeds

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

PRIMSEED[®] BIOM CEREALS

MICROBIAL SEED TREATMENT

PRIMSEED[®] **BIOM CEREALS** is a multifunctional microbial bioproduct intended for treating cereal and maize seeds during seed preparation.

PRIMSEED[®] **BIOM CEREALS** improves the microbiome composition of the seedling rhizosphere and the immediate environment of germinating seeds by forming a microbiological barrier that hinders pathogen development.

The product has a biostimulating effect on plants by increasing their supply of certain nutrients, primarily nitrogen, phosphorus, zinc and silicon.



Available package sizes: **1; 5 L**

PRIMSEED[®] **BIOM CEREALS** – composition:

	COMPOSITION	CONTENT
PRIMSEED[®] BIOM CEREALS	<i>Bacillus spp.</i>	at least 5 x 10 ⁸ CFU/mL

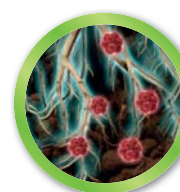
PRIMSEED[®] **BIOM CEREALS** – key benefits:



INCREASES CONTENT OF AVAILABLE FORMS OF NUTRIENTS IN THE SOIL



INTENSIFIES ROOT SYSTEM DEVELOPMENT AND PLANT GROWTH AFTER EMERGENCE



CREATES NATURAL BARRIER AROUND THE ROOT SYSTEM

PRIMSEED[®] **BIOM CEREALS** – direction of use:

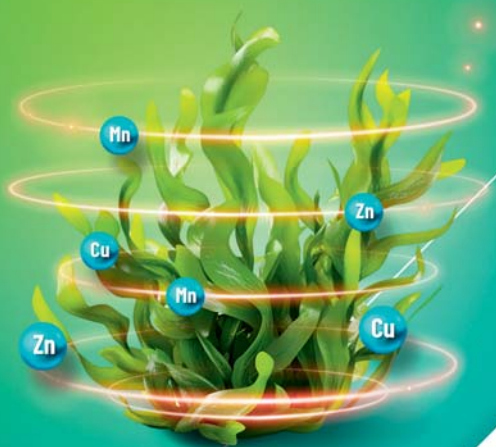
CROPS



PRIMSEED[®] **BIOM CEREALS** is recommended for seed treating in cereals and maize. It can be used in conjunction with PRIMSEED[®] **MULTI** seed fertilisers.

	DIRECTION OF USE	SINGLE DOSE
SEED TREATMENT	Use seed treatment machines or mechanical mixers	0.2–0.3 L bioproduct + 0.8–0.9 L of water / 100 kg of seeds

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



NEW



Learn more

ALGAPRIM®

RECOVERY ACTIVATOR

ALGAPRIM® is a modern, broad-spectrum plant regeneration activator intended for quickly restore plant health following stress. It contains plant-derived amino acids, *Ascophyllum nodosum* algae extract, betaine and trace elements (Cu, Mn, Zn) complexed with glycine.

Applied after stress, it accelerates plant regeneration following biotic, abiotic and agrotechnical stress factors.

Applied preventively, it increases plants' natural tolerance to unfavourable environmental conditions.

ALGAPRIM® is also highly effective in **alleviating stress caused by herbicide application**, helping plants return quickly to active growth and reducing the risk of growth inhibition following treatment.



Available package sizes: **5 L**

ALGAPRIM® – composition:

COMPOSITION [g/L]

	N	Cu	Mn	Zn	organic carbon	dry matter
ALGAPRIM®	25	7	9.9	8.4	205	570

ALGAPRIM® – key benefits:



EFFECTIVE PLANT REGENERATION
AFTER STRESS



INCREASING PLANT TOLERANCE
TO UNFAVORABLE ENVIRONMENTAL
CONDITIONS



INCREASING THE QUANTITY
AND QUALITY OF THE YIELD

ALGAPRIM® – direction of use:

CROPS



ALGAPRIM® is recommended for use in all agricultural, fruit and vegetable crops as foliar applications.

DIRECTION OF USE

SINGLE DOSE

FOLIAR APPLICATION

Number of treatments: 2–6

2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

ALGAPRIM® – effectiveness confirmed by research:

ALGAPRIM® improves overall plant condition and visual quality.

Effect of ALGAPRIM® application on plant condition and cucumber leaf greenness.

Test farm, Poland.



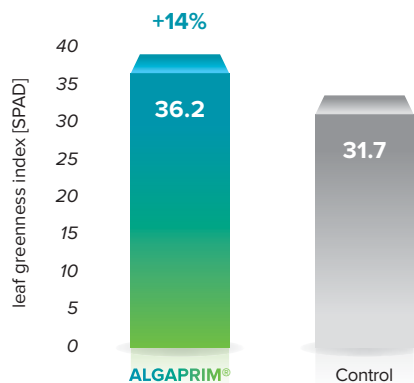
ALGAPRIM®



Control

Effect of ALGAPRIM® application on the leaf greenness index (SPAD) in cucumber cultivation.

Test farm, Poland.



Effect of ALGAPRIM® application on plant height 10 days after herbicide stress.

Test farm, Poland.



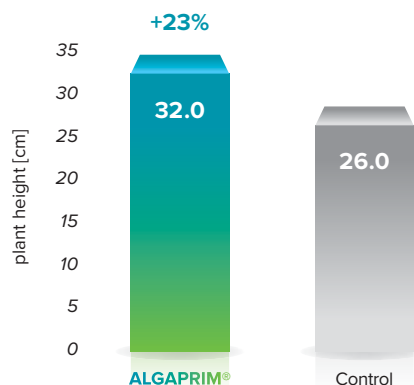
ALGAPRIM®



Control

Effect of ALGAPRIM® application on plant height 10 days after herbicide stress.

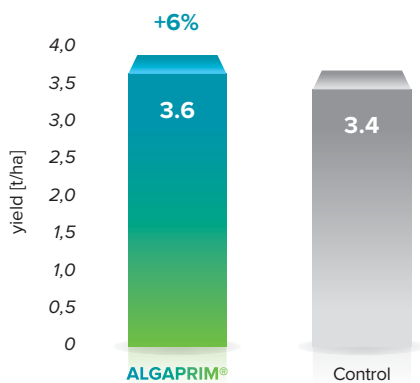
Test farm, Poland.



ALGAPRIM® ensures higher yield.

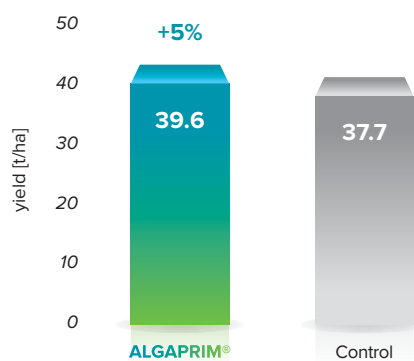
Effect of ALGAPRIM® application on winter oilseed rape yield.

Test farm, Poland.



Effect of ALGAPRIM® application on potato yield.

Test farm, Poland.





NEW



Learn more

VIMARIS®

**PURE ASCOPHYLLUM NODOSUM
ALGAE EXTRACT**

VIMARIS® is an activator containing **100% *Ascophyllum nodosum* algae extract** obtained using **CryoPress™** technology – a unique cold-extraction method that preserves bioactive ingredients such as phytohormones, peptides, amino acids and vitamins in their natural, highly bioavailable form.

VIMARIS® support natural plant physiological processes, increase resistance to abiotic stresses (including high or low temperatures, water shortages, waterlogging and soil salinity), and stimulate the growth of both the root system and the above-ground parts.

Regular use of **VIMARIS®** ensures dynamic plant growth, improved plant health and higher yields. The best results are achieved when the product is applied before stress conditions occur.

VIMARIS® – composition:

	CONTENT
VIMARIS®	<i>Ascophyllum nodosum</i> extract



Available package sizes: **5 L**

VIMARIS® – key benefits:



**INCREASED PLANT
TOLERANCE TO STRESS CONDITIONS**



**FAST PLANT RECOVERY
AFTER STRESS CONDITION**



**BETTER YIELD
QUALITY**

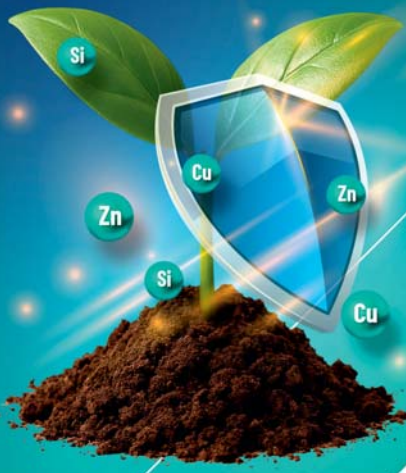
VIMARIS® – direction of use:

CROPS 

VIMARIS® is recommended for use in all agricultural, fruit and vegetable crops as foliar applications and fertigation.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–6	2–3 L/ha
FERTIGATION – FIELD GROWN PLANTS	Every 10–14 days	6–10 L/ha
FERTIGATION – SOILESS FARMING	Several times during growing season	0.3-0.5 L / 100 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



NEW



Learn more

RESISTAR®

SYSTEMIC SUPPORT FOR PLANT HEALTH AND IMMUNITY

RESISTAR® is a plant immunity and health activator containing systemic copper and zinc, as well as silicon in the bioavailable and highly absorbable **duoSIL®** formula.

RESISTAR® improves plant health during cultivation and storage, and activates and strengthens natural plant immunity mechanisms. Thanks to organic complexes in the form of **GCAA**, copper and zinc are absorbed and transported very effectively to various plant organs, ensuring action throughout the plant rather than only at the application site. The presence of silicon in the **duoSIL®** formula increases both mechanical and biological resistance to stress factors.

RESISTAR® – composition:

RESISTAR	CONTENT OF NUTRIENT [g/kg]		
	Cu	Zn	SiO ₂
	200	40	6,4



Available package sizes: **1; 5 kg**

RESISTAR® – key benefits:



BETTER UPTAKE
TRANSPORT AND METABOLIZATION
OF COPPER AND ZINC IN PLANTS



REDUCING PLANT
INFECTION PRESSURE



IMPROVING PLANT HEALTH
AND RESISTANCE
TO ENVIRONMENTAL FACTORS

RESISTAR® – direction of use:



RESISTAR® is recommended for use in all agricultural, fruit and vegetable crops as foliar applications.

FOLIAR APPLICATION	DIRECTION OF USE	SINGLE DOSE
	Number of treatments: 2–4	0.15–0.5 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

AMINOPRIM®

RECOVERY ACTIVATOR

AMINOPRIM® is a high-quality protein hydrolysate, characterised by a high content of natural amino acids and peptides (50% of amino acids).

AMINOPRIM® is intended for foliar application to improve plant tolerance to stress and to accelerate plant recovery following stressful conditions.

AMINOPRIM® is recommended for simultaneous use with other agrochemicals:

- amino acids applied together with fertilisers improve nutrients' bioavailability
- amino acids applied together with plant protection products reduce stress caused by these treatments.

AMINOPRIM® – key benefits:

- increased stress tolerance and enhanced plant recovery
- higher effectiveness and safety of agrochemical treatments
- improved yield quality and quantity.



AMINOPRIM® is approved for use in organic farming.



Available package sizes: **1; 5; 10; 20; 1000 L**

AMINOPRIM® – composition:

	CONTENT [%]	
	total amino acids (TAAs)	free amino acids (FAAs)
AMINOPRIM®	50	15

AMINOPRIM® – direction of use:

CROPS



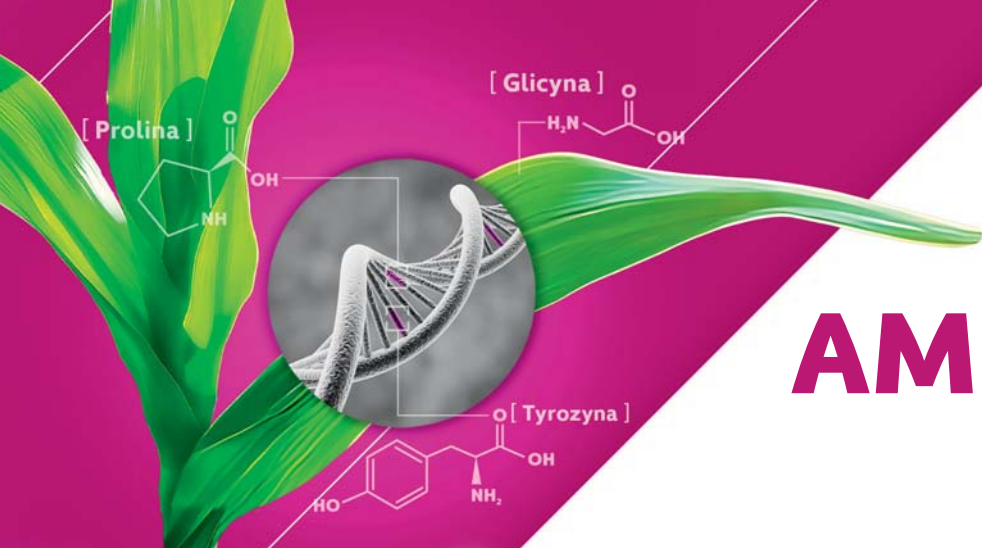
AMINOPRIM® is recommended in the cultivation of all types of agricultural and horticultural crops for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–6	0.2–0.5 L / 100 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



AMINOPRIM[®] PLANTACEA

RECOVERY ACTIVATOR

AMINOPRIM[®] PLANTACEA is a plant recovery activator characterised by a high content of amino acids of plant origin – 33% (29% of FREE amino acids).

AMINOPRIM[®] PLANTACEA is an organic plant recovery activator containing biologically active amino acids of plant origin. **AMINOPRIM[®] PLANTACEA** is intended for foliar application to increase stress tolerance and accelerate regeneration after stress conditions.

AMINOPRIM[®] PLANTACEA contains amino acids that activate chlorophyll synthesis, serve as fundamental building blocks of plant cells and accelerate tissue reconstruction.

AMINOPRIM[®] PLANTACEA is recommended for simultaneous use with other agrochemicals:

- amino acids applied together with fertilisers improve nutrients' bioavailability
- amino acids applied together with plant protection products reduce stress caused by these treatments.



Available package sizes: 1; 5; 10; 20; 1000 L

AMINOPRIM[®] PLANTACEA – composition:

AMINOPRIM [®] PLANTACEA	CONTENT [%]	
	total amino acids (TAAs)	free amino acids (FAAs)
	33	29

AMINOPRIM[®] PLANTACEA – direction of use:



AMINOPRIM[®] PLANTACEA is recommended in the cultivation of all types of agricultural and horticultural crops for foliar application.

FOLIAR APPLICATION	DIRECTION OF USE	SINGLE DOSE
	Number of treatments: 2–6	0.3–0.6 L / 100 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

OPTYCAL®

CALCIUM ACTIVATOR

OPTYCAL® is an innovative, water-soluble calcium activator for foliar application, improving crop size, quality and storage properties. It ensures an optimal supply of calcium at low doses.

OPTYCAL® supplies plants with calcium in two ways:

- stimulates the uptake of calcium from the soil and its transport to the youngest plant tissues (the auxin-calcium pump effect)
- directly provides plants with easily assimilable organic calcium through foliar treatment.

OPTYCAL® increases the calcium content in the plant and thereby improves fruit quality and storage properties.

OPTYCAL® – composition:

	CONTENT OF NUTRIENTS [g/kg]						
	CaO	B	Cu	Fe	Zn	Mo	Zn
OPTYCAL®	350	1.0	0.5	1.5	0.7	0.02	2.0



Available package sizes: **1.5; 3; 25 kg**

OPTYCAL® – key benefits:



OPTYCAL® – direction of use:



OPTYCAL® is recommended in the cultivation of horticultural crops for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 1–4	1–1.5 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



GROWON®

ENERGY ACTIVATOR

GROWON® is a foliar activator designed to provide plants with a rapid supply of phosphorus, thereby supporting the production of energy required for proper growth and development.

Thanks to **INT Technology**, it is highly effective in conditions of reduced phosphorus availability, such as low temperatures or acidic or alkaline soils.

GROWON® – composition:

	CONTENT OF NUTRIENTS [g/L]			
	N	P ₂ O ₅	B	Zn
GROWON®	71	500	1.4	1.4



Available package sizes: **1; 5; 10; 20; 1000 L**

GROWON® – key benefits:



INT TECHNOLOGY SUPPORTS FAST AND FULL PHOSPHORUS UPTAKE



UNIQUE FORM OF PHOSPHORUS ENSURES THE TRANSLOCATION OF PHOSPHORUS TO THE ROOT SYSTEM



DEVELOPED ROOT SYSTEM GUARANTEES **PLANT RESISTANCE** TO STRESS AND BETTER YIELD

GROWON® – direction of use:



GROWON® is recommended for foliar application in all types of agricultural and horticultural crops.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–5	1–5 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



ROOTSTAR®

PLANT ROOTING ACTIVATOR

ROOTSTAR® is a foliar activator intended for application in the early stages of plant development to improve rooting.

ROOTSTAR® activates auxin production, which enhances cell division and stimulates the formation of lateral and adventitious roots. Root development and growth are further strengthened by the synergistic interaction between auxins and zinc.

ROOTSTAR® is intended for use after germination to promote rooting, as well as during later growth stages to accelerate root recovery following stress conditions (e.g. freezing temperatures or pest damage).

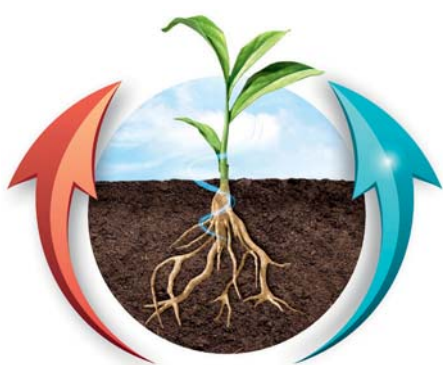


Available package sizes: 1; 5; 10; 20; 1000 L

ROOTSTAR® – composition:

	CONTENT OF NUTRIENTS [g/L]
	Zn
ROOTSTAR®	67

ROOTSTAR® – key benefits:



- dynamically developing the root system
- improving plant health in the early stages of development
- increasing plant tolerance to low temperatures and lack of water

ROOTSTAR® – direction of use:

CROPS



ROOTSTAR® is recommended for foliar application in all types of agricultural and horticultural crops.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 1–2	0.8–1.2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

NEW



Learn more

CHITOSHELL SL

ELICITOR OF CROP SELF-DEFENCE MECHANISMS

CHITOSHELL SL is an elicitor with fungicidal and bactericidal properties that stimulates plants' natural defence mechanisms. The product activates the plant immune system against a wide range of fungal and bacterial pathogens.

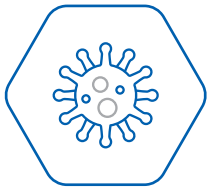
CHITOSHELL SL is a natural product containing the active ingredient chitosan hydrochloride.

CHITOSHELL SL also mitigates the effects of environmental stress and is particularly recommended when disease pressure from fungal or bacterial pathogens is high.



Available package sizes: **1; 5 L**

CHITOSHELL SL – key benefits:



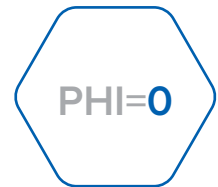
HIGH EFFECTIVENESS
AGAINST FUNGAL AND
BACTERIAL DISEASES



**REDUCED USE OF PLANT
PROTECTION PRODUCTS**
REDUCED PESTICIDE
RESIDUES IN CROPS



**COMPLETELY
BIODEGRADABLE**



**NO ADDITIONAL
PRE-HARVEST
INTERVAL REQUIRED**

CHITOSHELL SL – direction of use:



CHITOSHELL SL is recommended in the cultivation of all types of agricultural and horticultural crops for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 4–8	2–3 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

PLONVIT®

POWER FOR PLANTS



Available package sizes: **1; 5; 10; 1000 L**

The PLONVIT® series of fertilisers with NUTRIBOOST™ technology is distinguished by a very high content of micronutrients in proportions tailored to the requirements of individual plant species.

PLONVIT® NUTRIBOOST™ – key benefits:

- higher efficiency – dose of 1 L/ha
- lower application costs
- improved spray liquid properties.

PLONVIT® NUTRIBOOST™ – composition:

	CONTENT OF NUTRIENTS [g/L]										
	N	MgO	Na ₂ O	SO ₃	B	Co	Cu	Fe	Mn	Mo	Zn
PLONVIT® CEREALS	67.5	27		88	0.54		5.4	23	23	0.27	17
PLONVIT® OIL CROPS	67.5	27		80	8.6		3.2	17.3	21.6	0.27	17.3
PLONVIT® MAIZE	66	26.4		69	9.4		2.6	4.4	11.2	0.25	35
PLONVIT® LEGUMES	65.5	26.2		65.5	9.2	0.92	9.2	14.4	18.5	0.28	14.4
PLONVIT® POTATO	66.5	26.6		69	9.3		6.1	9.8	19.3	0.14	21.3
PLONVIT® SUGAR BEET	65.5	26.2	31.5	45.8	9.2		4.1	21	18.3	0.09	13.1
PLONVIT® ACTIVE	67.5	27		69	5.5		2.7	22	17.6	0.27	17.6

PLONVIT® NUTRIBOOST™ – direction of use: CROPS



PLONVIT® NUTRIBOOST™ is recommended for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–4	1 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu

PLONVIT® NUTRIBOOST™ – effectiveness confirmed by research:

PLONVIT® NUTRIBOOST™ fertilisers ensure higher yields.

Research carried out on: winter wheat, winter rapeseed, maize, sugar beet and soybean.

Research Centre for Cultivar Testing, Poland.

Research carried out on: potato – GBA, Poland.

Average yield increase compared to the control.

+13%
winter wheat



+10%
winter oilseed rape



+15%
maize



+9%
sugar beet



+8%
potato



+15%
soybeans



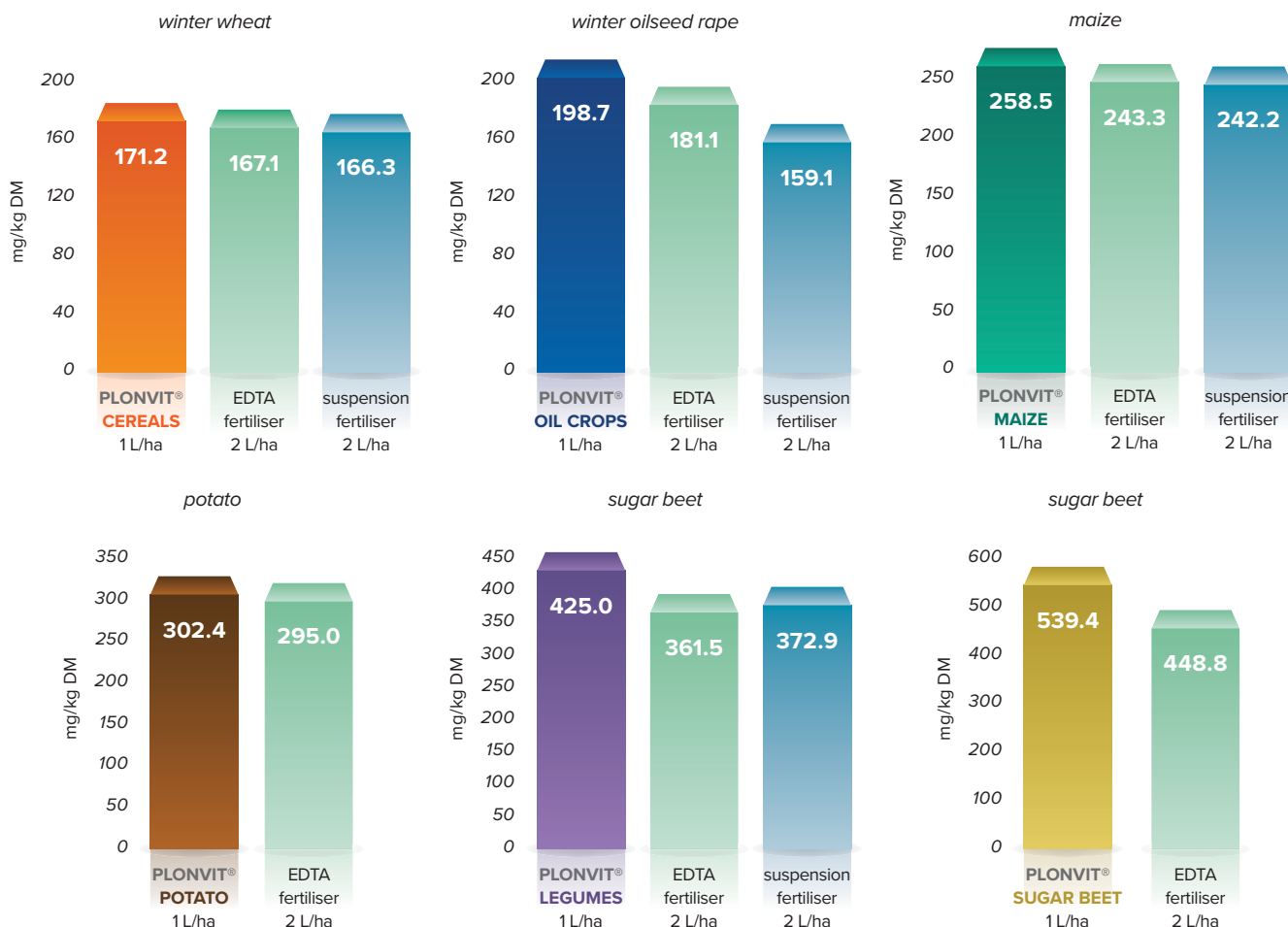
PLONVIT® NUTRIBOOST™ fertilisers ensure efficient plant nutrition at low application doses.

Research carried out on: winter wheat, winter rapeseed, maize, sugar beet and soybean.

Research Centre for Cultivar Testing, Poland.

Research carried out on: potato – GBA, Poland.

Micronutrient content (expressed as the sum of Cu, Fe, Mn and Zn) in the leaves of various agricultural plant species.





AMINO ULTRA®

ULTRA FAST NUTRITION EFFECT
Crop specific fertiliser



Available package sizes:

1; 5; 25 kg

AMINO ULTRA® CEREALS, OIL CROPS, MAIZE, HORTI, CITRUS are micronutrient fertilisers in the form of homogeneous OneGran granules. The series includes four products whose compositions are tailored to the requirements of cereals, oil crops, maize and horticultural crops.

They are distinguished by GCAA technology, which uses the smallest and most mobile amino acid – glycine. This enables very fast and effective delivery of micronutrients to plants.

AMINO ULTRA® CEREALS, OIL CROPS, MAIZE and HORTI are an alternative choice for farmers who prefer solid fertilisers.



AMINO ULTRA® CEREALS, MAIZE, HORTI are approved for use in organic farming.

AMINO ULTRA® – composition:

	CONTENT OF NUTRIENTS [g/kg]					
	B	Cu	Fe	Mn	Mo	Zn
AMINO ULTRA® CEREALS	1.8	18	70	75	0.7	55
AMINO ULTRA® OIL CROPS	21	7	53	85	0.7	55
AMINO ULTRA® MAIZE	16	8	68	57	0.8	60
AMINO ULTRA® HORTI	13	5	85	54	1.0	22
AMINO ULTRA® CITRUS				115		115

AMINO ULTRA® – direction of use:

CROPS



AMINO ULTRA® CEREALS, OIL CROPS, MAIZE, HORTI, CITRUS are recommended for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–4	0.5–0.75 kg/ha

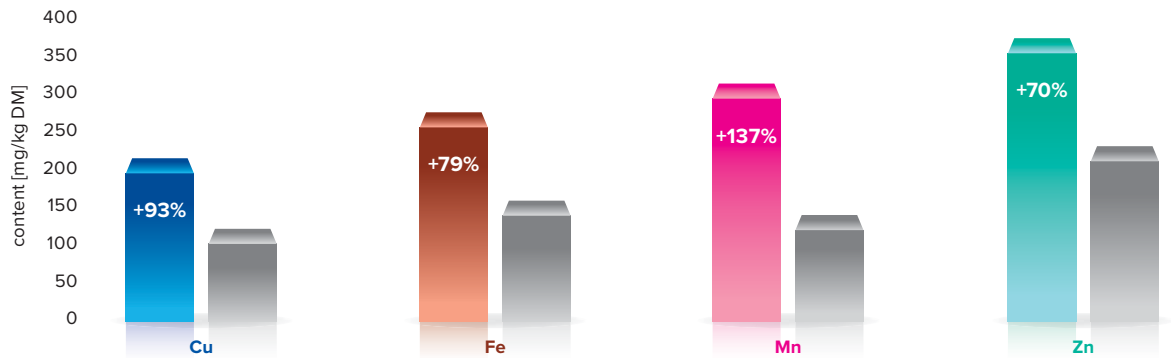
Detailed recommendations are available by scanning the QR code or at www.intermag.eu

AMINO ULTRA® – effectiveness confirmed by research:

AMINO ULTRA® ensures effective uptake of micronutrients.

Effect of AMINO ULTRA® application on uptake of micronutrients.

Internal test, INTERMAG.

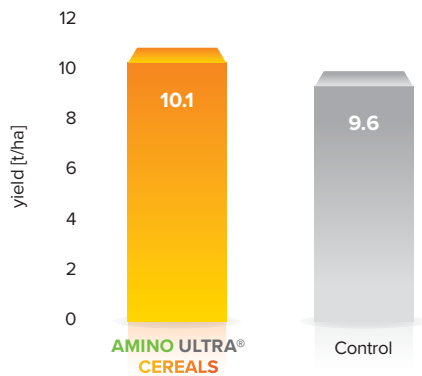


AMINO ULTRA® ● EDTA

AMINO ULTRA® are effective and profitable.

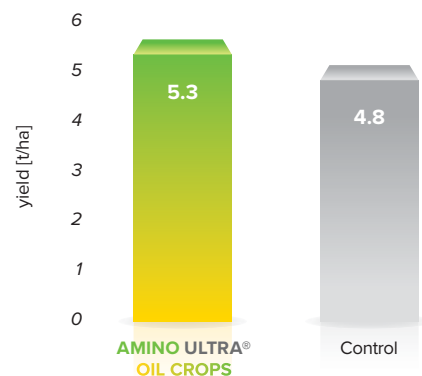
Effect of AMINO ULTRA® CEREALS application on winter wheat yield.

Research Centre for Cultivar Testing, Poland.



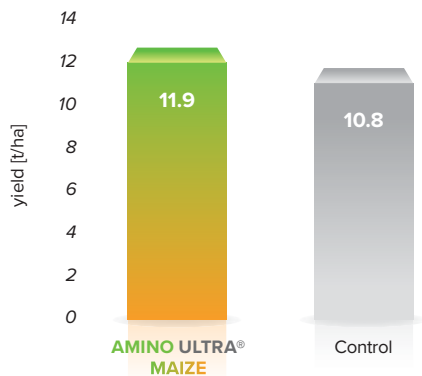
Effect of AMINO ULTRA® OIL CROPS application on winter oilseed rape yield.

Research Centre for Cultivar Testing, Poland.



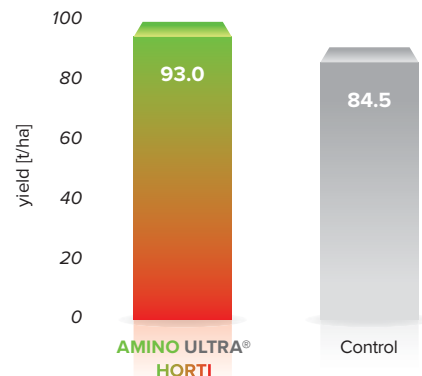
Effect of AMINO ULTRA® MAIZE application on maize yield.

Research Centre for Cultivar Testing, Poland.



Effect of AMINO ULTRA® HORTI application on cucumber yield.

Test farm, Poland.





Learn more

AMINO ULTRA®

ULTRA FAST NUTRITION EFFECT
Single-microelement fertilisers



Available package sizes: **1; 5; 25 kg**

AMINO ULTRA® are an innovative inorganic fertilisers with patented **GCAA** technology that combines micronutrients with the amino acid glycine.

Glycine is the smallest and most mobile amino acid in plants. As a result, micronutrients bind to glycine for faster and more effective plant nutrition than mineral salts, oxides or fertilisers based on other complexing agents.



AMINO ULTRA® **Cu-24**, **Fe-20**, **Mn-22**, **Zn-24** are approved for use in organic farming.

AMINO ULTRA® – composition:

	CONTENT OF NUTRIENTS [g/kg]			
	Cu	Fe	Mn	Zn
AMINO ULTRA® Cu-24	240			
AMINO ULTRA® Fe-20		200		
AMINO ULTRA® Mn-22			220	
AMINO ULTRA® Zn-24				240

AMINO ULTRA® – direction of use:

CROPS



AMINO ULTRA® **Cu-24**, **Fe-20**, **Mn-22**, **Zn-24** are recommended for foliar application in all types of crops.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 2–4	0.1–0.7 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

AMINO ULTRA[®] BORZIN

FAST ZINC and BORON SOURCE

AMINO ULTRA[®] BORZIN, based on **GCAA** technology, is a water-soluble fertiliser intended for the simultaneous supply of zinc and boron to plants. The zinc is fully complexed with amino acids. The product is intended primarily for fertilising orchards.

The **GCAA** technology used in **AMINO ULTRA[®] BORZIN** increases the speed and efficiency of zinc uptake, transport and assimilation within the plant.

When applied in autumn, before winter dormancy, **AMINO ULTRA[®] BORZIN** supplies plants with boron and zinc in forms readily absorbed by the leaves. It accumulates in lignified plant tissues and is then utilised immediately after growth resumes in spring.

When applied in early spring, it provides boron and zinc at a time when plant leaves are just beginning to develop or are still present in relatively low numbers.

AMINO ULTRA[®] BORZIN is also recommended as an effective source of zinc and boron for crops with high micronutrient requirements (e.g. maize, potatoes and fruit trees).



Available package sizes: **1; 3.5; 10; 25 kg**

AMINO ULTRA[®] BORZIN – composition:

	CONTENT OF NUTRIENTS [g/kg]	
	B	Zn
AMINO ULTRA[®] BORZIN	110	50

AMINO ULTRA[®] BORZIN – direction of use:

CROPS



AMINO ULTRA[®] BORZIN is recommended for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 1–3	3.5 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



AMINO ULTRA®

ULTRA FAST NUTRITION EFFECT
Liquid fertilisers



Available package sizes: 1; 5; 10; 20; 1000 L

AMINO ULTRA® are an innovative inorganic fertilisers with patented **GCAA** technology that combines micronutrients with the amino acid glycine.

Glycine is the smallest and most mobile amino acid in plants. As a result, micronutrients bind to glycine for faster and more effective plant nutrition than mineral salts, oxides or fertilisers based on other complexing agents.



AMINO ULTRA® Cu-24 SL, Fe-20 SL, Mn-22 SL, Zn-24 SL are approved for use in organic farming.

AMINO ULTRA® SL – composition:

	CONTENT OF NUTRIENTS [g/L]			
	Cu	Fe	Mn	Zn
AMINO ULTRA® Cu SL	71			
AMINO ULTRA® Fe SL		49		
AMINO ULTRA® Mn SL			57	
AMINO ULTRA® Zn SL				121
AMINO ULTRA® ACTIVE SL	6	27	27	20

AMINO ULTRA® SL – direction of use:

CROPS



AMINO ULTRA® SL are recommended in the cultivation of all types of agricultural and horticultural crops for foliar application.

	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 1–4	0.3–2 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



Learn more



Learn more

MIKROVIT® BORON TURBO, MIKROVIT® BORON PLUS, PLONVIT® BOROSULF

BORON fertilisers

INTERMAG boron fertilisers are characterised by a high boron concentration and very good bioavailability. Used preventively, they help prevent boron deficiency, while in corrective applications they effectively eliminate or reduce the negative effects of boron shortage.

Boron supplied in **MIKROVIT® BORON TURBO**, **MIKROVIT® BORON PLUS** and **PLONVIT® BOROSULF** fertilisers positively affects yield and quality through:

- supporting the proper growth and development of the youngest plant parts: growth cones, roots, shoots, buds and fruits
- ensuring proper flower fertilisation
- improving yield quality parameters (e.g. higher sugar content in beet, fruit and vegetables)



MIKROVIT® BORON TURBO,
MIKROVIT® BORON PLUS
PLONVIT® BOROSULF

Available package sizes:

1; 5; 10; 20; 1000 L

15 kg



MIKROVIT® BORON TURBO and **MIKROVIT® BORON PLUS** are approved for use in organic farming.

MIKROVIT®: BORON TURBO, BORON PLUS, PLONVIT® BOROSULF

– composition:

	CONTENT OF NUTRIENTS [g/L or g/kg]			
	B	Mo	SO ₃	Additives
MIKROVIT® BORON TURBO	150		150	INT technology
MIKROVIT® BORON PLUS	150	5.5	150	Algae extract
PLONVIT® BOROSULF	80		275	

MIKROVIT®: BORON TURBO, BORON PLUS, PLONVIT® BOROSULF – direction of use:

CROPS



MIKROVIT® BORON TURBO, **MIKROVIT® BORON PLUS** and **PLONVIT® BOROSULF** are recommended in the cultivation of all types of agricultural and horticultural crops for foliar application.

MIKROVIT®: BORON TURBO, BORON PLUS	DIRECTION OF USE	SINGLE DOSE
FOLIAR APPLICATION	Number of treatments: 1–7	0.15–1.5 L/ha
PLONVIT® BOROSULF		
FOLIAR APPLICATION	Number of treatments: 1–4	0.5–3 kg/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



MIKROVIT®

ZINC, MANGANESE, COPPER, MOLYBDENUM, IRON, BORON, COMO



Available package sizes: 1; 5; 10; 20; 1000 L

MIKROVIT® micronutrient fertilisers contain complexing agents that enhance plant uptake and ensure compatibility with other agrochemicals.

Their high micronutrient content makes them ideal for crops with increased nutritional demand. Preventive use of **MIKROVIT®** fertilisers ensures high quality and quantity of yield.

MIKROVIT® – composition:

	CONTENT OF NUTRIENTS [g/L]						
	B	Co	Cu	Fe	Mn	Mo	Zn
MIKROVIT® ZINC							112
MIKROVIT® MANGANESE					160		
MIKROVIT® COPPER			75				
MIKROVIT® MOLYBDENUM						33	
MIKROVIT® IRON				75			
MIKROVIT® BORON	150						
MIKROVIT® COMO		23		35			



Learn more



MIKROCHELAT™

Cu-15, Fe-13, Fe-11, Fe-6 SL, Mn-13, Mn-6 SL, Zn-15



Available package sizes:

Cu-15, Fe-13, Mn-13, Zn-15, Fe-11 | **1; 5; 25 kg**
Fe-6 SL, Mn-6 SL | **1; 5; 10; 20; 1000 L**

MIKROCHELAT™ is a series of chelated fertilisers in which micro elements are chelated, enabling them to be absorbed by plants quickly and easily.

MIKROCHELAT™ fertilisers are stable across a wide pH range in solutions, nutrient solutions and soils.

MIKROCHELAT™ – key benefits:

- fast absorption and assimilation by plants
- complete solubility, even in cold and hard water
- high effectiveness at low doses.

MIKROCHELAT™ Cu-15, Fe-13, Mn-13 and Zn-15, in ultragranular form, chelated with EDTA, are intended for fertigation and foliar feeding, as well as hydroponics.

MIKROCHELAT™ Fe-11, in ultragranular form, chelated with DTPA, is intended primarily for use in fertigation systems in inert organic substrates, and in acidic and neutral soils.

MIKROCHELAT™ Fe-6 SL, in liquid form chelated with DTPA, is intended primarily for use in fertigation systems in inert organic substrates, and in acidic and neutral soils.

MIKROCHELAT™ Mn-6 SL, in liquid form chelated with EDTA, intended for fertigation and foliar feeding, as well as hydroponics.



MIKROCHELAT™ Cu-15, Fe-13, Mn-13, Zn-15 are approved for use in organic farming.

MIKROCHELAT™ – composition:

	CONTENT OF NUTRIENTS [g/L or g/kg]			
	Cu	Fe	Mn	Zn
MIKROCHELAT™ Cu-15	150			
MIKROCHELAT™ Fe-13		130		
MIKROCHELAT™ Fe-11		110		
MIKROCHELAT™ Fe-6 SL		76		
MIKROCHELAT™ Mn-13			130	
MIKROCHELAT™ Mn-6 SL			78	
MIKROCHELAT™ Zn-15				150



Learn more



PLONVIT

**CALCIUM TURBO, FOSTAR, KALPRIM,
SULVIT, NITROMAG, UNI PK 14:24,
PK 28:30, PK 49:12, N37, PHOSPHORO-ZINC,
MIKROKOMPLEX®**



Available package sizes:

PLONVIT®, PHOSPHORO-ZINC | **1; 5; 10; 20; 1000 L**
MIKROKOMPLEX® | **5; 25 kg**

A group of macronutrient fertilisers for foliar feeding.

Fertilisers in this group contain the macronutrients essential for the cultivation of all plant species. Their use enables the rapid supply of macronutrients during periods of highest plant demand or when soil availability is limited.

Foliar macronutrient feeding is also used to accelerate plant regeneration following stress conditions. By choosing fertilisers from this group, can effectively eliminate macronutrient deficiencies, thereby increasing yields.

CONTENT OF NUTRIENTS [g/kg] or [g/L]

	N	P ₂ O ₅	K ₂ O	CaO	MgO	SO ₃	B	Cu	Fe	Mn	Mo	Zn
PLONVIT® CALCIUM TURBO	128			260			0.75	0.3		0.015		0.3
PLONVIT® FOSTAR	70	500										
PLONVIT® KALPRIM	45		400									
PLONVIT® SULVIT	200					760						
PLONVIT® NITROMAG	370				40		0.27	3.0	0.4	11.0	0.05	0.27
PLONVIT® UNI PK 14:24	35	136	245									
PLONVIT® PK 28:30		280	302									
PLONVIT® PK 49:12		490	125									
PLONVIT® N37	370				40		0.27	3.0	0.4	11.0	0.05	0.27
PHOSPHORO-ZINC	77	500										30
MIKROKOMPLEX®					160	320	0.5	3		3.5	0.1	2



PLONVIT®

OPTY, KALI, NITRO, PHOSPHO



Available package sizes: **2; 15 kg**

PLONVIT® **OPTY**, **KALI**, **NITRO** and **PHOSPHO** are crystalline, water-soluble macro- and micronutrient fertilisers with **GCAA** technology, intended for foliar feeding.

Fertilisers in this series can also be used to prepare nutrient solutions for the fertigation of soil-grown crops. These fertilisers provide excellent plant nutrition with all the macronutrients and microelements required for proper growth and development throughout the entire growing season.

PLONVIT® – composition:

	CONTENT OF NUTRIENTS [g/kg]								
	N	P ₂ O ₅	K ₂ O	B	Cu	Fe	Mn	Mo	Zn
PLONVIT® OPTY	200	200	200	0.3	0.3	1.5	0.7	0.02	0.7
PLONVIT® KALI	110	120	380	0.3	0.3	1.5	0.7	0.02	0.7
PLONVIT® NITRO	310	120	100	0.3	0.3	1.5	0.7	0.02	0.7
PLONVIT® PHOSPHO	110	530	50	0.3	0.3	1.5	0.7	0.02	0.7



Learn more

PLONVIT®

GEL 20/20/20 + micro

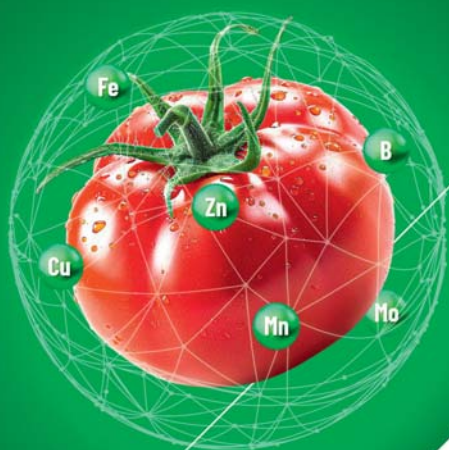
A multi-component NPK fertiliser with micronutrients in gel form (a water-soluble suspension), intended for foliar application.

PLONVIT® **GEL 20/20/20+micro** combines the advantages of crystalline fertilisers (high nutrient content) with those of liquid fertilisers (easy dosing and convenient preparation of the working solution). This product is particularly recommended when environmental factors weaken plant health.



Available package sizes: **1; 5; 10 L**

	CONTENT OF NUTRIENTS [g/L]									
	N	P ₂ O ₅	K ₂ O	B	Cu	Fe	Mn	Mo	Zn	
PLONVIT® GEL 20/20/20	200	200	200	0.3	0.7	1.4	0.7	0.014	0.7	



Learn more



Learn more

MIKRO PLUS™ MIKRO PLUS™ ULTRA

MIKRO PLUS™ and **MIKRO PLUS™ ULTRA** are highly concentrated, liquid and powdered multi-component micronutrient chelates intended for fertigation in inert and organic substrates, as well as in soil. Fertilisers in this series provide plants with a set of easily absorbable and readily available micronutrients.

These products can also be applied foliarly.

MIKRO PLUS™ and **MIKRO PLUS™ ULTRA** should be used preventively to avoid micronutrient deficiencies, but may also be applied as an intervention measure when deficiencies are diagnosed in plants.

MIKRO PLUS™ and **MIKRO PLUS™ ULTRA** – key benefits

- a high content of 100% chelated micronutrients
- stability over a wide pH range
- rapid absorption and assimilation of micronutrients by plants.



Available package sizes:

MIKRO PLUS™ 1; 5; 10; 20; 1000 L
MIKRO PLUS™ ULTRA 1; 5; 25 kg

MIKRO PLUS™ and **MIKRO PLUS™ ULTRA** – composition:

	CONTENT OF NUTRIENTS [g/kg] or [g/L]					
	B	Cu	Fe	Mn	Mo	Zn
MIKRO PLUS™	2.3	1.2	23.6	9.5	0.59	3.5
MIKRO PLUS™ ULTRA	7	4	63	28	1.5	9

OTHER PRODUCTS RECOMMENDED FOR FERTIGATION:

CHELATED FERTILISERS (p. 69)

- **MIKROCHELAT™: Cu-15, Fe-13, Mn-13, Zn-15**
- **MIKROCHELAT™ Fe-11**
- **MIKROCHELAT™ Fe-6 SL**
- **MIKROCHELAT™ Mn-6 SL**

BIOSTIMULANTS

- **TYTANIT®** (pp. 8–9)
- **OPTYSIL®** (pp. 10–11)
- **TYTANIT® MAX** (p. 14)

MICRONUTRIENT FERTILISERS

- **MIKROVIT® MOLYBDENUM** (p. 68)

MACRONUTRIENT FERTILISERS

- **MIKROKOMPLEX®** (p. 70)

MICROBIAL BIOPRODUCTS

- **BACTIM® FERTI** (pp. 32–33)
- **BACTIM® NUTRI N+** (p. 26)
- **BACTIM® NEMABLOCK SL** (pp. 40–41)
- **MYCOTIM® NEMABLOCK WP** (pp. 42–43)
- **MYCOTIM® VIGOR** (pp. 24–25)

NPK FERTILISERS + MICRELEMENTS

- **PLONVIT®** series with **GCAA** technology (p. 71)
- **DROPFERT®** series (p. 73)



Learn more

DROPFERT®

4/40/13, 9/10/36, 18/18/18



Available package sizes: **25 kg**

The **DROPFERT®** series consists of top-quality, chloride-free fertilisers designed for fertigation in inert substrates, organic substrates and soil. They are suitable for preparing both ready-to-use nutrient solutions and concentrated stock solutions.

The high quality of the components used in the production of these fertilisers, together with the appropriate forms of nutrients they contain, ensures excellent plant availability. Full chelation of micronutrients guarantees their stability in both concentrated and ready-to-use nutrient solutions and allows them to be mixed with other agrochemicals.

DROPFERT® fertilisers – key benefits:

- top quality and optimal forms of nutrients
- complete water solubility
- optimal levels of macro- and micronutrients
- suitability for use even with alkaline water.

The **DROPFERT®** series includes fertilisers with different compositions, allowing nutrient solutions to be formulated for various crops and for specific developmental stages:

- **DROPFERT® 4/40/13** is particularly recommended for use after planting and during the initial growth period, as well as before and during flowering.
- **DROPFERT® 9/10/36** is particularly recommended during periods of increased potassium demand, especially during intensive growth and development, flowering and yield formation.
- **DROPFERT® 18/18/18** is suitable for supplementary feeding in all stages of plant development throughout the growing season, and is especially useful when plant condition is weakened.



Learn more

PROAQUA® TRIO

WATER CONDITIONER

PROAQUA® TRIO is a multifunctional water conditioner with adjuvant properties that neutralizes the negative effect of hard water, lowers the pH of the solution and reduces the surface tension of solution.

PROAQUA® TRIO improves the physicochemical properties of hard water. It neutralizes the negative properties of hard water and lowers its pH, improving the miscibility and stability of the working solution. Reduces the surface tension of the solution, ensuring better coverage of plant surface and greater efficacy of foliar treatments.

The innovative two-phase formula of ensures comprehensive and effective improvement of the key properties of water.



Available package sizes: **1; 5; 10; 20; 1000 L**

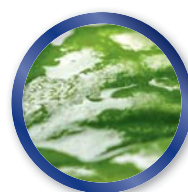
PROAQUA® TRIO – key benefits:



**LOWER WATER
HARDNESS**



LOWER pH



**LOWER SURFACE
TENSION**

PROAQUA® TRIO – direction of use:

CROPS



PROAQUA® TRIO is intended for use in preparing solutions for foliar treatments.

	DIRECTION OF USE	SINGLE DOSE
PREPARATION OF WORKING SOLUTION	Add to the water	0.1–0.2 L / 100 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

HEROSIL™

SILICONE ADJUVANT

HEROSIL™ is a highly effective silicone adjuvant designed for use as an additive to the working solution.

Thanks to its advanced technology, it significantly reduces surface tension and enables optimal coverage of the plant surface. It ensures better penetration of active ingredients and nutrients, improving the efficacy of foliar treatments.

HEROSIL™ ensures:

- improved spreading of the spray over the leaf surface
- improved uptake of crop protection products and foliarfertilisers by plant surface
- increased application efficiency in difficult conditions such as low humidity
- reduced loss of working solution.

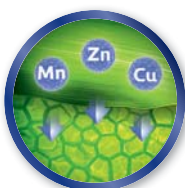


Available package sizes: **1; 5; 10; 20; 1000 L**

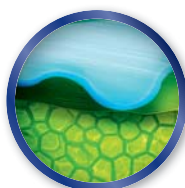
HEROSIL™ – key benefits:



REDUCTION OF SURFACE TENSION



INCREASED PENETRATION OF ACTIVE SUBSTANCES AND NUTRIENTS



IMPROVED ADHESION



OPTIMIZE WORKING SOLUTION USAGE

HEROSIL™ – direction of use:



HEROSIL™ is intended for use in preparing solutions for foliar treatments.

	DIRECTION OF USE	SINGLE DOSE
PREPARATION OF WORKING SOLUTION	Add to the water	0.1 L / 100 L of water

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more

ADITENS™ MAX

SYSTEMIC ADJUVANT

ADITENS™ MAX is an adjuvant that improves the properties of solutions used in foliar nutrition and protection treatments, among others, by reducing the surface tension and contact angle, which provides better coverage of the sprayed surface and increases the effectiveness of treatments.

The product increases the physiological activity and enhances the effectiveness of used agrochemicals.

The product contains substances that facilitate and accelerate uptake and distribution of nutrients and/or active substances in the plant. **ADITENS™ MAX** is particularly recommended for combined use with agricultural chemicals that have systemic effects.

In cases where the condition of plants requires rapid assimilation of components from foliar fertilisers or plant protection products and where the conditions for spraying are harsh (e.g., low air humidity, high or low air temperature, etc.), the treatment must be performed.



Available package sizes: **0.5; 1; 5; 10; 20 L**



Learn more

FASTER® is an adjuvant that improves the qualities of solutions used in foliar fertilising and plant protection. Compared to other adjuvants, it has anti-foaming properties and significantly reduces the amount of foam in a sprayer tank.

FASTER® facilitates correct application, coverage, and maintenance of a layer of the working solution on the plant surface. This enhances assimilation of nutrients from foliar fertilisers and increases the effectiveness of active ingredients in plant protection products.

FASTER®

ANTIFOAM ADJUVANT



Available package sizes: **1; 5; 20 L**



Learn more

PESTICLEAN™

CLEANING AGENT FOR SPRAYERS

PESTICLEAN™ is a liquid sprayer cleaner that removes pesticide residues and other deposits, including greasy substances.

PESTICLEAN™ removes residues of plant protection products, including sulfonylurea herbicides (e.g., chlorsulfuron, sulfonfufuron, methyl flupyrsulfuron, rimsulfuron, methyl thifensulfuron, methyl tribenuron, methyl triflurosulfuron, nicosulfuron, etc.).

PESTICLEAN™ is a mixture of surfactants in aqueous solution that can be used to clean tanks, filters, nozzles, beams and hoses.



Available package sizes: **1; 5; 10; 20 L**



Learn more

STRETCH™

ADJUVANT FOR STRENGTHENING SILIQUES

STRETCH™ is an adjuvant for strengthening siliques, husks and ears during the harvest maturity phase. It is intended to reduce the uncontrolled shedding of rapeseed and legume seeds, as well as to reduce cereal grain sprouting in ears.

STRETCH™ forms a thin elastic film on the sprayed surface (without a need for sunlight). The semipermeable film allows water to evaporate from the sprayed plant surface and reduces the ingress of moisture to the inside, thus reducing the multiple wetting and drying of siliques and husks, which is the main cause of seed shedding.

STRETCH™ is also intended to prevent sprouting of cereal grains in ears in high humidity conditions caused by rain or fog.

When applied on ears, **STRETCH™** can also prevent moisture ingress to the inside of the ear and to fully mature grains, thereby reducing the activation of enzymes (protease, lipase, and other hydrolytic enzymes) that initiate sprouting.



Available package sizes: **1; 5; 10; 20 L**



HUMMER™ HUMIRES™

NEW



Available package sizes: **20; 1000 L**

HUMMER™ and **HUMIRES™** are organic–mineral preparations containing humic acids, vitamin B1 and potassium, designed to improve the physicochemical properties of soil and support the development of soil microflora.

The main benefits of using **HUMMER™** and **HUMIRES™** include:

- restoration of the soil sorption complex
- consolidation of the crumb (lumpy) soil structure
- improved living conditions for soil microorganisms.

HUMMER™ / HUMIRES™ – composition:

	CONTENT OF NUTRIENT [% m/m]	
	C org.	K ₂ O
HUMMER™	5.0	2.0
HUMIRES™	1.65	0.65

HUMMER™ / HUMIRES™ – contains humic acids and vitamin B₁:



Humic acids, the main component of the product, contribute to:

- consolidating the crumb (lumpy) structure of the soil
- increasing the soil's water-holding capacity
- restoring the soil's sorption complex
- improving the living conditions for soil microorganisms
- stimulating the growth and development of the root system.



Vitamin **B₁** contained in the products has beneficial effects on plants:

- stimulates root growth
- regulates plant hormones.

HUMMER™ / HUMIRES™ – direction of use:



HUMMER™ / HUMIRES™ is recommended for all types of agricultural and horticultural crops for soil application and fertigation.

	DIRECTION OF USE	SINGLE DOSE
HUMMER™ – SOIL SPRAYING	Before sowing or planting	10–20 L/ha
HUMMER™ – FERTIGATION	Number of treatments: 2–4 per growing season	5 L/ha
HUMIRES™ – SOIL SPRAYING	Before sowing or planting	20–40 L/ha
HUMIRES™ – FERTIGATION	Number of treatments: 2–4 per growing season	10 L/ha

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



Learn more



TERRASTART™

MICRO-GRANULATED FERTILISER

TERRASTART™ is a multi-component, complex fertiliser with a high content of phosphorus and zinc, intended for application during seed sowing, plant planting and for preparing substrates used for sowing and planting.

Microgranular form of **TERRASTART™** ensures optimal distribution of nutrients around the root zone of seedlings. The high phosphorus content has a beneficial effect on root system development. **TERRASTART™** also contains easily assimilable zinc, which is essential for the initial development of plants.

TERRASTART™ – key benefits:

- enhanced early root development due to the high phosphorus content
- improved seedling vigour and establishment supported by readily available zinc
- faster and more uniform emergence under a wide range of soil and weather conditions.



Available package sizes: **15 kg**

TERRASTART™ – skład:

	CONTENT OF NUTRIENTS [g/kg]				
	N	P ₂ O ₅	MgO	SO ₃	Zn
TERRASTART™	100	350	20	125	20

TERRASTART™ – direction of use:



TERRASTART™ is intended for application during seed sowing, plant planting and for preparing substrates used for sowing and planting.

	DIRECTION OF USE	SINGLE DOSE
SOWING SEEDS – ROW CROPS	Use seeders equipped with micro-granulate dispensers	15 kg/ha
SOWING SEEDS – VEGETABLES	Use seeders equipped with micro-granulate dispensers	5–7 kg/ha
SEEDLINGS PLANTING	Use planters equipped with micro-granulate dispensers	5 kg/ha
PREPARING SUBSTRATES	Mixing thoroughly with substrate	1–2 kg/m ³

Detailed recommendations are available by scanning the QR code or at www.intermag.eu



According to the new strategy linked to the European Green Deal, organic farming will play a key role in developing a sustainable food system within the EU. Under the Farm to Fork Strategy, the European Commission has set the target of having at least 25% of the EU's agricultural land under organic farming by 2030. This is a major challenge, as organic food must be produced in accordance with strict rules that define the permitted inputs and production methods.

According to Regulation (EU) 2018/848 of the European Parliament and of the Council, organic crop production may only use fertilisers that have obtained the appropriate certificates of conformity issued by authorised certification bodies. The use of mineral nitrogen fertilisers is prohibited.

INTERMAG is continuously expanding its range of products registered for use in international organic agriculture. As a result, organic food producers can achieve high yields with the excellent quality expected by consumers. The company's innovative products allow farmers not only to comprehensively nourish organic crops with essential micronutrients, but also to stimulate plant growth and development, increasing plant tolerance to unfavourable environmental conditions.

INTERMAG is constantly broadening its portfolio of products for organic farming, and all updates on new solutions for organic crop production are available at www.intermag.eu and www.inputs.eu.

INTERMAG products for organic farming provide:



EU certification – all our products approved for use in organic farming comply with Regulation (EU) 2018/848 of the European Parliament and of the Council.



Sustainability – our fertilisers and biostimulants are designed to support sustainable agriculture, in line with the objectives of the European Green Deal.



High quality and productivity – by using advanced technological fertiliser products, farmers can achieve high yields of excellent quality to meet the growing consumer demand for organic food.

PRODUCTS FOR ORGANIC FARMING

INTERMAG products approved for use in organic farming:



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BIOSTIMULANTS				
NAME	DESCRIPTION	DOSAGE	Page	
	YIELD BIOSTIMULANT – improves both the size and quality of the yield by increasing the efficiency of pollination and the formation of yield-forming organs (seeds and fruit). Enhances biomass production by intensifying photosynthesis. Significantly increases the uptake of nutrients and water from the soil and strengthens plant tolerance to unfavourable growing conditions.	FOLIAR: 0.2–0.4 L/ha FERTIGATION: 0.5 L/ha	8	
	OPTYSIL®	IMMUNITY BIOSTIMULANT – increases plant tolerance to adverse growing conditions (e.g. drought and other abiotic stresses). Reduces the impact of biotic stress caused by pathogens and/or pest attack.	FOLIAR: 0.5 L/ha FERTIGATION: 1–2 L/ha	10
	OPTYSIL® LONGLIFE	SHELF-LIFE EXTENDER – significantly improves crop quality thanks to a unique combination of silicon and calcium. Increases the shelf life of fruit and vegetables in the supply chain by enhancing firmness and improving mechanical resistance to damage.	FOLIAR: 1–1.5 kg/ha	12
	TYTANIT® MAX	YIELD BIOSTIMULANT – a highly concentrated, powdered analogue of the TYTANIT® biostimulant, offering the same mode of action in a dry, easy-to-apply formulation.	FOLIAR: 0.1 kg/ha FERTIGATION: 0.25 kg/ha	14
	OPTYSIL® AMINO	IMMUNITY BIOSTIMULANT WITH AMINO-ACID – increase plant tolerance to abiotic and biotic stress conditions. Thanks to high content of plant-origin amino acids, helps plants recover rapidly after stresses.	FOLIAR: 1–1.2 L/ha	15
	VANADOO®	ROOT BIOSTIMULANT – intensifies processes responsible for sugar formation in plants and increases the transport of sugars to underground storage organs. Effectively improves the size and quality of storage organs. Recommended for crops with underground, harvestable plant parts.	FOLIAR: 0.25 L/ha	16
	PLANTICINE®	PLANT IMMUNISER – activates natural plant defence mechanisms by triggering key signalling pathways. Stimulates the production of PR (pathogenesis-related) defence proteins in all plant organs, preparing them to effectively combat pathogen threats. PLANTICINE® activates a range of genes responsible for regulating the plant's defensive responses.	FOLIAR: 2 L/ha	18
MICROBIAL PRODUCTS				
	BACTIM® ENDOFIX	TECHNOLOGY THAT FIXES AND PROVIDES ATMOSPHERIC NITROGEN DIRECTLY TO THE PLANT – BACTIM® ENDOFIX is a unique product based on the bacteria <i>Paenibacillus polymyxa</i> that penetrates the plant tissues (regardless of species) and provides it with additional nitrogen fixed directly from the air.	FOLIAR: 400 mL/ha	20
	BACTIM® SOIL	EFFECTIVE SOIL REGENERATION – accelerates decomposition of crop residues, increases the availability of nitrogen, phosphorus and potassium for plants. Increases content of humus in soil. Improves soil physicochemical properties and soil microbial activity.	SOIL SPRAYING: 1–2 L/ha	22
	MYCOTIM® VIGOR	MYCORRHIZAL PRODUCT ENHANCES PLANT YIELD – improving the supply of nutrients and water to plants. It boosts soil microbiological activity and decreases plants' susceptibility to abiotic and biotic stresses.	SOIL APPLICATION and FERTIGATION: 2 kg/ha/application	24
	BACTIM® NUTRI N+	MICROBIAL TECHNOLOGY FOR ENHANCING PLANT SUPPLY OF NITROGEN AND PHOSPHORUS This technology consists of two products:	SOIL SPRAYING: 400 mL/ha	26
	BACTIM® NUTRI P+	<ul style="list-style-type: none"> • BACTIM® NUTRI N+, containing <i>Azotobacter sp.</i> bacteria that effectively fix atmospheric nitrogen; • BACTIM® NUTRI P+, containing <i>Bacillus spp.</i> bacteria with a high ability to release immobilised phosphorus in the soil. 	SOIL SPRAYING: 400 mL/ha FERTIGATION: 2 L/ha	27
	BACTIM® SAFE PK	SOIL PHOSPHORUS AND POTASSIUM MOBILIZATION – microbiological product that contains selected bacteria enhancing the efficiency of NPKfertiliser use due to their unique properties.	SOIL SPRAYING: 200 g/ha	28
	BACTIM® DELTA	A MICROBIOLOGICAL PREPARATION THAT LIMITS THE HARMFULNESS OF LEPIDOPTORA LARVAE – the bacteria contained in the preparation colonize the leaf surface and the rhizosphere, creating a biological barrier that negatively affects the development and feeding of pests (mainly lepidoptora larvae)	FOLIAR: 1 kg/ha	29
	BACTIM® HORTI	A MICROBIOLOGICAL PRODUCT DEDICATED TO HORTICULTURE – increases crop health by creating a natural microbiological barrier on plant surfaces. Additionally, the product exhibits biostimulating properties, which positively impacts yield potential and plant vigour.	FOLIAR: 2 L/ha	30
	BACTIM® FERTI	A MICROBIOLOGICAL PRODUCT DEDICATED TO FERTIGATED CROPS – improves the health of fertigated crops by forming a natural microbiological barrier on the surface of their root systems. The product exhibits biostimulating properties, which positively impacts yield potential and plant vigour.	FERTIGATION: 2 L/ha	32
	BACTIM® OMNIS	A MICROBIOLOGICAL STIMULATOR THAT LIMITS THE INFECTION POTENTIAL OF CROPS – it improves the composition of the microbiome in the plant phyllosphere and rhizosphere by creating a microbiological barrier on the plant that naturally impedes the development of pathogens. It also has a biostimulating effect on plants by increasing their supply of certain nutrients.	FOLIAR, SOIL SPRAYING: 2 L/ha	34
	BACTIM® PANTOEAE CARE	MICROBIAL ENHANCER OF PLANT HEALTH – contains a high concentration of unique strains of <i>Pantoea spp.</i> bacteria, which are characterized by the ability to quickly colonize above-ground parts of plants.	FOLIAR: 0.5 kg/ha	36
	BACTIM® VERSUS	MICROBIAL ENHANCER OF PLANT HEALTH – contains a high concentration of unique strains of <i>Bacillus sp.</i> and <i>Pantoea spp.</i> bacteria that work synergistically. The product limits the harmfulness of fungal and bacterial diseases.	FOLIAR: 1 L/ha	38
	BACTIM® NEMABLOCK SL	MICROBIOLOGICAL PRODUCT WITH HIGH BIOLOGICAL ACTIVITY AGAINST PARASITIC SOIL NEMATODES – for use in field, vegetable and fruit crops.	SOIL SPRAYING, FERTIGATION: 5 L/ha	40
	MYCOTIM® NEMABLOCK WP	MYCORRHIZAL PRODUCT WITH HIGH BIOLOGICAL ACTIVITY AGAINST PARASITIC SOIL NEMATODES – reduces root system damage caused by parasitic nematodes. Increases plant resistance to root system diseases. Improves the size and quality of vegetable and fruit yields. Reduces the accumulation of harmful substances in the plant.	FERTIGATION: 2 kg/ha/application	42









PRODUCT FOR SEEDS

NAME	DESCRIPTION	DOSAGE	Page
PRIMSEED® MULTI	SEED FERTILISER – provides germinating seeds with essential nutrients and strengthens the condition of plants in the early stages of development. Colours the treated seeds, which enables better identification of the seed material.	0.2–0.3 L / 100 kg of seeds	44
PRIMSEED® BIOM SOYBEAN	INOCULANT FOR SOYBEAN SEEDS – contains bacteria <i>Bradyrhizobium</i> , which effectively improves the formation of root nodules and effectively fixes atmospheric nitrogen.	0.2 L / 100 kg of seeds	46
 PRIMSEED® BIOM PEA	INOCULANT FOR PEA BROAD BEAN, FABA BEAN OND LUPINE – contains bacteria <i>Rhizobium</i> , which effectively improves the formation of root nodules and effectively fixes atmospheric nitrogen.	0.2 L / 100 kg of seeds	48
 PRIMSEED® BIOM LUPINE			
PRIMSEED® BIOM CEREALS	MICROBIOLOGICAL SEED PRODUCT INCREASING PLANT HEALTH – improves the composition of the rhizosphere microbiome of seedlings and the immediate environment of sprouting seeds by creating a microbial barrier that hinders the development of pathogens. Biostimulating effect on plants.	0.2–0.3 L / 100 kg of seeds	49












ACTIVATORS

NAME	DESCRIPTION	DOSAGE	Page
 ALGAPRIM®	REGENERATION ACTIVATOR – quickly and effectively restores plant health after stress. Contains plant-derived amino acids, <i>Ascophyllum nodosum</i> algae extract, betaine, and trace elements (Cu, Mn, Zn) complexed with glycine. Excellent for relieving stress caused by herbicide application.	FOLIAR: 2 L/ha	50
 VIMARIS	ASCOPHYLLUM NODOSUM ALGAE EXTRACT – supports natural plant physiological processes, increases their resistance to abiotic stresses (including high or low temperatures, water shortages, waterlogging, or soil salinity), and stimulates the growth of both the root system and the above-ground parts.	FOLIAR: 2–3 L/ha FERTIGATION: 6–10 L/ha	52
 RESISTAR®	IMMUNITY AND HEALTH ACTIVATOR – improves plant health during cultivation and storage and activates and strengthens natural plant immunity mechanisms. Thanks to organic complexes, copper and zinc are very efficiently absorbed and transported to various plant organs, ensuring activity throughout the plant. The presence of bioavailable silicon increases resistance to stress factors.	FOLIAR 0.15–0.5 kg/ha	53
AMINOPRIM®	RECOVERY ACTIVATOR – stimulates resistance and rapid plant recovery after stresses. Increases the effectiveness and safety of agrochemical treatments. Increases yield quantity and quality.	FOLIAR: 0.2–0.3 L / 100 L of water	54
AMINOPRIM® PLANTACEA	RECOVERY ACTIVATOR – product containing biologically active amino acids of plant origin. Intended for foliar application to increase stress tolerance and accelerate regeneration after stress conditions.	FOLIAR: 0.3–0.6 L / 100 L of water	55
OPTYCAL®	CALCIUM ACTIVATOR – ensures optimal supply of calcium by stimulating calcium uptake from the soil and enhancing transport to the youngest parts of the plant (auxin-calcium pump effect). Directly provides easily assimilable organic calcium in foliar treatment. Improves fruit and vegetable quality and crop storability.	FOLIAR: 1–1.5 kg/ha	56
GROWON®	ENERGY ACTIVATOR – stimulates root growth and formation of plants intended for harvest mainly in soil and air with low temperatures and in acidic soils. Improves quantity and quality of yield.	FOLIAR: 1–5 L/ha	57
ROOTSTAR®	PLANT ROOTING ACTIVATOR – improves plant rooting in the early stages of development. Improves the process of root growth and development after stress conditions. Increases plant tolerance to stress associated with low soil temperature and water deficiency.	FOLIAR: 0.8–1.2 L/ha	58
CHITOSHELL SL	ELICITATOR WITH FUNGICIDAL AND BACTERICIDAL ACTION – directly affects the metabolism of pathogenic fungi and bacteria by destroying the structure of pathogen cell membranes, creating an impermeable polymer layer, and inhibiting mRNA and protein synthesis.	FOLIAR: 2 L/ha	59

FOLIAR FERTILISERS

NAME	NUTRIENT CONTENT [g/L or g/kg]													DIRECTION OF USE detailed instructions on product labels		Page
	N _{total}	P ₂ O ₅	K ₂ O	CaO	MgO	Na ₂ O	SO ₃	B	Co	Cu	Fe	Mn	Mo	Zn	FOLIAR	
PLONVIT® ACTIVE NUTRIBOOST™	67.5				27		69	5.5		2.7	22	17.6	0.27	17.6	1 L/ha	60
PLONVIT® CEREALS NUTRIBOOST™	67.5				27		88	0.54		5.4	23	23	0.27	17	1 L/ha	
PLONVIT® OIL CROPS NUTRIBOOST™	67.5				27		80	8.6		3.2	17.3	21.6	0.27	17.3	1 L/ha	
PLONVIT® MAIZE NUTRIBOOST™	66.0				26.4		69	9.4		2.6	4.4	11.2	0.25	35	1 L/ha	
PLONVIT® LEGUMES NUTRIBOOST™	65.5				26.2		65.5	9.2	0.92	9.2	14.4	18.5	0.28	14.4	1 L/ha	
PLONVIT® POTATO NUTRIBOOST™	65.5				26.6		69	9.3		6.1	9.8	19.3	0.14	21.3	1 L/ha	
PLONVIT® SUGAR BEET NUTRIBOOST™	65.5				26.2	31.5	45.8	9.2		4.1	21	18.3	0.09	13.1	1 L/ha	
 AMINO ULTRA® CEREALS								1.8		18	70	75	0.7	55	0.5–0.75 kg/ha	62
AMINO ULTRA® OIL CROPS								21		7	53	85	0.7	55	0.5–0.75 kg/ha	
 AMINO ULTRA® MAIZE								16		8	68	57	0.8	60	0.5–0.75 kg/ha	
 AMINO ULTRA® HORTI								13		5	85	54	1.0	22	0.5–0.75 kg/ha	
AMINO ULTRA® CITRUS												115		115	0.1-0.5 kg/ha	64
 AMINO ULTRA® Cu-24										240					0.1–0.6 kg/ha	
 AMINO ULTRA® Fe-20											200				0.1–0.7 kg/ha	
 AMINO ULTRA® Mn-22												220			0.1–0.6 kg/ha	
 AMINO ULTRA® Zn-24														240	0.1–0.55 kg/ha	
 AMINO ULTRA® BORZIN								110						50	3.5 kg/ha	65

FOLIAR FERTILISERS

NAME	NUTRIENT CONTENT [g/L or g/kg]														DIRECTION OF USE detailed instructions on product labels		Page
	N _{total}	P ₂ O ₅	K ₂ O	CaO	MgO	Na ₂ O	SO ₃	B	Co	Cu	Fe	Mn	Mo	Zn	FOLIAR	FERTIGATION	
 AMINO ULTRA® Cu SL	15									71					0.3–2 L/ha	–	66
 AMINO ULTRA® Fe SL	10										49				0.3–2.5 L/ha	–	
 AMINO ULTRA® Mn SL	14											57			0.3–2 L/ha	–	
 AMINO ULTRA® Zn SL	26													121	0.3–1 L/ha	–	
AMINO ULTRA® ACTIVE SL	56								6	27	27			20	1.5–2 L/ha	–	
 MIKROCHELAT™ Cu-15	55									150					0.1–1 kg/ha	Adjust the composition of nutrient solution and application frequency to match the plant requirements and type of substrate.	69
 MIKROCHELAT™ Fe-13	65										130				0.2–1 kg/ha		
 MIKROCHELAT™ Mn-13	64											130			0.25–1 kg/ha		
 MIKROCHELAT™ Zn-15	64												150		0.2–1 kg/ha		
 MIKROVIT® BORON	41							150							0.2–1.5 L/ha	–	68
 MIKROVIT® BORON TURBO	41							150							0.15–1.2 L/ha	–	67
 MIKROVIT® BORON PLUS								150				5.5			0.2–1.5 L/ha	–	
MIKROVIT® COPPER	52									75					0.2–2 L/ha	–	
MIKROVIT® COMO									23			35			3–4 L/ha	–	68
MIKROVIT® ZINC	37													112	0.5–2 L/ha	–	
MIKROVIT® MANGANESE	33										160				0.5–2 L/ha	–	
MIKROVIT® MOLYBDENUM	45											33			0.5–1 L/ha	1–2 mL per 1000 L	
MIKROVIT® IRON	28									75					0.5–2 L/ha	–	
PLONVIT® BOROSULF	60				53		275	80			10	0.4	1		0.5–3 kg/ha	–	67
PHOSPHORO-ZINC	77.4	500												30	3–6 L/ha	–	70
PLONVIT® OPTY GCAA	200	200	200						0.3	0.3	1.5	0.7	0.02	0.7	2–5 kg/ha	Adjust the composition of nutrient solution and application frequency to match the plant requirements and type of substrate.	71
PLONVIT® NITRO GCAA	310	120	100						0.3	0.3	1.5	0.7	0.02	0.7	2–5 kg/ha		
PLONVIT® PHOSPHO GCAA	110	530	50						0.3	0.3	1.5	0.7	0.02	0.7	2–5 kg/ha		
PLONVIT® KALI GCAA	110	120	380						0.3	0.3	1.5	0.7	0.02	0.7	2–5 kg/ha		
PLONVIT® GEL 20/20/20	200	200	200						0.3	0.7	1.4	0.7	0.014	0.7	2–5 L/ha	–	71
MIKROKOMPLEX®					160		320	0.5		3		3.5	0.1	2	3–7 kg/ha	0.1–1 kg per 1000 L	70
PLONVIT® FOSTAR	70	500													2–6 L/ha	–	
PLONVIT® KALPRIM	45		400												3–6 L/ha	–	
PLONVIT® NITROMAG	370				40		12.2	0.27		3.0	0.4	11.0	0.05	0.27	2–6 L/ha	–	
PLONVIT® SULVIT	200						760								2–6 L/ha	–	
PLONVIT® UNI PK 14:24	35	136	245												3–6 L/ha	–	
PLONVIT® PK 28:30		280	302												3–6 L/ha	–	
PLONVIT® PK 49:12		490	125												3–6 L/ha	–	
PLONVIT® N37	370				18			0.26		1.3	2.6	1.3	0.07	0.26	2–6 L/ha	–	
PLONVIT® CALCIUM TURBO	128			260	10			0.75		0.3			0.0015	0.3	2–6 L/ha	–	

FERTILISERS FOR FERTIGATION

NAME	NUTRIENT CONTENT [g/L or g/kg]													DIRECTION OF USE detailed instructions on product labels	Page
	N _{total}	P ₂ O ₅	K ₂ O	CaO	MgO	Na ₂ O	SO ₃	B	Cu	Fe	Mn	Mo	Zn		
MIKROCHELAT™ Fe-11										110				Adjust the composition of nutrient solution and application frequency to match the plant requirements and type of substrate.	69
MIKROCHELAT™ Fe-6 SL										76					
MIKROCHELAT™ Mn-6 SL											78				
MIKRO PLUS™								2.3	1.2	23.6	9.5	0.59	3.5	30–100 mL per 1000 L	72
MIKRO PLUS™ ULTRA								7	4	63	28	1.5	9	10–40 g per 1000 L	
DROPFERT® 9/10/36 + micro	90	100	360		20		93	0.2	0.1	1.2	0.6	0.03	0.25	0.3–2 kg per 1000 L	73
DROPFERT® 4/40/13 + micro	40	400	130		60		126	0.2	0.1	1.2	0.6	0.03	0.25		
DROPFERT® 18/18/18 + micro	180	180	180		3		18.5	0.2	0.1	1.2	0.6	0.03	0.25		

TANK MIX ADDITIVES

NAME	DESCRIPTION	DOSAGE	Page
HEROSIL™	SILICONE ADJUVANT – thanks to its advanced technology, it significantly reduces surface tension and enables optimal coverage of the plant surface.	0.1 L/ha	75
PROAQUA® TRIO	WATER CONDITIONER – improves the physicochemical properties of water used for preparing solutions for foliar treatment and plant protection. Neutralizes the negative properties of hard water and lowers the solution's pH, thereby increasing the efficiency of fertilisers and plant protection products.	0.1–0.2 L per 100 L	74
ADITENS™ MAX	SYSTEMIC ADJUVANT – ensures better coverage of the sprayed surface with a solution. Increases the efficiency of applied agrochemicals. Accelerates assimilation and transport of agrochemical active ingredients.	50–100 mL per 100 L	76
FASTER®	ANTI-FOAMING ADJUVANT – facilitates the application, coverage and retention of spray solution on the surface of leaves. Reduces the formation of foam in the spray tank. Improves the effectiveness of agrochemicals.	0.1 L per 100 L	76
STRETCH™	SEALING PRODUCT – limits the uncontrolled shattering of rapeseeds and legumes. Limits grain sprouting in the ear.	1 L/ha	77
PESTICLEAN™	CLEANING AGENT FOR SPRAYERS – removes residues of plant protection products (e.g., residues of sulfonylurea herbicides) and other sediments, including fatty substances.	0.2–0.25 L per 100 L	77

SOIL IMPROVERS

NAME	DESCRIPTION	DOSAGE	Page
HUMMER™	SOIL IMPROVERS – HUMMER™ / HUMIRES™ are organic–mineral preparations containing humic acids, vitamin B1 and potassium, designed to improve the physicochemical properties of soil and support the development of soil microflora	SOIL SPRAYING: 10–20 L/ha FERTIGATION: 5 L/ha	78
N HUMIRES™		SOIL SPRAYING: 20–40 L/ha FERTIGATION: 10 L/ha	

GRANULAR FERTILISER

NAME	DESCRIPTION	DOSAGE	Page
TERRASTART®	MICRO-GRANULATED FERTILISER – is a multi-component, complex fertiliser with a high content of phosphorus and zinc, intended for application during seed sowing, plant planting and for preparing substrates used for sowing and planting.	SEED SOWING: 5–15 kg/ha SEEDLING PLANTING: 5 kg/ha PREPARING SUBSTRATES: 1–2 kg/m ³	79

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