Natural
Development
Group

PRODUCT CATALOG

Dedicated
to the Earth’s Caretakers,
who are mindful and
sensitive
to the Quality of its
Harvests.

NDG Group - Respectful Cultivation

NDG is an International Group that operates dynamically and professionally in the field of nutrition and agricultural defense. It offers innovative and high-quality products through collaboration with research laboratories linked to the most prestigious European and International Universities. We believe in trust, fairness, transparency, the care of human heritage, and a constant commitment to research. These values form the basis of our dedicated and reliable team of competent and professional individuals.

NDG Natural Development Group

Innovation and continuous research with an eco-friendly perspective.

Innovation, development, and sustainability

Respectful Cultivation.

We are women and men of “culture.”
Farmers, agronomists, technicians, and researchers.

We have developed a new method to make crops more productive while respecting Nature, human health, and the environment.
A choice that makes us learn every day from the one true teacher:
Nature.

Effectiveness, quality, and safety

For human and environmental health.

We are what we eat; we are the result of the environment we live in.
Therefore, nourishing the soil is an act of love towards ourselves.

This is why we focus on continuous innovation in the eco-sustainability of agricultural production activities, for a healthy and clean environment ready to be handed out to future generations.

Partnership

NCR Biochemical

The synergy between NDG and NCR Biochemical represents a significant step towards expanding our research and innovation capabilities in the field of microorganisms.
With NCR Biochemical's experience in biotechnology and microbiology, we can open new opportunities for our business.

Through this partnership, NDG has access to specialized resources and cutting-edge technologies for the isolation, cultivation, and characterization of microorganisms.
This enables us to carry out advanced and targeted research, accelerating the development process of new products and solutions.

This collaboration marks a significant step forward in innovation and sustainability, contributing to the progress and well-being of society as a whole.

Partnership

GI.MA.

GI.MA., with its solid experience in the production of fertilizers and plant protection products, ensures greater efficiency and production capacity, allowing us to continue offering innovative and sustainable solutions that meet the emerging needs of the market while maintaining our famous high quality standards and service excellence.

In summary, the alliance between NDG and GI.MA. represents a strategic partnership with plenty of advantages for our group, including access to complementary resources and expertise, expanded product and service offerings, access to new markets, and strong leadership in the agricultural sector.

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TECHNICAL LINES

Agricoltura 4.0

Precision Agriculture

The European regulations have redefined the concept
of good agronomic practice through an eco-sustainable perspective.

NDG in Agriculture has developed effective products in compliance with European standards and obtained the certificazione Suolo e Salute (Suolo e Salute is an Inspection and Certification Body in Italy for organic certification), authorizing their use in organic farming.

Microsap®

MICROSAP®, whose formulations are covered by patent (PATENT GRANT NR. EP 3071039), is an aqueous suspension of Carbonated Hydroxyapatite that can be used in combination with micro-meso-macro elements, essential oils, natural extracts, and active ingredients.

Microsap®

To reduce the use of synthetic chemicals, Microsap® has developed a structured microcrystal that is biocompatible, originating from the medical sector. It is capable of transporting and delivering active ingredients and nutraceuticals to the plant.

Our primary objective is to create highly eco-compatible formulations that can fight off very complex diseases currently without cure and help plants overcome stress caused by climate change and pollution.

Macro elements

Micro elements

Meso elements

Active Ingredients

Essential oils
(natural extracts)

Microsap® Competitive Advantage

The combination of carrier, essential oils (natural extracts), and active ingredients is highly innovative in agriculture. The Microsap® technology enhances the action of active ingredients, delivers them where needed, and interacts with the electrostatic charge of plants to ensure controlled release over time and high resistance to rain wash-off.
It leaves no phytotoxic residues.

Activity and Functionality of Microsap® in agriculture

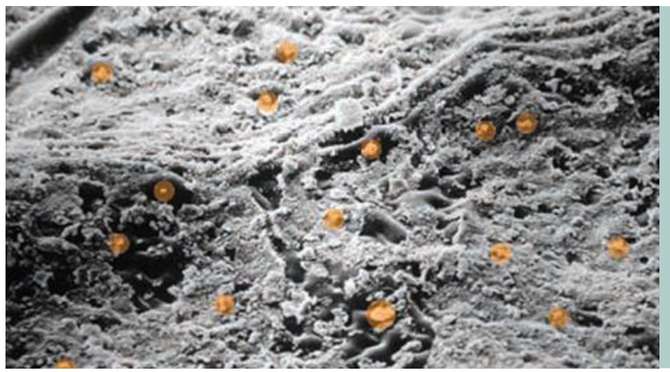
Microsap® (carbonated hydroxyapatite) is a carrier, a micrometric-sized transporter capable of chemically binding to active ingredients such as nutrients and essential oils.

Microsap® formulations in fertilizers
Associated with micro, macro, and meso nutrients through foliar fertilization, it can make the needed nutrients immediately available to the plant.

Microsap® formulations in plant protection products
They enhance the action of active ingredients by ensuring controlled release and reducing photodegradation of active ingredients like pyrethrum.

Microsap® biotechnology
It aligns perfectly with the strategic objectives of the European Green Deal, as defined by the new Common Agricultural Policy (CAP), focusing on social, economic, and environmental sustainability while respecting Human Health and the Environment.

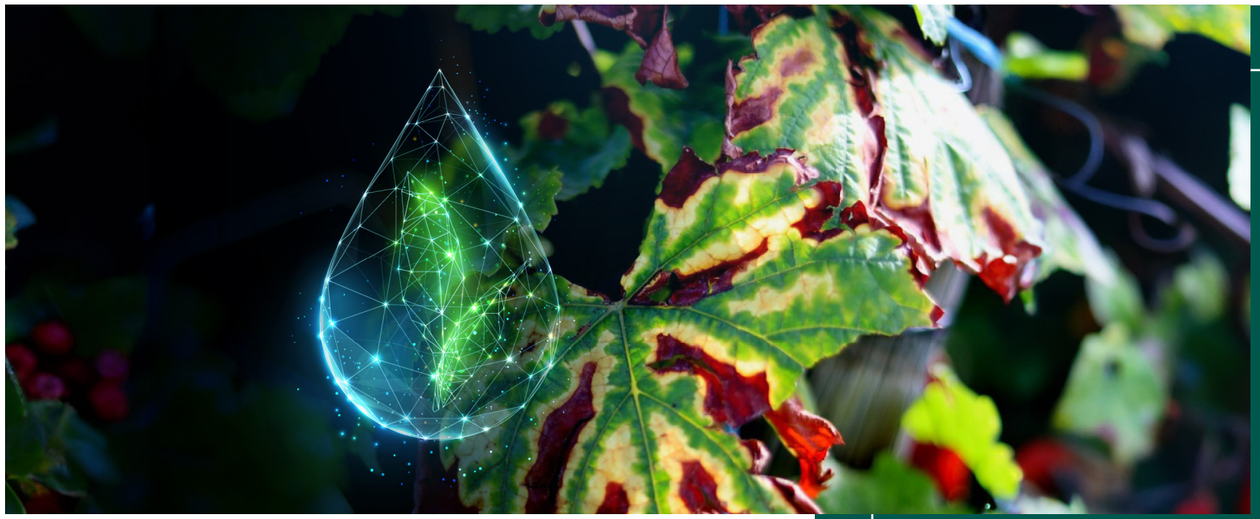
In the electron microscope image, you can observe the Microsap® microcrystal getting distributed evenly on the leaf surface, resisting the washing effects of heavy rain or dew.

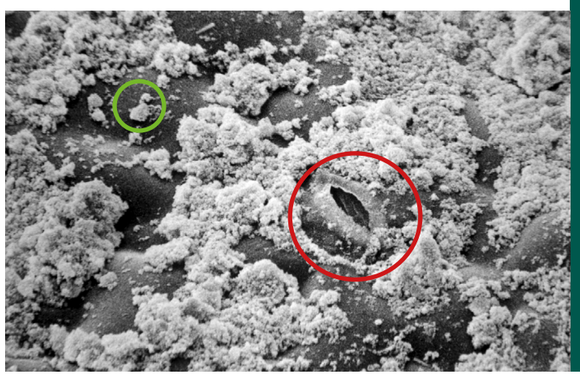


Highlighted are some MICROSAP® microcrystals on the leaf surface.

Microsap® on the leaf

The aqueous suspension of MICROSAP® is thoroughly mixed within the water volume used for foliar application, ensuring excellent coverage.





As shown in the side image, the **MICROSAP® microcrystals** are smaller than the stomata of the leaf.

The **stomata** and the product are distributed evenly on the leaf surface.

Scientific Publications

Recognized as one of the **best Biomaterials of the Future** by the most important Scientific Journals:

2018	Pest Management Science
2018	APS Journals Phytopathology
2019	Phytopathogenic Mollicutes
2021	Frontiers in Plant Science
2021	Plants
2022	Journal of fungi

NDG's constant commitment alongside these scientific partners has led to prestigious achievements:

- 7 Master's Dissertations with Honors
- 1 PhD with Honors
- 2 Winners of the BEST POSTER AWARD (S.I.P.A.V.)
- 1 Antico Fattore Award from ACCADEMIA GEORGOFILI

Collaborations

In collaboration with the following International Institutes and Universities:

- University of Catania (IT)
- University of Reims (FR)
- University of Geisenheim (DE)
- University of Florence (IT)
- University of Bologna (IT)
- National Research Council (C.N.R.) of Bologna – Ibimet (IT)
- C.R.E.A. – Research Center for Viticulture (IT)
- University of Lisbon - Instituto Superior de Agronomia (PT)

The agriculture of the future

A good portion of the European vine-growing sector is facing a deep conversion mainly driven by the new regulatory framework.

Regulation EC No. 1107/2009 and EC Directive 128/2009
Regulation EC 834/2007
Regulation EC EU 2019/1009 and its amendment Delegated Regulation (EU) 2022/1519

establishing the concept of “Good Agronomic Practices”.

With these measures, the European Community acknowledged the fact that traditional farming practices are unsustainable in terms of costs connected to environmental damages and human-health.

This radical transformation is leading to a rigorous revision of EU regulations concerning integrated and organic productions. Simultaneously, certification bodies are tightening their control systems to ensure the highest quality standards with minimal environmental impact.

Therefore, this context demands a reflection on the development of innovative technical means through research and experimentation programs that may enable to implement the new production standards and get ready for future scenarios in light of an eco-sustainable market.

Fungicides

What makes our fungicides different?

We have patented a Natural Organic Technology, an aqueous suspension of carbonated hydroxyapatite that can be combined with active ingredients, plant extracts, essential oils, micro-meso-macro elements, for use in agriculture. And we have named it Microsap®.

Coating

Our fungicides represent cutting-edge innovation in plant nutrition, characterized by unique formulations based on natural extracts and innovative microelement solutions. MICROSAP® is a biocompatible carrier that can form a coating on the leaf surface, thus extending the effectiveness of active ingredients over time.

Carbonated hydroxyapatite: The Microsap® carrier

An innovative formulation capable of enhancing the biological activity of copper ions for sustainable control of the grapevine downy mildew pathogen.
Years of research and investigation have highlighted the release properties of hydroxyapatite, which has been shown to improve the biological activity of copper ions, reducing both the severity of the disease and its incidence. The choice of hydroxyapatite as a carrier originates from its ability to generate a microstructured coating—a natural, biologically active coating that is highly effective and persistent on the leaf surface despite rain wash-off. The study concluded that a formulation composed of microcrystalline particles of hydroxyapatite can modify the distribution, persistence, and release of copper ions on the leaf surface, thereby enhancing their biological activity.

Scientific Publication Phytopathology 2019 Disease control and Pest Management. “Innovative Delivery of CU (II) Ions by a Nanostructured Hydroxyapatite: Potential application in planta to enhance the sustainable control of Plasmopara viticola.”
E. Battiston – L. Mugnai

FUNGICIDE

Microsap® Cu Plus

Concentrated suspension based on copper
(in the form of tribasic copper sulfate)

MICROSAP® CU PLUS

MICROSAP® CU PLUS is a concentrated suspension fungicide containing tribasic copper sulfate as its active ingredient. Action mechanism: M1 group (FRAC) Composition: Copper metal (as tribasic sulfate) 5 g (53.8 g/L) Adjuvants as needed at 100 g

Grapevine
Apply at the onset of disease and continue every 7 days starting from full leaf expansion, adjusting based on weather conditions. Suspend treatments 15 days before harvest if necessary.

Tomato, Eggplant (field-grown)
Apply at the onset of disease and continue at intervals of 7-8 days depending on weather and vegetative growth.

For transplanted crops, begin applications after transplant shock has passed and repeat every 7-10 days based on weather conditions and growth. Suspend treatments 3 days before harvesting.

Potato
Begin applications at the onset of disease and continue at intervals of 7-8 days depending on weather conditions. Suspend treatments 14 days before harvesting.

CAUTION
To be used only for the purposes and under the conditions specified on this label. The user is liable for any damage caused by improper use of the product. Compliance with the instructions on this label is essential to ensure the effectiveness of the treatment and to avoid damage to plants, people, and animals. Do not apply using aerial methods—do not contaminate other crops, food, and beverages or watercourses—apply in the absence of wind. Not for individual sale. Do not disperse the empty container into the environment. The container cannot be reused.

COMPATIBILITY
Before mixing with other formulations, carry out a compatibility test. When mixing with other formulations, observe longer waiting times. In case of intoxication, inform the physician about the product mix.

PHYTOTOXICITY
The product is not phytotoxic at authorized doses and for authorized crops.

FUNGICIDE

Microsap® Esca Plus

Fungicide product - Emergency use.

In accordance with Article 53(1) of Regulation (EC) No 1107/2009

MICROSAP® ESCA PLUS

MICROSAP® ESCA PLUS is a copper-based fungicide suitable for preventing the penetration of fungi responsible for “esca disease” which attack grapevines (both wine and table varieties) through pruning cuts, wounds, and other lesions caused, for example, by hail.

Wine grapes
Maximum application rate per hectare (L/ha): 1.5- 2.5
Maximum application rate: 5 (minimum interval 6-7 days) per hectare (L/ha): 400- 1000

Directions for use
Do not exceed a cumulative application of 28 kg of copper per hectare over a 7-year period. It is recommended to adhere to an average annual application rate of 4 kg of copper per hectare.

Compatibility
Mix the product with other formulations only if there is sufficient evidence of safe compatibility; however, it is advisable to carry out a preliminary test to ensure that the products to be combined do not exhibit chemical-physical incompatibilities.

Phytotoxicity
The product is not phytotoxic at authorized doses and for authorized crops.

CAUTION
To be used exclusively for the purposes and under the conditions specified on this label. The user is liable for any damage resulting from improper use of the product. Compliance with all instructions on this label is essential to ensure the effectiveness of the treatment and to avoid damage to plants, people, and animals. Do not apply using aerial methods — do not contaminate other crops, food, and beverages or watercourses — apply in the absence of wind. Not for individual sale. Do not disperse the empty container into the environment.
The container cannot be reused.

STORAGE
Store the product in its original packaging, in a storage area designated for phytosanitary products compliant with current regulations, away from beverages and food, including those for animals. Keep out of the reach of children and unauthorized persons. Store in a well-ventilated place at a temperature of 20 °C ± 5 °C.

FERTILIZERS

Microsap® Bio

NATURE

We are part of the planet we live on. Respecting nature is respecting ourselves.

MICROSAP® BIO / **458**

Microsap® BIO 458 is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. Microsap® BIO 458 is a product based on microelements that, through its combined action with the Microsap® microcrystal, strengthens the plant's immune defenses and natural resistance to fungal and bacterial diseases.

Authorized for use in organic farming
Raw materials: copper oxychloride, zinc salt (sulfate)

Directions for use:
Grapevine
1.5 KG/HA / Use a minimum of 400-600 liters of water per hectare per application

Fruit trees
2.5 KG/HA / Use a minimum of 600-1000 liters of water per hectare per application

Table grapes
1.5 KG/HA / Use a minimum of 400-600 liters of water per hectare per application

Vegetable crops
2-3 KG/HA / Use a minimum of 400-600 liters of water per hectare per application

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4.3 ± 0.5 \ Specific gravity (at 20 °C) 1.12 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER

Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 2,5%
- Zinc (Zn), sulfate, water-soluble 3,0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® BIO / **AKT**

Thanks to the innovative patented technology developed by Natural Development Group, Microsap® BIO AKT is a cutting-edge product for the healthy and balanced development of plants, enhancing their ability to better withstand a variety of stresses. Microsap® BIO AKT can be used in combination with other agricultural products and, once in the soil, it serves as a source of important mineral salts for the plant.

Permitted for use in organic farming
Raw materials: manganese salt (sulfate), zinc salt (sulfate)

Directions for use:
3-4 kg/ha / Use 300 - 400 cc/hl of water

Pour the product into the sprayer tank and reach the required volume with water.

Use medium to high volumes of water for all types.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need.
Do not exceed the recommended dosage.
Do not mix the product with EC formulations.
The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4.7 ± 0.5 / Specific gravity (at 20 °C) 1.13 KG/L

FLUID MICROELEMENTS MIXTURE

Manganese (Mn) sulfate, Zinc (Zn) sulfate

- Manganese (Mn), sulfate, water-soluble 0.5%
- Zinc (Zn), sulfate, water-soluble 3.0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Manganese Sulfate: CAS 10034-96-5

MICROSAP® BIO / **Cu**

MICROSAP® BIO Cu is a microelements-based liquid fertilizer specifically designed to be easily assimilated and translocated within the plant. Microsap® BIO Cu helps plants to quickly overcome stress caused by nutritional imbalance or unfavorable environmental conditions.

Permitted for use in organic farming
Raw materials: copper oxychloride, zinc salt (sulfate)

Directions for use:
Grapevine
3-5 kg/ha / Use a minimum of 400 - 600 liters of water per hectare per application

Fruit trees
4-5 kg/ha / Use a minimum of 600 - 1000 liters of water per hectare per application

Table grapes
3-5 kg/ha Use a minimum of 400 - 600 liters of water per hectare per application

Vegetable crops
2-3 kg/ha Use a minimum of 400 - 600 liters of water per hectare per application

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. Do not mix the product with EC formulations. Store the product at temperatures between 5 and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4 ± 0.5 \ Specific gravity (at 20 °C)
1.25 KG/L

CONCIME INORGANICO COMPOSTO A BASE DI MICROELEMENTI

Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 3.0%
- Zinc (Zn), sulfate, water-soluble 2.0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® BIO / **ES**

Microsap® BIO ES is an advanced product designed for a fertilization strategy that ensures healthy and balanced plant development. Microsap® BIO ES is a microelement-based product that stimulates the natural defense mechanisms of plants. The elements it contains are absorbed through the trunk, enhancing immune defenses and natural resistance. Microsap® BIO ES once in the soil represents a source of vital mineral salts for the plant.

Permitted for use in organic farming
Raw materials: copper oxychloride, zinc salt (sulfate)

Directions for use:
Grapevine
10 KG - see protocol

Table grapes
15 KG - see protocol

Winter applications minimum 250 L water/hectare. Summer applications greater than 300 L water/hectare.
Start the applications at the falling of leaves and repeat throughout plant development

For an optimal result, 5 annual applications are recommended.

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4 ± 0.5 \ Specific gravity (at 20 °C)
1.17 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER

Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 2.5%
- Zinc (Zn), sulfate, water-soluble 3.0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® BIO / **Fe**

MICROSAP® BIO Fe is an iron-based foliar fertilizer that thanks to its synergy with the innovative Microsap® crystal allows for easy and immediate absorption by the plant, optimizing its nutritional status.

Permitted for use in organic farming
Raw materials: Iron sulfate (sulfate)

Directions for use:
Grapevine
0.5 – 1 Kg/hectare

Fruit trees
Use a volume of water no less than 400 liters/hectare

Fertigation
In fertigation, use 3 – 5 Kg/hectare for:
- Vegetable crops
- Strawberries
- Tomatoes
- Watermelon and melon
- Zucchini
- Leafy vegetables (lettuce, spinach, etc.)
- Other vegetables / other crops

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. Store at temperatures between 5 °C and 30 °C. The product is stable at standard temperatures and pressures. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 4 ± 0.5 \ Specific gravity (at 20 °C) 1.25 KG/L

MICROELEMENTS-BASED INORGANIC FERTILIZER COMPOUND
Iron (Fe) microelements-based suspension fertilizer

- Iron (Fe), soluble sulfate 4.5%

Iron sulfate: CAS 7720-78-7

MICROSAP® BIO / **FI**

MICROSAP® BIO FI is an advanced product for a fertilization strategy that ensures healthy and balanced plant development.
It is a microelement-based product that, combined with Microsap®, stimulates the natural defense mechanisms of plants. The elements contained in it are absorbed by the woody parts, enhancing immune defenses and promoting natural resistance. The product reinvigorates damaged tissues and enriches the plant with nutritious vegetable substances.

Permitted for use in organic farming
Raw materials: copper oxychloride, zinc salt (sulfate)

Directions for use:
Grapevine
10 kg/ha/year / See Protocol / Use a minimum of 300 liters of water per hectare per application.

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 4.5 ± 0.5 / Specific gravity (at 20°C) 1.22 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER
Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 2.5%
- Zinc (Zn), sulfate, water-soluble 3.0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® BIO / **MICROEL B SAP**

MICROSAP® MICROEL B SAP is a magnesium sulfate-based foliar fertilizer that features the addition of boron and zinc, which are easily absorbed by the plant. The administration of Boron enhances pollen fertility, thereby increasing fruit production. It also promotes the absorption of other nutrients (K, Ca, and P) and improves cell division by stabilizing cell walls. The addition of Zinc enhances plant vigor and boosts root development. Sulfur improves crop quality and production by supporting the synthesis of essential proteins crucial for plant growth.

Permitted for use in organic farming
Raw materials: naturally sourced magnesium sulfate, boron ethanolamine, zinc salt (sulfate)

Directions for use:
Grapevine
200-300 cc/100 L From pre-bloom to pre-bunch closure. Repeat every 7-10 days

Table grapes
200-400 cc/100 L From pre-bloom to pre-bunch closure. Repeat every 7-10 days.

Pome fruits, stone fruits, and kiwifruit
200-400 cc/100 L From pre-bloom to fruit growth. Repeat every 7-10 days

Tomatoes
200-300 cc/100 L / From the beginning of flowering of the second cluster. Repeat every 7-10 days

Strawberries
200-300 cc/100 L / From flowering. Repeat every 7-10 days

Olive and citrus trees
200-300 cc/100 L / From pre-bloom to fruit enlargement. Repeat every 7-10 days

Hazelnut
200-400 cc/100 L / From flowering (female) to fruit enlargement. Repeat every 7-10 days

Watermelon and Melon
200-300 cc/100 L / From post-fruit set Repeat every 7-10 days

Zucchini
200-300 cc/100 L / From post-fruit set Repeat every 7-10 days

Leafy vegetables (spinach, lettuce, etc.)
100-200 cc/100 L / From post-transplanting. Repeat every 7-10 days.

Other vegetables and crops
200-300 cc/100 L / Depending on the specific case. Repeat every 7-10 days

Lawns and ornamental plants
100-200 cc/100 L / During the vegetative cycle. Repeat every 14 days

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. Store at temperatures between 5 °C and 30 °C. The product is stable at standard temperatures and pressures. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 4.7 ± 1 \ Specific gravity (at 20 °C) 1.19 KG/L

CONCIME INORGANICO LIQUIDO COMPOSTO A BASE DI MACROELEMENTI
MgO-SO3 5-10 with Boron (B) and Zinc (Zn)

- Hydrosoluble Magnesium Oxide (MgO) 5.0%
- Hydrosoluble Sulfur Trioxide (SO3) 10.0%
- Boron (B), ethanolamine, hydrosoluble 0.5%
- Zinc (Zn), sulfate, water-soluble 2.0%

Zinc Sulfate Heptahydrate: CAS: 7446-19-7
Magnesium Sulfate Heptahydrate: CAS:10034-99-8
Borethanolamine: CAS: 26038-87-9

MICROSAP® BIO / **POWER LEAF**

MICROSAP® BIO POWER LEAF is a formulation based on zinc and manganese which, combined with Microsap® technology, ensures healthy and balanced plant development. When applied in horticulture and fruit growing via foliar application, it stimulates the catalysis of chlorophyll formation and oxidation-reactions that directly interact with auxin and nitrogen metabolism. Enhancing these activities confers natural resistance to biotic and abiotic stresses on the treated crops.

Permitted for use in organic farming
Raw materials: manganese salt (sulfate), zinc salt (sulfate)

Directions for use:
Grapevine
Use 2 – 2.5 kg/ha, observing an interval of 7 - 10 days between applications.
Recommended for all crops: vegetables, fruit trees, and ornamental plants.

Use a minimum of 200 - 300 liters per hectare per application

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. Do not mix the product with EC formulations. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 6 ± 6.5 \ Specific gravity (at 20 °C)
1.15 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER
Manganese (Mn), Zinc (Zn)

- Manganese (Mn), sulfate, water-soluble 0.5%
- Zinc (Zn), sulfate, water-soluble 5.0%

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Manganese Sulfate: CAS 10034-96-5

MICROSAP® BIO / **S400**

MICROSAP® BIO S400 is an advanced product for a fertilization strategy that ensures healthy and balanced plant development. Microsap® BIO S400 is based on sulfur, which, in combination with the Microsap® microcrystal, stimulates the plant's natural resistance to various stresses, while simultaneously protecting the environment and human health.

Permitted for use in organic farming
Raw materials: elemental sulfur

Directions for use:
Grapevine
4 - 5 kg/ha / Use a minimum of 400 - 600 L water per hectare per application

Fruit Trees
3 - 5 kg/ha / Use a minimum of 600 - 1000 L water per hectare per application

Table grapes
4-5 kg/ha / Use a minimum of 400 - 600 L water per hectare per application

Vegetable crops
2-3 kg/ha / Use a minimum of 400 -600 L water per hectare per application

Pour the product into the sprayer tank and reach the required volume with water. Spread on the soil surface and mix into the top layer.

SHAKE WELL BEFORE USE
USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. Not for individual sale. The product is stable at standard temperatures and pressures. Store at a temperature between 5 °C e 30 °C. Do not mix the product with EC formulations. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 7.30 ± 0.5 \ Specific gravity (at 20 °C)
1.32 KG/L

AMMENDANTE INORGANICO S40
Dry matter on mass: 95%

The product contains 40% elemental sulfur.

Sulfur: CAS 7704-34-9

MICROSAP® BIO / **RESOLV**

MICROSAP® BIO RESOLV is an advanced product for a fertilization strategy that ensures healthy and balanced plant development. It is based on Copper sulfate and Zinc sulfate. The elements it contains are absorbed by the trunk and green organs, reaching up to the conductive tissues and reinforcing plant defenses. The product reinvigorates damaged tissues and enriches the plant with nutritious substances. Microsap® BIO Resolv, once in the soil, serves as a source of mineral salts for the plant.

Permitted for use in organic farming
Raw materials: copper oxychloride, zinc salts (sulfate).

Pour the product into the sprayer tank and reach the required volume with water

Directions for use:
Olive Tree
3-4 kg/ha - normal volume of water
First application: February/March.
Second application: July.
Third application: End of August.
Fourth application: Post-harvest, November.

Citrus
3.5 - 5 kg/ha - standard volume of water
First application: End of pruning, March/April.
Second application: July.
Third application: End of August.
Fourth application: Post-harvest, November.

Fruit Trees
3 - 4 kg/ha - standard volume of water
First application: Post-pruning, March.
Second application: May.
Third application: June.
Fourth application: Post-harvest.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need.
Do not exceed the recommended dosage.
The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4.50 ± 0.5 \ Specific gravity (at 20 °C) 1.22 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER

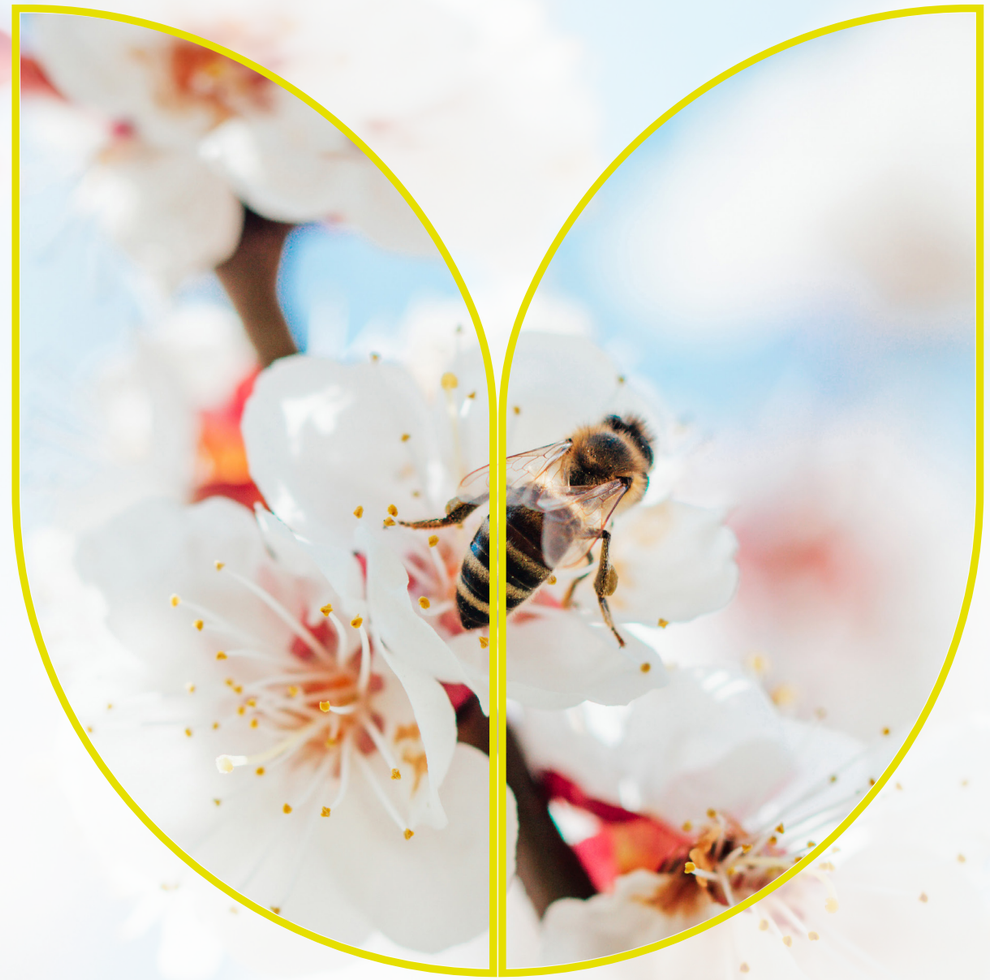
Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 3.0%
- Zinc (Zn), sulfate, water-soluble 4.0%

Copper trihydroxychloride: CAS 1332-65-6
Zinc sulfate heptahydrate: CAS 7446-19-7

PRODUCTS

Generics



ECO-SUSTAINABILITY

The strength of our protection is natural, because progressing while respecting the environment is possible and is our goal.

MICROSAP® / **CALANTIOSS**

CALANTIOSS is a corrector that enhances the effectiveness of the substances in the formulations it is combined with. Calantioss is designed to deliver the active ingredients of the formulations to the plant.

Authorized for use in organic farming

Directions for use:
Shake well before mixing. 250ML of CALANTIOSS for 5 Kg of product

The specified composition and the quality of the products used provide sufficient information to consumers in accordance with Article 76 of Legislative Decree of September 6, 2005, number 206 (G.U. No. 235 of 10/08/2005) and subsequent amendments and additions.
EUH210

WARNING
Store in a cool place at a temperature between 5 and 32 °C.
The recommendations and information are the result of practical experience.
Contiene Carvacrol: May cause an allergic reaction. Safety data sheet available upon request.

REMARKS
The raw materials used are listed in the annexes of Regulation (EU) 2021/1165 regarding organic production. However, before using them in conjunction with other technical means permitted in organic farming, it is advisable to consult your certification body for approval.

CHEMICAL-PHYSICAL PROPERTIES

- Calcium Phosphate 6.4% (w/w)

Solution corrector to enhance the formulation of active substances.
Suspension of calcium phosphate enriched with antioxidants.

250 ml

MICROSAP® / **GHAR-VIT**

GHAR - VIT is an activator that enhances the effectiveness of the Microsap® line and increases the translocation of microelements and soluble solids, boosting their resistance to climatic stress.

Authorized for use in organic farming

Directions for use:
Shake well before mixing. 250ML of GHAR-VIT per 5 Kg of product

The specified composition and the quality of the products used provide sufficient information to consumers in accordance with Article 76 of Legislative Decree of September 6, 2005, number 206 (G.U. No. 235 of 10/08/2005) and subsequent amendments and additions.
EUH210

WARNING
Store in a cool place at a temperature between 5 and 32 °C.
The recommendations and information are the result of practical experience.
Contains Carvacrol: May cause an allergic reaction. Safety data sheet available upon request.

REMARKS
The raw materials used are listed in the annexes of Regulation (EU) 2021/1165 regarding organic production. However, before using them in conjunction with other technical means permitted in organic farming, it is advisable to consult your certification body for approval.

CHEMICAL-PHYSICAL PROPERTIES

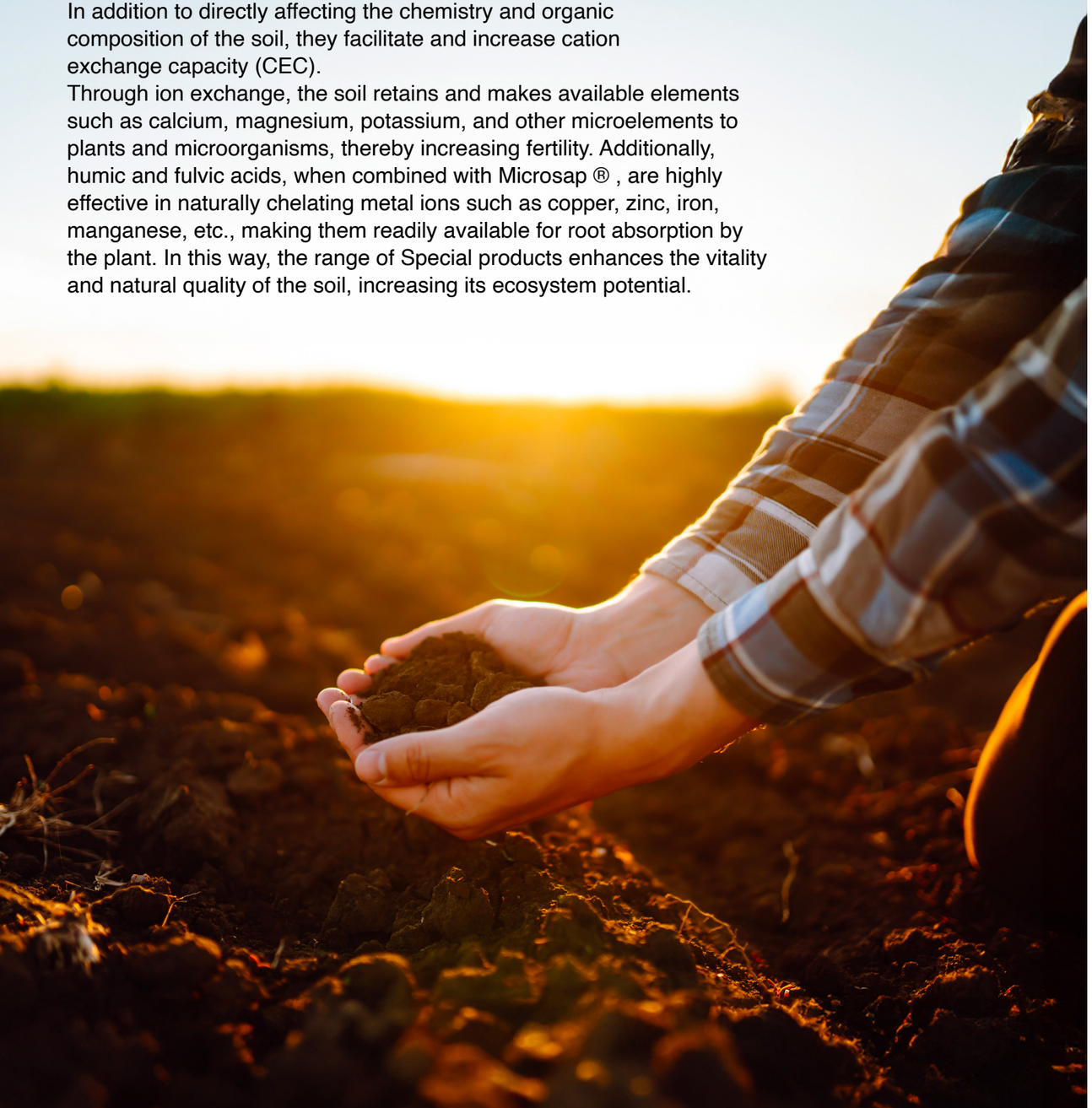
- Calcium Phosphate 6.4% (w/w)

Solution activator to enhance the formulation of active substances.
Suspension of calcium phosphate enriched with antioxidants.

250 ml

WE ADD VALUE TO OUR LAND

Humic and fulvic acids help maintain and preserve the biological balance of the rhizosphere.
In addition to directly affecting the chemistry and organic composition of the soil, they facilitate and increase cation exchange capacity (CEC).
Through ion exchange, the soil retains and makes available elements such as calcium, magnesium, potassium, and other microelements to plants and microorganisms, thereby increasing fertility. Additionally, humic and fulvic acids, when combined with Microsap ® , are highly effective in naturally chelating metal ions such as copper, zinc, iron, manganese, etc., making them readily available for root absorption by the plant. In this way, the range of Special products enhances the vitality and natural quality of the soil, increasing its ecosystem potential.



PRODUCTS

Special Fertilizers

RESEARCH

We invest in research because it brightens up the paths of knowledge and reveals a future of infinite discoveries.

MICROSAP® / BIO TOP

Microsap® BIO TOP is a microelements-based liquid fertilizer specifically designed to be easily assimilated and translocated within the plant. Microsap® BIO TOP helps plants to quickly overcome stress caused by nutritional imbalance.

Permitted for use in organic farming
Raw materials: manganese chelate (EDTA), zinc chelate (EDTA)

Directions for use:
Grapevine
3-5 KG/HA / Apply from the appearance of the inflorescences until veraison, with an application every 15-21 days

Fruit trees
4-8 KG/HA: Apply from the appearance of the inflorescences until pre-harvest, with an application every 15-21 days

Table grapes
3-5 KG/HA: Apply from the first appearance of inflorescences until veraison, with an application every 15-21 days

Vegetable crops
1-3 KG/HA: Apply from the transplanting phase until pre-harvest, with an application every 7-15 days

Use a minimum of 250 L water/hectare per application. Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage.
Store the product at temperatures between 4 and 36 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 7.00 ± 0.5 \ Specific gravity (at 20 °C) 1.05 KG/L

FLUID MICROELEMENTS MIXTURE
Manganese (Mn) EDTA, Zinc (Zn) EDTA

• Water-soluble Manganese (Mn)	1,0%
• Manganese (Mn) chelated with EDTA	1,0%
• Water-soluble Zinc (Zn)	1,0%
• Zinc (Zn) chelated with EDTA	1,0%

pH interval that ensures good stability of the EDTA chelated fraction: 4- 9

MICROSAP® / BIO HUMITER

MICROSAP® BIO HUMITER is an organic fertilizer with a high carbon content designed to provide biological stability to the soil. Thanks to its composition, Microsap® BIO HUMITER improves the organic substrate by assisting microflora in the humification process of the soil.

Permitted for use in organic farming
Raw materials: humic extracts without added phenolic substances and extracts with inorganic non-ammoniacal salts.

Directions for Use: Dosage kg/ha
Vineyards 50-100 Autumn – Spring.
At planting 10-20 3/5 applications per season

Fruit Trees 50-100 Autumn – Spring -
At planting 10-20 3/5 applications per season

Vegetables 3-100 Pre-planting/sowing
Field Greenhouse 20-30 Every 15 days

Grain crops 20-80 100-150 Fine winter cover / Winter wheat Rice, maize Pre-sowing

Potato 50-100 Pre-sowing

Beet 50-100 Pre-sowing

Pastures 100-200 Spring/Autumn

Preparation of compost and activation of substrates 3-5 Kg/m³

SHAKE WELL BEFORE USE
Before mixing the product, verify its solubility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need.
Do not exceed the recommended dosage.
Store the product at temperatures between 4 °C and 36 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 5 ± 6 \ Specific gravity (at 20 °C) 1100 KG/L

SPECIFIC ACTION PRODUCT
Soluble humates from leonardite (fluid product)

• Soluble organic carbon (C) in water	12,0%
• Humified organic carbon (C)	11,5%
• Organic nitrogen (N) on dry matter	0,82%

Extraction agent: KHO

MICROSAP® / BIO ALGESKHA MG

MICROSAP® BIO ALGESKHA MG, is a highly performing product featuring magnesium and microelements that, in combination with the Microsap® microcrystal, effectively complexes and transports nutrients. Magnesium is a primary constituent of the pyrrolic ring in the porphyrin nucleus of chlorophyll, as well as a coenzyme involved in various biochemical mechanisms for plant growth and development activities. When combined with iron and zinc, it enhances photosynthetic efficiency and nutrient translocation.

Allowed in organic farming
Raw materials: Magnesium sulfate of only natural origin. Boro ethanolamine, manganese sulfate, zinc sulfate.

Directions for use:

Pome fruits
300-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Stone Fruits
200-300 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Kiwifruit
200-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Tomatoes
200-300 cc/100L, starting from the beginning of flowering of the second cluster.
Repeat every 7-10 days

Strawberries
200-300 cc/100L, starting from flowering.
Repeat every 7-10 days

Grapevine
5 kg/ha per application, starting from phenological phase 9-10 (leaf expansion), repeating the application every 7-10 days until veraison.

Table grapes
6 kg/ha per application, starting from phenological phase 9-10 (expanded leaf), repeating the application every 7-10 days until veraison

Olive and citrus trees
200-300 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Hazelnut
200-400 cc/100L, from flowering (female) to fruit enlargement. Repeat every 7-10 days

Olive and citrus trees
200-300 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Watermelon and melon
200-300 cc/100L, from post-fruit set and veraison. Repeat every 7-10 days

Zucchini
100-150 cc/100L, after each harvest.
Repeat every 7-10 days

Leafy vegetables
100-200 cc/100L, after transplanting.
For fertigation: 12-15 Kg/Ha.
Repeat every 7-10 days

Other vegetables
200-300 cc/100L, depending on the specific case. For fertigation: 12-15 Kg/Ha.
Repeat every 7-10 days

For other crops
200-400 cc/100L
Depending on the specific case.
Repeat every 7-10 days.

For lawns and ornamental plants
100-200 cc/100L during the vegetative cycle. Repeat every 14 days

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

To be used only in case of need.
Do not exceed the recommended dosage.
USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

The dosages should always be determined taking into consideration the nutritional status of the soil and agronomic practices used. The product is stable at standard temperatures and pressures. Store in a well-closed container. Do not mix the product with EC formulations. Store the product at temperatures between 4 and 30 °C.
In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 6.5 \ Specific gravity (at 20°C) 1270 g/l

FLUID MICROELEMENTS MIXTURE

Boron (B) ethanolamine, Manganese (Mn) sulfate, Zinc (Zn) sulfate containing Magnesium (Mg)

- Water-soluble magnesium oxide (MgO) 5,0%
- Boron (B) ethanolamine, water-soluble 1,0%
- Manganese (Mn) sulfate, water-soluble 1,5%
- Zinc (Zn) sulfate, water-soluble 1,0%

Manganese Sulfate Monohydrate: CAS 10034-96-5
Zinc Sulfate Heptahydrate: CAS 7446-19-7

MICROSAP® / BIO ALGESKHA CA

MICROSAP® BIO ALESKHA CA, is a highly effective product composed of Iron and Zinc which, in combination with the Microsap® microcrystal, efficiently complexes and transports its nutritional elements. Calcium is a meso element and a primary constituent of the cell wall and membrane. Calcium deficiency can negatively impact cell division and weaken the structural stability and permeability of the cell wall.

Allowed in organic farming (*)
Raw materials: Calcium chloride, iron chelate (o,o) (EDDHA), zinc salt (sulfate)

Directions for use:
Apple tree (*)
200-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Cherry tree
200-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Kiwifruit
200-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Tomatoes
200-400 cc/100L, starting from the beginning of flowering of the second cluster. Repeat every 7-10 days

Strawberries
200-400 cc/100L, starting from flowering. Repeat every 7-10 days

Grapevine
5 kg/ha per application, starting from phenological phase 9-10 (leaf expansion), repeating the application every 7-10 days until veraison.

Olive and citrus trees
200-400 cc/100L, from pre-flowering to fruit development. Repeat every 7-10 days

Hazelnut
200-400 cc/100L, from flowering (female) to fruit enlargement. Repeat every 7-10 days

Watermelon and melon
200-400 cc/100L, from post-fruit set and veraison. Repeat every 7-10 days

Zucchini
150-300 cc/100L
After each harvest. Repeat every 7-10 days

Leafy vegetables
100-300 cc/100L After transplanting.
In fertigation. 12-15 Kg/Ha.
Repeat every 7-10 days.

Lawns and ornamental plants
100-200 cc/100L during the vegetative cycle. Repeat every 14 days.

Table grapes
6 kg/ha per application, starting from phenological phase 9-10 (expanded leaf), repeating the application every 7-10 days until veraison.

Other vegetables
200-300 cc/100L, depending on the specific case. For fertigation: 12-15 Kg/Ha. Repeat every 7-10 days.

(*) Only for foliar treatment and after calcium deficiency has been identified.

Pour the product into the sprayer tank and reach the required volume with water

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

Dosages should always be established considering the nutritional status of the soil and the agronomic practices in use. The product is stable at standard temperatures and pressures. Store in a well-closed container. Do not mix the product with EC formulations. Store the product at temperatures between 4 and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 5.8 \ Specific gravity (at 20°C) 1160 g/l

FLUID MICROELEMENTS MIXTURE

Iron (Fe) [o,o] EDDHA, Zinc (Zn) sulfate containing Calcium (CaO)

• Calcium Oxide (CaO) water soluble	7.0%
• Iron (Fe) water soluble	0.5%
• Iron (Fe) chelated with [o,o] EDDHA	0.5%
• Zinc (Zn) sulfate water soluble	1.5%

pH range with EDDHA: 4-11
Calcium Chloride dihydrate: CAS 10035-04-8
Zinc Sulfate Heptahydrate: CAS 7446-19-4

MICROSAP® / BIO K BILL

MICROSAP® BIO K BILL is a microelements-based liquid fertilizer specifically designed to be easily assimilated and translocated within the plant. Microsap® BIO K BILL helps plants quickly overcome stress induced by nutritional imbalances.

Permitted for use in organic farming
Raw materials: manganese chelate (EDTA), zinc chelate (EDTA)

Directions for use:
Grapevine
3 - 5 KG/HA / Apply from the appearance of inflorescences until veraison, with an application every 15-21 days

Fruit trees
4 - 8 KG/HA / Apply from the appearance of inflorescences until pre-harvest phase, with an application every 15-21 days

Table grapes
3 – 5 KG/HA: Apply from the first appearance of inflorescences until veraison, with an application every 15-21 days

Vegetable crops
1 – 3 KG/HA / Apply from transplanting phase until pre-harvest phase, with an application every 7-15 days

Use a minimum of 250 L water/hectare per application. Pour the product into the sprayer tank and reach the required volume with water

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. Store the product at temperatures between 4 °C and 36 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 7.00 ± 0.5 \ Specific gravity (at 20 °C) 1.05 KG/L

FLUID MICROELEMENTS MIXTURE

Manganese (Mn) EDTA, Zinc (Zn) EDTA

- Water-soluble Manganese (Mn) 1,0%
- Manganese (Mn) chelated with 1,0%
- Water-soluble Zinc (Zn) 1,0%
- Zinc (Zn) chelated with EDTA 1,0%

A Ph interval that ensures good stability of the fraction chelated with EDTA: 4- 9

FERTILIZERS

SQNPI Fertilizers

DEVELOPMENT

We are constantly evolving. Every day, we have the opportunity to grow and improve ourselves.

MICROSAP® / 458

MICROSAP® 458 is an advanced product designed for a fertilization strategy that ensures healthy and balanced plant development. Microsap® 458 is composed of microelements which, combined with the activated microcrystal Microsap® enriched with carbon-rich humic substances, help

Directions for use:
Grapevine
1.5 kg/ha / Use a minimum of 400 - 600 L water per hectare per application. Maintain an interval of 7-10 days between applications

Fruit trees
2.5 kg/ha / Use a minimum of 600 - 1000 L water per hectare per application. Maintain an interval of 7-10 days between applications

Table grapes
1.5 kg/ha / Use a minimum of 400 - 600 L water per hectare per application. Maintain an interval of 7-10 days between applications

Colture Orticole
2 - 3 kg/ha / Use a minimum of 400 - 600 L water per hectare per application. Maintain an interval of

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4.3 ± 0.5 \ Specific gravity (at 20 °C) 1.12 KG/L

FLUID MICROELEMENTS MIXTURE

Copper (Cu), oxychloride, sulfate, Zinc (Zn), sulfate, with activator

- Copper (Cu), oxychloride, sulfate,total 3,5%
- Zinc (Zn), water-soluble sulfate 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper Sulfate Pentahydrate: CAS 7758-99-8
Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper Hydroxychloride: CAS 1332-65-6

MICROSAP® / Cu

MICROSAP® Cu is a microelements-based liquid fertilizer specifically designed to be easily assimilated and translocated within the plant. MICROSAP® Cu helps plants quickly overcome stresses induced by nutritional imbalance or unfavorable environmental conditions and helps developing natural resistance against major cryptogams.

Directions for Use:
Grapevine
3 - 5 kg/ha / Use a minimum of 400-600 L water per hectare per application. Maintain an interval of 7-10 days between applications

Fruit trees
4 - 5 kg/ha / Use a minimum of 600-1000 L water per hectare per application. Maintain an interval of 7-10 days between applications

Vegetable crops
2 - 3 kg/ha / Use a minimum of 400 - 600 L water per hectare per application. Maintain an interval of 7-10 days between applications

Table grapes
3 - 5 kg/ha / Use a minimum of 400 - 600 L water per hectare per application. Maintain an interval of 7 - 10 days between applications

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30°C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4 ± 0.5 \ Specific gravity (at 20°C) 1.25 KG/L

FLUID MICROELEMENTS MIXTURE

Copper (Cu), hydroxide-chloro-sulfate, and Zinc (Zn) sulfate with activator

- Copper (Cu) 5,0%
- Water-soluble Copper (Cu) 2,5%
- Water-soluble Zinc (Zn) 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper Sulfate Pentahydrate: CAS 7758-99-8
Zinc Sulfate Heptahydrate: CAS 7446-19-7
Copper Trihydroxychloride: CAS 1332-65-6

MICROSAP® / ALGESKHA MG

MICROSAP® ALGESKHA MG is a highly effective product featuring Calcium and Magnesium, which in combination with the Microsap® microcrystal, effectively complexes and transports its nutritional elements. Calcium is a meso element and a primary constituent of the cell wall and membrane. Calcium deficiency can negatively impact cell division, weaken structural stability, and reduce cell wall permeability. Magnesium promotes greater translocation of Calcium.

Directions for Use:
Pome Fruit, Stone Fruit, Kiwifruit:
200-400 cc/100 L / From pre-flowering to fruit development – Repeat every 7-10 days

Apple/Cherry Tree
200-300 cc/100 L / From pre-flowering to fruit development – Repeat every 7-10 days

Tomato
200-300 cc/100 L / From the beginning of flowering on the second cluster
Repeat every 7-10 days

Strawberries
200-300 cc/100 L / From flowering
Repeat every 7-10 days

Olive and citrus trees
200-300 cc/100 L / From pre-flowering to fruit enlargement - Repeat every 7-10 days

Hazelnut
200-400 cc/100 L / From female flowering to fruit enlargement - Repeat every 7-10 days

Watermelon and melon
200-300 cc/100 L / From post-fruit set to veraison - Repeat every 7-10 days

Zucchini
100-150 cc/100 L / After each harvest
Repeat every 7-10 days

Leafy Vegetables (Spinach, Lettuce, etc.)
100-200 cc/100 L / From post-transplanting In fertigation: 12-15 kg/ha / Repeat every 7-10 days

Other vegetables/other crops
200-300 cc/100 L / Depending on the case / Repeat every 7-10 days

Lawns and ornamental plants
100-200 cc/100 L / During the vegetative cycle / Repeat every 14 days

Grapevine
5 kg/ha per application, starting from phenological phase 9-10 (expanded leaf) and repeating every 10-12 days until veraison

Table grapes
6 kg/ha per application, starting from phenological phase 9-10 (expanded leaf), repeating the application every 7-10 days until veraison.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

Dosages should always be established considering the nutritional status of the soil and the agronomic practices in use. Store in a well-closed container. Do not mix the product with EC formulations. Store the product at temperatures between 4 and 35 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 5,8 \ Specific gravity (at 20°) 1360 KG/L

MICROELEMENTS-BASED INORGANIC COMPOUND FERTILIZER

CaO-MgO 12-4.5 In suspension

- Soluble Calcium Oxide (CaO) 12.0%
- Soluble Magnesium Oxide (MgO) 4.5%

Calcium Chloride: CAS 10043-52-4

MICROSAP® / ES

MICROSAP® ES is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. Microsap® ES is a microelements-based product activated with carbon-rich humic substances and Microsap®, which are absorbed by the trunk and help the plant overcome a variety of stresses. Microsap® ES once in the soil represents a source of vital mineral salts for the plant.

Directions for use/seasonal dose per hectare/year

Grapevine
10 KG (see protocol)

Table grapes
15 KG (see protocol)

Winter applications minimum 250 L water/hectare.
Summer applications greater than 300 liters of water per hectare

Pour the product into the sprayer tank and reach the required volume with water. Start the applications at the falling of leaves and repeat throughout plant development. For an optimal result, 5 annual applications are recommended.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Do not mix the product with foliar fertilizers not belonging to the Microsap® ES Line and with EC formulated products. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4 ± 0.5 \ Specific gravity (at 20°) 1.17KG/L

FLUID MICROELEMENTS MIXTURE

Copper (Cu), oxychloride, sulfate, Zinc (Zn), sulfate, with activator

Copper (Cu), oxychloride, sulfate, total	3,5%
Water-soluble Zinc (Zn), sulfate	1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper sulfate pentahydrate: CAS 7758-99-8
Zinc sulfate heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® / FI

MICROSAP® FI is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. It is a microelements-based product activated with carbon-rich humic substances and Microsap® that are absorbed through the trunk, helping the plant overcome a variety of stresses. The product reinvigorates damaged tissues and enriches the plant with nutritious vegetable substances. Microsap® FI once in the soil represents a source of vital mineral salts for the plant.

Directions for use:
Grapevine
10 kg/ha/Anno (see Protocol)

Use a minimum of 300 L water per hectare per application

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Do not mix the product with foliar fertilizers not belonging to the Microsap® Line and with EC formulated products. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4.5 ± 0.5 / Specific gravity (at 20°C) 1.22 KG/L

FLUID MICROELEMENTS MIXTURE

Copper (Cu), oxychloride, sulfate, Zinc (Zn), sulfate, with activator

- Copper (Cu), oxychloride, sulfate, total 3,5%
- Zinc (Zn) sulfate water soluble 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper sulfate pentahydrate: CAS 7758-99-8
Zinc sulfate heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

MICROSAP® / MICROCEREAL

Microsap® MICROCEREAL is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. It is a product based on Copper sulfate and Zinc sulfate activated with carbon-rich humic substances that are absorbed by the young organs of the plant and help it overcome a variety of stresses. The product reinvigorates damaged tissues and enriches the plant with nutritious substances. Once in the soil represents a source of vital mineral salts for the plant.

Crops
Fall-Winter grains

Directions for use:
Two applications (for medium needs)
BBCH 37-39 (last leafing phase)
BBCH 61-63 (beginning of flowering phase)
Use 4 kg/ha - use at least
300/400 liters of water

Directions for use:
Three applications (for severe deficiency)
BBCH 30-32 (stem elongation phase)
BBCH 37-39 (final leafing phase)
BBCH 61-63 (beginning of flowering stage)
Use 4 kg/ha - use at least
300/400 liters of water

It is recommended to water generously during applications

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30°C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 4.00 ± 0.5 / Specific gravity (at 20°C)
1.25 KG/L

FLUID MICROELEMENTS MIXTURE
Copper (Cu), oxychloride, sulfate and Zinc (Zn), sulfate with activator

- Copper (Cu), oxychloride, sulfate, total 7,0%
- Zinc (Zn), sulfate, water-soluble 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper Sulfate Pentahydrate: CAS: 7758-99-8
Zinc Sulfate Heptahydrate: CAS: 7446-19-7
Copper Trihydroxychloride: CAS: 1332-65-6

MICROSAP® / POWER LEAF

Microsap® POWER LEAF is a formulation based on zinc and manganese which, in combination with Microsap® technology, ensures healthy and balanced plant development. When applied in horticulture and fruit growing via foliar application, itstimulates the catalysis of chlorophyll formation and oxidation-reactions that directly interact with auxin and nitrogen metabolism. Enhancing these activities ensures natural resistance to biotic and abiotic stresses on the treated crops.

Directions for use:
Grapevine
2 - 3 kg/ha / Use a minimum of 400 - 600 liters of water per hectare per application
Maintain an interval of 7-10 days between applications

Arboreal crops
2 - 2.5 kg/ha / Use a minimum of 600 - 1000 liters of water per hectare per application
Maintain an interval of 7-10 days between applications

Orticole e floreali
2 - 2.5 kg/ha / Use a minimum of 400 - 600 litres of water per hectare per application
Maintain an interval of 7-10 days between applications

Pour the product into the sprayer tank and reach the required volume with water.

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
Store at a temperature ranging between 5°C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES
pH 6 ± 6.5 \ Specific gravity (at 20 °C)
1.150 KG/L

FLUID MICROELEMENTS MIXTURE
Manganese (Mn) and Zinc (Zn) with activator

- Water soluble manganese (Mn) 0,5%
- Water soluble Zinc (Zn) 5,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Zinc Sulfate Heptahydrate: CAS 7446-19-7
Manganese Sulfate: CAS 10034-96-5

MICROSAP® / RESOLV

MICROSAP® RESOLV is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. It is a product based on copper sulfate and zinc sulfate activated with humic substances rich in carbon that are absorbed by the trunk and help the plant overcome a variety of stresses. The product reinvigorates damaged tissues and enriches the plant with nutritious substances. Microsap® RESOLV once in the soil represents a source of vital mineral salts for the plant.

Directions for use:
Olive Tree
3 - 4 kg/ha - standard water volume
First application: February/March.
Second application, in July.
Third application, at the end of August.
Fourth application post-harvest/November.

Citrus
3.5 - 5 kg/ha - standard water volume.
First application after pruning: March/April.
Second application in June/July.
Third application, at the end of August.
Fourth application post-harvest/November

Fruit trees
3 - 4 kg/ha - standard water volume
First application, post-pruning, in March.
Second application in May.
Third application in June.
Fourth application post-harvest.

Pour the product into the sprayer tank and reach the required volume with water. Do not mix with foliar fertilizers unless previously tested.

SHAKE WELL BEFORE USE

Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS

To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CHEMICAL-PHYSICAL PROPERTIES

pH 4 ± 0.5 \ Specific gravity (at 20 °C)
1.25 KG/L

FLUID MICROELEMENTS MIXTURE

Copper (Cu), oxychloride, sulfate and Zinc (Zn), sulfate with activator

- Copper (Cu), oxychloride, sulfate, total 7,0%
- Znc (Zn), sulfate, water-soluble 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper sulfate pentahydrate: CAS 7758-99-8
Zinc sulfate heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

PRODUCTS

Rooting Agents Section

INNOVATION

Progress is learning from the past to revolutionize the present and shape the future.

MICROSAP® / **RADIMICRO**

MICROSAP® RADIMICRO is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. Microsap® RADIMICRO is a product based on copper and zinc that, thanks to its combined action with the Microsap® microcrystal activated with humic substances rich in carbon, helps plants overcome periods of stress.

Directions for use
The product should be applied via root irrigation. Use a sufficient amount of water for proper distribution

Pour the product into the sprayer tank and reach the required volume with water.

Dosage for fertigation
1.5 - 2 kg per 1000 linear meters (ml)
Repeat every 7-10 days
Vegetable crops
- Strawberries
- Tomatoes
- Watermelon and melon
- Zucchini
- Leafy vegetables (lettuce, spinach, etc.)
- Other vegetables
- For other crops
- Lawns and ornamental plants

(repeat every 14 days)

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. Not for individual sale. Store at temperatures between 5 °C and 30 ° C. The product is stable at standard temperatures and pressures. In case of spillage, collect with sawdust and/or sand.

FLUID MICROELEMENTS MIXTURE
Copper (Cu), oxychloride, sulfate and Zinc (Zn), sulfate with activator

- Copper (Cu), oxychloride, sulfate, total 7,0%
- Zinc (Zn), sulfate, water-soluble 1,0%

Activated with 0.1% humic extracts from leonardite. Extracting agent KOH.

Copper sulfate pentahydrate: CAS 7758-99-8
Zinc sulfate heptahydrate: CAS 7446-19-7
Copper trihydroxychloride: CAS 1332-65-6

CHEMICAL-PHYSICAL PROPERTIES
pH 4 ± 0.5 \ Specific gravity (at 20 °C) 1.25 KG/L

MICROSAP® / **BIO RADIMICRO**

MICROSAP® BIO RADIMICRO is a cutting-edge product for a fertilization strategy that ensures healthy and balanced plant growth. Microsap® BIO RADIMICRO is a product based on copper and zinc that, thanks to its combined action with Microsap® microcrystal, helps plants overcome stress phases.

Permitted for use in organic farming
Raw materials: copper oxychloride, zinc salt (sulfate)

Directions for use
The product should be applied via root irrigation. Use a sufficient amount of water for proper distribution

Dosage for fertigation
1.5 - 2 kg per 1000 linear meters (ml)
Repeat every 7-10 days
Vegetable crops
- Strawberries
- Tomatoes
- Watermelon and melon
- Zucchini
- Leafy vegetables (lettuce, spinach, etc.)
- Other vegetables
- For other crops
- Lawns and ornamental plants

(repeat every 14 days)

SHAKE WELL BEFORE USE
Before mixing the product, verify its miscibility. USE A SOLUTION WITH A pH ranging from 5.8 to 6.5.

REMARKS
To be used only in case of need. Do not exceed the recommended dosage. The product is stable at standard temperatures and pressures. Store at a temperature ranging between 5 °C and 30 °C. In case of spillage, collect with sawdust and/or sand.

CONCIME INORGANICO COMPOSTO A BASE DI MICROELEMENTI
Copper (Cu), Zinc (Zn), in suspension

- Total Copper (Cu), oxychloride 3,0%
- Zinc (Zn), sulfate, water-soluble 4,0%

Copper Trihydroxychloride: CAS 1332-65-6
Zinc sulfate heptahydrate: CAS 7446-19-7

CHEMICAL-PHYSICAL PROPERTIES
pH 4 ± 0.5 \ Specific gravity (at 20 °C) 1.25 KG/L

A TEAM DEDICATED TO SAFEGUARDING NATURE.

Natural Development Group

Technical Guidelines

ACTINIDIA \ Organic Protocol

	Post-Harvest	Beginning of Leaf Fall	Post-Pruning	Bud break BBCH-00	Flowering BBCH 53-60	Fruit set BBCH 67-69	Veraison BBCH 73-79
Microsap® Bio Resolv *Calantioss*	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha
Microsap® Bio Fe	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha
Microsap® Bio Power Leaf *Calantioss*	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha
Microsap® Bio Microel B Sap	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Repeat every 10 days after sprouting until flowering.
- It is recommended to apply the treatment with at least 800 - 1000 liters of water per hectare.
- Observe an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

ACTINIDIA \ SQNPI Protocol

	Post-Harvest	Beginning of Leaf Fall	Post-Pruning	Bud break BBCH-00	Flowering BBCH 53-60	Fruit set BBCH 67-69	Veraison BBCH 73-79
Microsap® Resolv	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha	3k g/ha
Microsap® Bio Fe	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha	1k g/ha
Microsap® Power Leaf	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha
Microsap® Bio Microel B Sap	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha	2k g/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Repeat every 10 days after sprouting until flowering.
- It is recommended to apply the treatment with at least 800 - 1000 liters of water per hectare.
- Maintain an interval of 7–10 days between applications.

CITRUS \ Organic Protocol

	Post-Pruning	Pre-Flowering March/April	Post-Fruit Set	Summer Period July/August	Post-Harvest November/ December
Microsap® Bio Cu	4 kg/ha	4 kg/ha	4 kg/ha	4 kg/ha	4 kg/ha
Microsap® Bio Power Leaf *Calantioss*	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha
Microsap® Bio Microel B Sap	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Never use less than 600 liters of water per hectare.
- During the post-pruning phase, it is advisable to thoroughly wet even the woody parts.
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

STONE FRUITS \ Organic Protocol

	Dormancy BBCH 00	Bud swelling BBCH 01	Petal fall BBCH 69	Fruit development BBCH 79
Microsap® Bio Cu	4 - 5 kg/ha			3 kg/ha
Microsap® Bio 458 *Calantioss*			1,5 kg/ha	1,5 kg/ha
Microsap® Bio Fe				1 kg/ha
Microsap® Bio Microel B Sap		1 kg/ha		
Microsap® Bio Power Leaf *Calantioss*		1,5 - 2 kg/ha	1,5 - 2 kg/ha	1,5 - 2 kg/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Repeat every 10 days after sprouting until flowering.
- It is recommended to apply the treatment with at least 600 liters of water per hectare.
- Observe an interval of 7–10 days between applications.
- Attention: - Add the Calantioss Corrector to the sprayer before the products.

HAZELNUT \ Organic Protocol

	Winter buds	Bud burst	Third leaf bud break	Bud development stage II	Post Harvest
Microsap® Bio Resolv *Calantioss*	2 kg/ha	3 kg/ha		3 kg/ha	3 kg/ha
Microsap® Bio Power Leaf *Calantioss*	1 kg/ha	1 kg/ha	2 kg/ha	2 kg/ha	1 kg/ha
Microsap® Bio 458 *Calantioss*		2 kg/ha		1 kg/ha	1 kg/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Never use less than 1000 liters of water per hectare.
- Observe an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

LEGUMES \ Organic Protocol

	Application Timing	Product	Dosage
1	15-20 days after sowing or transplanting / pre-flowering	Microsap® Bio Cu	300 gr/ Hl of water
		Microsap® Bio Microel B Sap	150-200 gr/ Hl of water
2	Post flowering / post fruit set	Microsap® Bio Cu	300 gr/ Hl of water
		Microsap® Bio 458	150-200 gr/ Hl of water
3	Fruit/Pod Enlargement and Development	Microsap® Bio Cu	300 gr/ Hl of water
		Microsap® Bio 458	150-200 gr/ Hl of water
		Microsap® Bio Power Leaf	150-200 gr/ Hl of water

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Observe an interval of 7–10 days between applications.
- We recommend 3 treatments, all through foliar sprays.

STRAWBERRIES \ Organic Protocol

	Application timing	Dosage	Leaf dosage	Application frequency
Microsap® Bio Cu	After transplanting	1 kg Per 1000 linear meters	3 kg/ha	Repeat every 6-8 days
Microsap® Bio Microel B Sap	Pre-Flowering to Flowering		1,5 kg/ha	Repeat every 6-8 days
Microsap® Bio Fe	Post-Fruit Set	1,5 kg Per 1000 linear meters	1 kg/ha	It is recommended to carry out 2-3 treatments with an interval of 6-8 days between applications in cases of severe iron chlorosis
Microsap® Bio 458 *Calantioss*	From post-fruit set to ripening		1,5 kg/ha	Repeat every 6-8 days. Use a minimum of 400-600 liters of water per hectare
Microsap® Bio Power Leaf *Calantioss*	From post-fruit set to ripening		1,5 kg/ha	Repeat every 6-8 days. Use a minimum of 400-600 liters of water per hectare
Microsap® Bio S400	Pre-Flowering		2 kg/ha	Repeat every 6-8 days

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

POME FRUIT \ Organic Protocol

	BBCH 1 Bud swelling	BBCH 60 Flowering onset	BBCH 65 Full flowering	BBCH 72 Fruit set	BBCH 75 Fruit enlargement	Post-Harvest	BBCH 93 Beginning of Leaf Fall
Microsap® Bio Fe	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha
Microsap® Bio Resolv *Calantioss*	3 kg/ha	3 kg/ha	3 kg/ha	4 kg/ha	4 kg/ha	3 kg/ha	3 kg/ha
Microsap® Bio Microel B Sap	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha
Microsap® Bio Power Leaf *Calantioss*		2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha
Microsap® Bio S400					3/5 kg/ha		

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Use between 800 and 1100 liters per hectare.
- Maintain an interval of 7–10 days between applications.

POME FRUIT \ SQNPI Protocol

	BBCH 1 Bud swelling	BBCH 60 Flowering onset	BBCH 65 Full flowering	BBCH 72 Fruit set	BBCH 75 Fruit enlargement	Post-Harvest	BBCH 93 Beginning of Leaf Fall
Microsap® Bio Fe	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha
Microsap® Bio Resolv	3 kg/ha	3 kg/ha	3 kg/ha	4 kg/ha	4 kg/ha	3 kg/ha	3 kg/ha
Microsap® Bio Microel B Sap	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha
Microsap® Bio Power Leaf		2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha	2 kg/ha
Microsap® Bio S400					3/5 kg/ha		

OLIVE TREES \ Organic Protocol

	Post-Pruning	Pre-Flowering	Flowering	Fruit grouth	Post-Harvest
Microsap® Bio Resolv *Calantioss*	3 kg/ha	3 kg/ha	3 kg/ha	3 kg/ha	3 kg/ha
Microsap® Bio Microel B Sap		3 kg/ha	3 kg/ha		
Microsap® Bio Power Leaf *Calantioss*		1/2 kg/ha	1/2 kg/ha	1/2 kg/ha	1/2 kg/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Never use less than 1000 liters of water per hectare.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Use Microsap® BIO Resolv at 3 kg/ha for each hail event or wounds.
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

OLIVE TREES \ SQNPI Protocol

	Pre-Flowering	Flowering	Fruit grouth	Post-Harvest
Microsap® Resolv	3 kg/ha	3 kg/ha	3 kg/ha	
Microsap® Microel B Sap	3 kg/ha	3 kg/ha		

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Never use less than 1000 liters of water per hectare.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Use Microsap® Resolv at 3 kg/ha for each hail event or wounds.
- Check compatibility with foliar fertilizers.
- Maintain an interval of 7–10 days between applications.

HORTICULTURE \ Organic Cucurbits

	Application timing	Dosage	Leaf dosage	Application frequency
Microsap® Bio Radimicro *Calantioss*	1-2 applications during the post-transplant stage	1-1.5 kg fertigation per 1,000 linear meters		Starting from the post transplant phase, a maximum of 2 applications at intervals of 7-10 days
Microsap® Bio Cu	Starting from the third true leaf stagea		200/300 CC/hl (2 – 3Kg/ha)	Every 7 days
Microsap® Bio 458 *Calantioss*	Starting from the third true leaf stage		150/200 CC/hl (1,5 – 2Kg/ha)	Every 7 days
Microsap® Bio S400	Starting with the first pruning		250/300 CC/hl (2,5 – 3Kg/ha)	Every 7 days
Microsap® Bio Power Leaf *Calantioss*	Starting with the first pruning		1,5 – 2Kg/ha	Every 7 days

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Check compatibility with foliar fertilizers
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

HORTICULTURE \ Organic Potatoes

Application timing	Application	Application	Application
After transplanting	Microsap® Cu Plus 3 L/ha	Microsap® Bio Power Leaf 1,5 – 2 KG/ha *Calantioss*	Microsap® Bio 458 1 – 1,5 KG/ha *Calantioss*

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Check compatibility with foliar fertilizers
- Apply from the emergence phase onwards
- Check compatibility with foliar fertilizers
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

HORTICULTURE \ Organic Umbelliferae

Application timing	Application	Application	Application	Application
For fennel only After transplanting	Microsap® Bio Cu 3 Kg/ha	Microsap® Bio 458 1,5 KG/ha *Calantioss*		
For carrots only. Apply after 20-30 days from emergence	Microsap® Bio Cu 3 Kg/ha	Microsap® Bio 458 2 KG/ha *Calantioss*	Microsap® Bio S400 3 Kg/ha	Microsap® Bio Power Leaf 1,5 / 2 KG/ha *Calantioss*

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Check compatibility with foliar fertilizers
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

HORTICULTURE \ Organic Leafy Vegetables

	Application	Application	Application	Application
Foliar application after transplanting	Microsap® Bio Cu 3 Kg/ha	Microsap® Bio 458 1,5 KG/ha *Calantioss*	Microsap® Bio S400 3 Kg/ha	Microsap® Bio Power Leaf 1,5 / 2 KG/ha *Calantioss*
Root application after transplanting	Microsap® Bio Radimicro 3 Kg/ha *Calantioss*			

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Check compatibility with foliar fertilizers
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

HORTICULTURE \ Organic Solanaceae

Application timing	Dosage	Leaf dosage	Application
Microsap® Bio Radimicro *Calantioss*	After transplanting	1/1,5 kg fertigation per 1000 linear meters	Every 7-10 days
Microsap® Cu Plus		3/4 L/ha foliar application	Every 7-10 days
Microsap® Bio 458 *Calantioss*		1/1,5 kg/ha foliar application	Every 7-10 days
Microsap® Bio S400		2,5/3 kg/ha foliar application	Every 7-10 days
Microsap® Bio Power Leaf *Calantioss*		1,5/2 kg/ha foliar application	Every 7-10 days

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Check compatibility with foliar fertilizers
- Maintain an interval of 7–10 days between applications.
- Attention: - Add the CALANTIOSS Corrector to the sprayer before the products.

GRAFTED VINES \ Vines

Root Dipping (Root Soaking) PRE-GRAFTING 5.000 rootstocks	
Mix the two products together in an adequate volume of water to fully immerse the roots.	
MICROSAP® ES 5 kg	MICROSAP® FI 5 kg

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Use 100g of citric acid per 100 liters of water.

VINES \ Organic Wood Protocol

ATTENTION Add the Calantioss Corrector to the sprayer before the products.

	Post pruning BBCH 0	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Bio Es	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Fe		1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Microel B Sap		1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Bio Power Leaf *Calantioss*				2/3 kg/ha	2/3 kg/ha	

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.

- Use water volumes not less than 300 liters per hectare.
- Apply to all rows.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Check compatibility with foliar fertilizers
- Apply Microsap® ES at a rate of 3 kg/ha for each wound (hail damage, mechanical pruning, topping).
- **During acute phases:** apply 3 kg/ha during BBCH phases.

VINES \ SQNPI Wood Protocol

	Post pruning BBCH 0	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Es	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Fe		1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Microel B Sap		1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Power Leaf				2/3 kg/ha	2/3 kg/ha	

VINES \ Organic Sap Protocol

ATTENTION Add the Calantioss Corrector to the sprayer before the products.

	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Bio Fi *Calantioss*	2/3 L/ha	2/3 L/ha			2/3 L/ha
Microsap® Bio Fe	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Microel B Sap	1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Bio Power Leaf *Calantioss*			2/3 kg/ha	2/3 kg/ha	

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.

- The dosage per hectare should be considered valid for a number of plants per hectare ranging from 4000 to 5000 units.
- Use water volumes of no less than 300 liters per hectare.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Apply to all rows.
- Check compatibility with foliar fertilizers
- In the acute phase, apply Microsap® Fi at a rate of 3 kg/ha during the BBCH phases.

VINES \ SQNPI SAP Protocol

	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Bio Fi	2/3 L/ha	2/3 L/ha			2/3 L/ha
Microsap® Bio Fe	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Microel B Sap	1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Bio Power Leaf			2/3 kg/ha	2/3 kg/ha	

VINES \ Organic Downy Mildew Protocol

ATTENTION Add the Calantioss Corrector to the sprayer before the products.

	2 expanded leaves BBCH 12	9-10 expanded leaves BBCH 19	Visible Flower Clusters BBCH 53	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81
Microsap® Cu Plus	3 L/ha	3 L/ha	3/5 L/ha	3/5 L/ha	3/5 L/ha	3/5 L/ha
Microsap® Bio Fe	2 kg/ha	2 kg/ha	2 kg/ha			
Microsap® Bio Power Leaf *Calantioss*				2 kg/ha	2 kg/ha	2 kg/ha
Microsap® Bio Microel B Sap		2 kg/ha	2 kg/ha			
Microsap® Bio 458 *Calantioss*	2 kg/ha	2 kg/ha	0,5 kg/ha	0,5 kg/ha	0,5 kg/ha	0,5 kg/ha

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Ensure efficient watering using an adequate volume of water.
- Apply every 7-8 days depending on weather conditions.
- Never underdose Microsap® Cu Plus

VINES \ SQNPI Downy Mildew Protocol

	2 expanded leaves BBCH 12	9-10 expanded leaves BBCH 19	Visible Flower Clusters BBCH 53	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81
Microsap® Cu Plus	3 L/ha	3 L/ha	3/5 L/ha	3/5 L/ha	3/5 L/ha	3/5 L/ha
Microsap® Bio Fe	2 kg/ha	2 kg/ha	2 kg/ha			
Microsap® Bio Power Leaf				2 kg/ha	2 kg/ha	2 kg/ha
Microsap® Bio Microel B Sap		2 kg/ha	2 kg/ha			
Microsap® Bio 458	2 kg/ha	2 kg/ha	0,5 kg/ha	0,5 kg/ha	0,5 kg/ha	0,5 kg/ha

VINES \ Organic Energy Protocol

ATTENTION Add the Calantioss Corrector to the sprayer before the products.

	Post pruning BBCH 0	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Bio Es	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Fe		1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Fi *Calantioss*		2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Microel B Sap		1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Bio Power Leaf Calantioss				4 kg/ha	4 kg/ha	

It is recommended to apply a solution with a pH ranging from 5.8 to 6.5.
- Ensure thorough watering that reaches the woody parts of the plant as well.
- Use water volumes of not less than 300 liters per hectare. Apply to all rows.
- Check compatibility with foliar fertilizers
- Apply at a rate of 3 kg per hectare at each wound opening.

VINES \ Energy SQNPI Protocol

	Post pruning BBCH 0	9-10 expanded leaves BBCH 19	Grape berry growth BBCH 73	Bunch closure BBCH 77	Veraison onset BBCH 81	Post harvest BBCH 91
Microsap® Es	2/3 kg/ha	2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Fe		1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha	1 kg/ha
Microsap® Bio Fi		2/3 kg/ha	2/3 kg/ha			2/3 kg/ha
Microsap® Bio Microel B Sap		1 kg/ha	1 kg/ha	1 kg/ha	0,5 kg/ha	0,5 kg/ha
Microsap® Bio Power Leaf				4 kg/ha	4 kg/ha	

Respecting nature
to nourish the future.
This is our commitment to
the only home we have and
to the generations to come.

Natural
Development
Group

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AREAS SERVED

NORTH

Filippo Taglietti
+39 393 42 89 038
ftaglietti@ndggroup.eu

CENTER

Ivano Aringoli
+39 338 66 24 065
ivanoaringoli@gmail.com

SOUTH

Vincenzo Di Maria
+39 335 64 19 322
vdimaria@ndggroup.eu

Natural
Development
Group

NDG NATURAL DEVELOPMENT GROUP S.R.L.
Via Salvatore Quasimodo, 42
40013 Castel Maggiore (BO)
T 051 41 21 099 I www.ndggroup.eu