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2025

Biotechnology for Agriculture

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Adjuvants

Introduction

Adjuvants are essential agricultural products designed to enhance the effectiveness of pesticides, herbicides, and fertilizers. They optimize the application process by improving spray coverage, adhesion, and absorption onto target plants, thereby maximizing their efficacy.

Our products

NIS 700

sonar agro

NEW
IMPORTED FROM SPAIN

NIS 700

Non-Ionic Surfactant

Adjuvant: penetrant - surfactant - acidifier

foliar

COMPOSITION	% w/w
Lecithin	35,0
Propionic acid	35,0
Linear Ethoxylated Alcohol	10,9

ZERO RESIDUES

Characteristics

NIS 700 It is a non-ionic surfactant, multipurpose, with acidifying, penetrating and translocation action whose use increases the effectiveness of herbicides, insecticides, fungicides, foliar fertilizers and growth regulators.

NIS 700 reduces the surface tension of spray solutions to decrease the contact angle of the droplet with the plant surface, which results in a greater amount of coverage by improving the chemical into contact with the plant and uptake.

NIS 700 can also be used as acidifying to lower the pH of the solutions, preventing losses of active ingredient by alkaline hydrolysis.

NIS 700 contains Lecithin and is formulated as a unique technology to allow you to expect more from your pesticide application, it delivers FIVE IMPORTANT BENEFITS:

Multi benefits

SPREADABILITY - provides better leaf spread to increase pesticide contact.

ADHESION - Droplets remain on target to ensure pesticide effectiveness.

PENETRATION - Provides better breakdown of waxy leaf cuticle to allow for enhanced pesticide penetration into the plant.

DROPLET MANAGEMENT - Better manages droplet size to minimize loss due to drift or evaporation.

ENVIROMENTAL - Made from natural occurring soybean oil.

Dosage

GOAL	DOSES ml/100L	Comments
Reduction of pH	50 – 100 (> 8 pH); 30 – 50(< 8 pH)	
Insecticides - fungicides.	50 – 100	Do not apply with high temperatures. Add to water in spray tank before adding PESTICIDE.
Herbicides	125 - 250 250 - 500	Recommended for use in mixing with defoliants, desiccants and for annual weed control. Use the highest dose of NIS 700 for the control of perennial and other weeds. (Equisetum bogotense) (Malva nicaensis), (Cynodon dactylon), (Cyperus rotundus).
Foliar fertilizers	125 - 250	Tank mixing with other agricultural chemicals may increase the potential for crop damage check with supplier.
Assistance in droplet size management	100 - 200	NIS 700 will reduce the fine droplets associated with, but not eliminate, off target movement. This is contingent upon good agricultural spraying practise and appropiate nozzle choice.

CONDITIONS FOR SAFE AND EFFECTIVE APPLICATION: NIS 700 can be used in any condition in which the application of pesticides is recommended. Avoid applying in conditions of heat or extreme solar radiation. Avoid applying NIS 700 in strong wind conditions, with rain or presence of dew.

INCOMPATIBILITY: NIS 700 is incompatible with products containing metallic Cu.

IMPORTED FROM EU

1L 5L 20L

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Bioprotection

Introduction

Bioprotectors are innovative agricultural products formulated to safeguard crops against various biotic and abiotic stresses while promoting overall plant health. These products utilize natural compounds and beneficial microorganisms to enhance plant resistance to diseases, pests, and environmental stressors.

Our products

CROP SAFE

NEMATURAL PLUS

QUTO CARE

sonar agro

NEW
IMPORTED FROM SPAIN

CROP SAFE

FORTIFYING, YIELD AND QUALITY

soil foliar

COMPOSITION	% w/v
Total Nitrogen (N)	4,8
Ureic Nitrogen (N)	4,8
Zinc water-soluble complex (Zn)	1,0
Manganese water-soluble complex (Mn)	2,0
Copper water-soluble complex (Cu)	2,0
Density: 1,2	
Complexing agents: Aluminium Lignosulphonates and gluconic acids	

SYSTEMIC

ECOLOGICAL AGRICULTURE

ZERO RESIDUES

Characteristics

CROP SAFE It's established as an organic product ofvegetable origin. Because of its great purity and quick absorption in different vegetable tissues, **CROP SAFE** makes an essential product for the growth, maintenance and protection of plants.

- Complete systemia (ascending and descending).
- Stimulates complete distribution throughout the whole plant.
- Immediate response from the plant's self-defense systems.
- Targeted Agents: Endogenous and exogenous fungi

APRICOT · COTTON · ALMOND AND HAZELNUT · OLIVE · GREEN BEANS · LETTUCE · CITRUS · TOMATO · PEAR AND APPLE · WATERMELON · PEACH · KHAKI · POTATO · ORNAMENTALS · STRAWBERRIES · VINE

Examples

- VITICULTURE → Downy mildew
- OLIVE TREES → Verticilium
- HORTICULTURAL → Phytophthora nicotianae
- GRAPE VINES AND FRUIT CROPS (EUTIPIOSIS) → Eutypa
- GRAPE VINES AND GRAPE ARBORS → Phellinus igniarius, Stereum hirsutum (yesca producers)
- CITRUS FRUITS → Pythiacystis citrophthorain
- VEGETABLE CROPS → Botrytis, Patristic pernospora
- VEGETABLE CROPS
- STONE AND PIPFRUIT TREES
- TROPICAL, SUBTROPICAL, AND INDUSTRIAL CROPS,
- OLIVE TREES
- DRY FRUITS
- FLOWERS AND ORNAMENTAL PLANTS

→ Several types of mildew and other fungi

Application

CROPS	FOLIAR APPLICATION	DOSAGE
All crops	Wetting the whole plant, including its trunk.	200-400cc per 100L of water
Grapewine	As a preventive measure, 2-3 times throughout the vegetative cycle. Raise the dosage spraying the trunks.	1 L per 100 L of water.

CROPS	TRICKLE IRRIGATION	DOSAGE
Adult tree	Diluted in water before applying.	10 cc / Ft
Plants	Diluted in water before applying.	5 cc / Ft
Crops	Diluted in water before applying.	5 cc / Ft

*For specific crops, please consult our technical department

FERTILIZER
CE
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NEMATURAL PLUS

BOTANICAL

Natural Nematicide
Bioprotector

soil foliar

COMPOSITION %W/V

Plant extract (Gramineae Sp.)	70,0
Phosporus (P_2O_5)	8,0
Potassium (K_2O)	4,0
L-Amino Acids	2,0

ECOLOGICAL AGRICULTURE

Natural Protection

Parasitic nematode control

Characteristics

NEMATURAL PLUS is a naturally derived bionematicide for control of parasitics nematodes in agricultural and ornamental crop. May be applied by ground spray applications, drip irrigation, overhead irrigation system or fertirrigation systems.
Control and prevents plant parasitic nematodes using several modes of action:

DIRECT ACTION:
NEMATURAL PLUS gost to work inmediately the nematode and damage its cuticle. Causes nematode immobilization and desorientation, making it more difficult for them to reach plant roots.

REPELLENCY:
NEMATURAL PLUS helps repel nematodes so that they are unable to reach plant roots. Without being able to reach roots and feed, nematodes will die after they have depleted their lipid reserves.

Nematural Botanical Advantages

- **Effective, broad spectrum nematicide.**
- **Sustainable and environmentally friendy.**
- **Can be used in Nematode Management Programs with other chemical nematicides, nutrients and cultural practices.**
- **Workers can re/enter the field inmediately after application.**
- **No pre or post harvest application limitations.**
- **For use in conventional and organic production.**


BELONOLAISMUS SPP.


HOPLOLAIMUS GALEATUS


PRATYLENCHUS SPP.

Application

CROP	L/Ha	APPLICATION (1,2, or 3)	CROP	L/Ha	APPLICATION (1,2, or 3)
Aubergine	10-30	Transplant - at 30 days	Onion	10-20	Transplant - at 30 days
Banana	40-60	April - September	Ornamental	10-40	After cutting - at 30 days - at 30 days
Citrus	20-40	After fruit curd - at 30 days - at 45 days	Pepper	15-30	ransplant - at 30 days - at 30 days
Cucumber	10-20	Transplant - at 30 days - at 30 days	Pineapple	40-60	february - July
Fruit	10-20	After fruit set - at 30 days	Potato	10-25	Seeding - at 21 days
Garlic	10-20	Transplant - at 30 days	Strawberry	20-40	Transplanting - at 21 days
Grape	15-40	After flowering - at 30 days	Tobacco	20-30	Transplant - at 30 days
Green bean	10-25	Beginning of crop	Tomato	20-40	Transplant - at 30 days - at 30 days
Lawn	10-20	After - at 21 days - at 21 days	Zucchini	10-20	At the beginning of crop
Melon, watermelon	10-25	Transplant - at 21 days			

! CAUTION:
Nemantural Botanical is compatible with most foliar fertilizers and plant protection products.
SHAKE IT BEFORE USE

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NEW
IMPORTED FROM SPAIN

QUITO CARE

FUNGICIDE,
BACTERICIDE, ELICITOR

foliar

COMPOSITION	% w/w
Chitin (Poly-D-glucosamine)	3,0
Density: 1,01	
pH: 5	

ECOLOGICAL AGRICULTURE

MULTI VIROS NEMATODE

YIELD & QUALITY

ZERO RESIDUES

Characteristics

QUITO CARE is a biopesticide composed of biochemicals obtained from natural sources (Chitin). Chitosan is a polymer of β-(1-4) D-glucosamine, a partially deacetylated form of quinine. It can be obtained from natural sources of chitin (crustacean shells, squid feathers, etc.) from seafood processing plants. Chitosan and its derivatives exhibit antimicrobial activity against bacteria and fungi. The bactericidal action is due to the fact that:

1. It destabilizes cell membranes, causing the loss of cell contents.
2. Inhibits the germination of phytopathogenic fungal spores.
3. It affects their growth, inducing morphological and ultrastructural alterations in the hyphae.
4. It causes a reduction in the production of toxins from plant pathogenic fungi.

QUITO CARE has fungistatic properties against both airborne and root diseases. When applied to plants, cells receive the same stimulus as if they were being attacked by a disease. This promotes the activation of the Systemic Acquired Resistance (SAR) mechanism, providing an immune response against diseases.

Benefits

- Fungiside and bactericide effects.
- Significantly increases plant resistance and lignification.
- Stimulates the synthesis of biochemical compounds.
- Enhances balanced development of the aboveground and root systems.
- Nematostatic and virostatic effects.
- Reduces transpiration in plants and enhances physiological water use efficiency.
- Improves seed germination and emergence. Has positive effects on food storage.


Blast Desease (Rice)


Seath Blight (Rice)


Alfafa mosaic virus


Tobacco Necrosis necrovirus (TNV) (Tobacco)

Doses and application

CROPS	OBJECTIVE	TIME OF APPLICATION	TYPE OF APPLICATION	Nº OF APPL.	INTERVAL BETWEEN APPL.	DOSAGE	BROTH VOLUME/SOLUTION (L/HA)
Berries and small fruits (grapes, strawberries, cane fruits, and other berries and small fruits)	Plant Elicitor, an indicator of resistance to pathogenic fungi and bacteria	From leaf development (main shoot) or fruit development	Foliar	4 - 8	2 weeks	3-5L/hl	200 - 400
Horticultural		Before planting	Foliar	1	2 weeks	3-5L/hl	200 - 400
Cereals		Before planting	Foliar	1	2 weeks	3-5L/hl	200 - 400
Spices		Before planting	Foliar	1	2 weeks	3-5L/hl	200 - 400
Animal feed crops		Before planting	Foliar	1	2 weeks	2-3L/hl	200 - 400
Cereals Seed Treatment		Before planting	Foliar	1	----	2-3L/hl	----
Sugarbeet Seed Treatment		Before planting	Bulb Treatment: Dipping/Soaking	1	----	2-3L/hl	----
Bulbous ornamental plants		Germination	Foliar	1 - 8	5-7 days	3-5L/hl	200 - 400
		Foliar development – senescensio					200 - 400
Beet cultivation		Foliar development – senescensio	Foliar	1 - 8	5-7 days	3-5L/hl	200 - 400

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Biostimulants

Introduction

Biostimulants are specialized agricultural products designed to enhance plant growth, development, and productivity. These products contain natural substances, such as seaweed extracts, humic acids, amino acids, and beneficial microorganisms, that stimulate physiological processes in plants.

Our products

- SPUR
- SPUR POWER
- ZOOM
- ZOOM AMYN
- ZOOM FULVIC
- ZOOM MIX
- ZOOM SOLID

sonar agro

Spur

Aminoacids

soil foliar

Composition %w/w

Free aminoacids	22,0
Total Nitrogen (N)	2,0
Organic Carbon	12,0
Total Organic matter	21,0
O.E.S. (Organic Elicitor System)	3,0
Density: 1,16	
pH: 6-7	

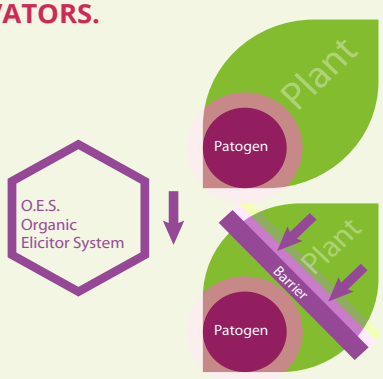
ECOLOGICAL AGRICULTURE

Approved by ECOCERT INPUTS

Product suitable for use in Ecological Agriculture in accordance with Regulations (EU) No. 2018/848 and 2021/1165. Control ECOCERT SA F – 32600

Characteristics

SPUR is a natural bioactivator based on Amino acids obtained through enzymatic processes, making **SPUR** more efficient than chemicalprocess based products. It is recommended for all crops and all times, especially when the plants need more nutrients such as in pre-blooming, setting, the swelling of the fruit, vegetative growth, for saline or climatic conditions etc. Sonneagro has developed a group of molecules that we call I.S.I. capable of acting as **DISEASE RESISTANCE ACTIVATORS.**



- 100% bioactive aminoacids
- Completely assimilable and available
- Very quick uptake and incorporation into plant metabolism
- Stimulate protein synthesis and energy saving
- The best option against different situations of plant stress (freeze, drought, fast growth, nutritional deficiencies...)

SPUR increases:

- Yield
- Nutrients uptake
- Root system
- The seed germination
- Inmunological system action of the crops

Application

Soil Dosage		Lts/ha
STRAWBERRIES	Every 10 days after transplanting	4
FRUIT TREES	From budding until the swelling of the fruit	6
BANANA PLANTS	Every 15 days between March and June	6
OLIVE TREES	Throughout the whole cycle	18
TABLE GRAPES	From budding until the end of the cycle	5
DRY FRUITS	From budding until the swelling of the fruit	5
CITRUS FRUIT	From flowering until the swelling of the fruit	12
COTTON	10 days after shooting until 20 days after the flowering	6
ORNAMENTAL PLANTS	Every 15 days after transplanting	4

Foliar Dosage		cc/100L
HORTICULTURAL CROPS	Every 10 days after transplanting	200
STRAWBERRIES	Throughout the whole cycle	200
TUBERS	Every 15 days	250
FRUIT TREES	From budding until the swelling of the fruit	200 - 300
BANANA PLANTS	Every 15 days	250
OLIVE TREES	Throughout the whole cycle	200 - 300
TABLE GRAPES	From budding until the end of the cycle	250
WINE GRAPES	From budding until the end of the cycle	2 L/Ha
DRY FRUITS	From budding until the swelling of the fruit	200 - 300
CITRUS FRUITS	From flowering until the swelling of the fruit	200 - 300
BEET	2 applications every 15 days	2,5 L/Ha
COTTON	10 days after sprouting until 20 days after the first flower	300
ALFALFA	After every mowing	2,5 L/Ha
ORNAMENTAL PLANTS	Every 15 days after transplanting	250
LAWN	After sowing/Growth phase	3-5 L/Ha/30 cc/m²

IMPORTED FROM EU

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Spur Power

Solid. Aminoacids

soil foliar

Composition	%w/w
Free aminoacids	74,0
Total Nitrogen (N)	13,0
Organic Nitrogen (N)	12,0
Ammoniacal nitrogen (N)	1,0

ECOLOGICAL AGRICULTURE

HIGH SOLUBILITY

HIGH QUALITY

Characteristics

SPUR POWER is an organic water-soluble powder fertilizer based on amino acids derived from enzymatic hydrolysis.

Through quick absorbance by leaves and transfer to the plant tissues **SPUR POWER** Vamino acids act as a natural biostimulant and organic chelator for trace elements, and it promotes recovery from abiotic or biotic stress.

The use as a foliar fertilizer helps the plant to better absorb minerals, fertilizers and nutrients naturally present in the soil.

SPUR POWER is a natural and stable mixture of complex structures being essential precursors to the building of peptides, proteins and enzymes and at the same time by accelerating the metabolic processes of the plant.

Benefits

- **Supports plant resistance to environmental stresses (*drought, extreme temperatures, sunburn, transplanting stress, etc*)**
- **Promotes the growth of roots and regenerates damaged roots**
- **Decreases the incidence of certain plant diseases**
- **Supplies proteins and amino acids**
- **Stimulates vegetative grwoth and improves fruit size**
- **Favors nutrients uptake**

Soil Application

Crops	Season	Annual dosage
In all crops	Reduction of stress, improvement of efficiency of plant protection treatment	3-4 Kg/Ha in case of stress (salinity, dryness, etc) divided into several doses (1 Kg/Ha)
Cereals, potatoes, legumes	Yield increase	3-4 Kg/Ha divided into 3 applications every 15 days after the first true leaf stage
Horticultural fruit trees	Fruit setting, fruit growth and quality	1-2 Kg/Ha every 10-15 days, from pre blooming stage until the beginning of the colouring stage
Open field vegetables	Yield increase	1-2 Kg/Ha every 7-10 days after the first true leaf stage
Ornamental plants and tree nursery, landscaping, turf grass (in general)	Root formation and nutrient uptake, sprouting leaf quality, growth	1 Kg/Ha every 7-12 days starting from planting
Vegetables in greenhouses	Yield, sprouting leaf quality, growth	3-4 Kg/Ha divided into 2-3 applications every 10-15 days, starting from planting

The recommended concentration for foliar application is 0,3-0,5% in the usual quantity of spray water.

1 Kg | 5 Kg | 20 Kg

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ZOOM

Humic Acids.
Biostimulant

soil foliar

Composition	%w/w
Total Humic Extract	40,0
Humic Acid	4,0
Fulvic Acid	36,0
Potassium (K_2O)	4,0

ECOLOGICAL AGRICULTURE

Total Miscibility

Improves germination

Increases root development

Higher yield

Increases the incorporation of fertilizers

Characteristics

ZOOM is a liquid humic acid corrector made from vegetable matter. ZOOM is a completely soluble microfiltered product.

When ZOOM is added to the soil it stimulates the root and micro organism growth, unlocking the nutrients that are in an unassimilable form for the plant.

ZOOM FOLIAR application improves the uptake and transport of nutrients as well as of other compounds (hormones, vitamins, etc.

The application of ZOOM is safe and easy throughout all stages of plant growth, from planting to harvesting.

Foliar application

Crops	Applications	Annual dosage
Lawn	5-6 app.	5L / 1.000 m^2
Ornamental	5-6 app.	100 cc / 20 Lts
Vegetable	3-4 app.	1-2 L / 200 Lts

General dosage 2-4 L/200 L

Soil application

Crops	Season	Annual dosage
Citrus Fruits	From budding to mid-cycle	100-130 cc/tree
Fruit Trees	From budding to mid-cycle	100-150 cc/tree
Strawberries	Throughout the whole cycle	100 L/Ha
Cut Flowers	Throughout the whole cycle	100-120 L/Ha
Open-air Horticultural Crops	Throughout the whole cycle	80-100 L/Ha
Greenhouse Horticultural	Throughout the whole cycle	100-120 L/Ha
Maize	In the first irrigation	50-80 L/Ha
Olive Trees	Throughout the whole cycle	100-150 cc/tree
Pear Trees	From budding to mid-cycle	150-200 cc/tree
Wine Grapes	From budding to mid-cycle	30-50 L / Ha
Table Grapes	From budding to mid-cycle	70-100 L / Ha

SHAKE THE ZOOM CONTAINER WELL BEFORE OPENING. Keep ZOOM in the original container. Do not store below 0ºC or above 40ºC. When stored under normal storage conditions the product will keep its physical, chemical and biological properties for at least 3 years.

IMPORTED FROM EU

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ZOOM AMYN

Liquid fertilizer of high concentration of Fulvic Acid and Amino Acids

soil foliar

Composition	%w/v
Total Humic Extract	14,0
Free Amino Acids	14,0
Total Polysaccharides	8,0

Density: 1,15 g/cc

ECOLOGICAL AGRICULTURE

Characteristics

ZOOM AMYN is an is an extremely bioactive growth promoting and soil improving agent in liquid form with a high concentration of natural fulvic acids. Zoom Amyn is 100% water-soluble and suitable for all crop and garden cultures for foliage and soil application. It may be used alone or in combination with soluble fertilizers and currently, plant protection agents.

ZOOM AMYN is a natural and versatile biostimulant. It is produced through a bacterial fermentation process using plant raw material.

ZOOM AMYN contains a complex array of plant based soil biostimulants including natural phytohormones (cytokinins, auxinsm gibberellins), polyamines, antioxidants, betaines, peptides, secondary metabolites, polysaccharides, auxins, vitamins, carbohydrates and organic mater to impove nutrient availability in soil, resulting in a hight uptake in pants.

- **BIOAVAILABILITY**
- **HIGHLY SOLUBLE**
- **SMALL PARTICLE SIZE**
- **STABILITY**

Actions

- **OPTIMUM VIGOUR CROP**
- **INCREASES STRESS TOLERANCE**
- **PROMOTES ROOT GROWTH**
- **IMPROVE THE NUTRIENTS UPTAKE AND TRANSPORT**
- **INCREASES THE MICROBIAL ACTIVITY IN THE SOIL**
- **YIELD AND QUALITY**

Application

Foliar: 200-300 mls/100 water
Fertirrigation: Drip: 5-10 L/ha

CROPS	Season and annual dosage
Blueberries and Cranberries	10L/ha Apply 3 times; budding, fruit setting and fruit sizing.
Cereals	Minimum dose: 4L/ha once. Can be applied mixed with herbicides. In summer cereals, apply at 35-40 days after seeding.
Fruiting vegetables and cut flowers	4-6 applications from the beginning of the crop, depending on stress and development.
Greenhouse vegetable	Apply through the cycle of the crop of the crop every 7-14 days; foliar or fertigate.
Orchards, Citrus, Subtropical and Olives	Apply and bud break, pre-bloom and once the fruit setting is complete. Use when crops stressed.
Vegetable	Leafy crops: Apply regularly in early stage of growth.
Vines	Apply during vegetative growth; repeat 2 to 3 times from post berry set until the beginning of ripening.

IMPORTED FROM EU

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ZOOM fulvic

Fulvic Acids. Biostimulant

soil foliar

Composition

	%w/v		ppm
Total Organic Matter	59,0	Iron (Fe)	1840
Fulvic extract	46,2	Manganese (Mn)	660
Total humic extract	46,2	Zinc (Zn)	660
Total Nitrogen (N)	6,6	Copper (Cu)	660
Phosphorus (P_2O_5)	4,0	Boron (B)	270
Calcium (CaO)	1,3	Molybdenum (Mo)	33

Density: 1,32
pH: 5-6

Characteristics

ZOOM FULVIC is made up of vegetal organic materia, macronutrients: N, P, K, Ca and microelements: Fe, Mn, Zn, Cu, B and Mo

It's completely biodegradable because the soil-plant system decomposes their compounds with microbiological processes taking advantage of the minerals.

ZOOM FULVIC has a low molecular weight and it's applicable by leaves and roots. The organic materia is assimilable by the beneficial microorganisms. pH 5, slightly acid. Because of the relatively small size of fulvic acid (FA) molecules they can readily enter plant roots, stems and leaves. As they enter these plant parts they carry trace minerals from plant surfaces into plant issues. Fulvic Acids are key ingredients of high quality foliar fertilizers. Foliar spray applications containing fulvic acid mineral chelates, at specific plant growth stages, can be used as a primary production technique for maximizing the plants productive capacity.

Once applied to plant, fulvic acids transport trace minerals directly to metabolic sites in plant cells. Fulvic acids are the most effective carbon containing chelating compounds known. They are plant compatible, thus non toxic, when applied in a suitable concentration.

Improves the soil structure

Promotes fixation of potassium by avoiding the leaching leak, mostly in sandy soils

Make the microelements more assimilable by the plans

Help with the development and activity of microbial flora

Stimulate the rooting and development of the plants

Soil application

Crops	Season	Anual Dosage
Horticultural crops	It's recommended doing 3 treatments. The first after transplanting in order to help the rooting. The other 2 treatments must be along the vegetative cycle of crops, during the thickening of the fruit.	7-12 L/Ha/Application
Fruit trees	It's recommended a minimum of 3 treatments. 1º Tillering-Flowering, 2º Thinning, 3º Fruit growth	7-12 L/Ha/Application
Citrus	A minimum of 2 to 3 treatments depending on the range (early or late range). 1º February-March 2º July-August 3º October only to late range.	7-12 L/Ha/Application
Banana tree	4-5 applications throughout the whole year.	50-60 L/Ha
Corn and sorghum	Apply by spraying it twice: 1º After the appearance of corn 2º Before the flowering	10-25 L/Ha
Olive tree	Olive trees are crops very grateful to the treatments with **Zoom fulvic.** Two applications: 1º Spring (March-April) 2º Summer (June-July-August)	12 L/Ha/Application In case of foliar application, it's recommended two treatments: 1º Spring: 200-300cc/100L water. 2º Autum: 300-400cc/ 100L water.

Foliar dosage 2-4 L / 200 L

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ZOOM mix

Organic Matter.
Macro-Micronutrients.

soil foliar

Composition

	%w/w
Fulvic Acids	30,0
Calcium (CaO)	3,0
Magnesium (Mg)	3,0
Iron (Fe)	5,0
Manganese (Mn)	5,0
Zinc (Zn)	5,0
Boron (B)	1,0
pH: (disolution 10%) 6-7	
Non toxic	

Improve overall crop quality

Improve Nutrients Assimilation

ECOLOGICAL AGRICULTURE

Characteristics

ZOOM mix is a product with contains low molecular weight fulvate wilth several nutrients: Calcium (Ca), Magnesium (Mg) and micronutrients: Iron (Fe), Manganese (Mn), Zinc (Zn) and Boron (B).

The fact that fulvates have a low molecular weight enables then to penetrate the cell membranes of the roots and leaves, transporting chelates metals to the inner parts of the plant.

In summary, soil nutrients and fertilizer assimilable better, increasing mobilization and participation of metabolic processes.

Benefits of FULVIC ACIDS

- Increases the microbiological activity in the soil.
- Improves the activity and take up of soil nutrients.
- Improves the physical, chemical and biological characteristics in soil.
- Have a chelating effect in micronutrients.
- Are excellent in transporting nutrients from the root to the plant.
- Peermeate cellular membranes helping assimilation.
- Enhance flowering and fructification.

Application

Crops	Season	Annual dosage
In all crops	Prevention and correction of trace element deficiency, and increasing of plant vitality and fertilizer utilisation	4-5 Kg/Ha divided into several doses (1-2 Kg/Ha or 150-300 g/1000 L)
Cereals, potatoes, legumes	Prevention and correction of trace element deficiency, and increasing of plant vitality and fertilizer utilisation	3-4 Kg/Ha divided into several doses (1 Kg/Ha or 150-300 g/1000 L) during the season
Horticultural fruit trees	Prevention and correction of trace element deficiency, and increasing of plant vitality and fertilizer utilisation	4-5 Kg/Ha divided into several doses (1-2 Kg/Ha or 150-300 g/1000 L) during the season
Ornamental plants and tree nursery, landscaping, turf grass (in general)	Prevention and correction of trace element deficiency, and increasing of plant vitality and fertilizer utilisation	3-4 Kg/Ha or 1 Kg/m3 during the preparation of substrates
Vegetable in greenhouses	Prevention and correction of trace element deficiency, and increasing of plant vitality and fertilizer utilisation	4-5 Kg/Ha divided into several doses (1-2 Kg/Ha or 150-300 g/1000 L) during the season

FOLIAR APPLICATION: Increasing of soil fertility and fertilizer utilisation. 3-4 Kg/Ha or 1 Kg/m³ during reparation of substrates

1 Kg 5 Kg 20 Kg

IMPORTED FROM EU

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ZOOM SOLID

Humic Acids.
Biostimulant

seed soil foliar

Composition

	%w/w
Total Humic Extract	85,0
Humic Acids	74,0
Fulvic Acids	11,0
Potassium (K_2O) water soluble	11,0

Characteristics

ZOOM SOLID is a highly concentrated potassium humate. It is a plant stimulant of the highest quality and improves soil conditions.

ZOOM SOLID can be applied to agricultural, horticultural and gardening plants by soil, and seed application.

ZOOM SOLID can be used to be alone or mixed with most fertilizers. As product solid granular form, it can be transported easily.

ZOOM SOLID is able to enhance the efficacy of fertilizers and reduces input costs.

ORGANIC SOIL AMENDMENT

ROOT DEVELOPMENT

NUTRIENT UPTAKE

THE GERMINATION OF SEED

APPLICATION AND DOSAGE

CROP	OBJECTIVE	RECOMENDED APPLICATION
Soil application		
Cereals, potatoes, legumes (Spinklers and pivot system)	Soil conditioning, root growth stimulation, increasing of soil fertility and fertilizer utilisation	6-8 kg/ha divided into several doses (1-2 kg/ha) during the season and at the time of fertilzer application
Fruit trees (Apple, citrus)	Soil conditioning, root growth, increasing of soil fertility and fertilizer utilisation	8-10 kg/ha divided into several doses (1-2 kg/ha)
In all crops	Soil conditioning, increasing of soil fertility and fertilizer utilisation	6-8 kg/ha divided into several doses (1-2 kg/ha) during the season
Open field vegetable	Soil conditioning, root growth, increasing of soil fertility and fertilizer utilisation	6-8 kg/ha divided into several doses (1-2 kg/ha)
Ornamental plants and tree nursery, turf grass, landscaping (in general)	Soil conditioning, root growth, stimulation, increasing of soil fertility and fertilizer utilisation	8-10 kg/ha divided into several doses (1-2 kg/ha) or 1kg/m^3 during the preparation of substrates
Vegetables in greenhouses	Growth stimulant, and increases foliar fertilizer utilisation	150-300g/100Lwater every two weeks during the season

Foliar application

Growth stimulant, and increases foliar fertilizer penetration. **Application:** 150-300 g/1000L water every two weeks during the season

Seed treatment

Stimulation of seed germination and root growth. **Application:** 1kg/100kg seeds

IMPORTED FROM EU

sonar agro

Coppers

Introduction

Copper fertilizers are essential agricultural products containing copper, a micronutrient crucial for plant growth and development. These fertilizers are formulated to provide plants with the necessary copper levels needed for various physiological functions, including enzyme activation, photosynthesis, and reproductive processes.

Our products

COPPER G

COPPER S

sonar agro

Copper G

Deficiency corrector.
Fungicide Bactericide

soil foliar

Composition

	%w/v	%w/w
Copper (Cu)	8,0	6,5
Organic complexant agent: **D-gluconic acid**		
Density: 1,23-1,33 g/cc		

ECOLOGICAL AGRICULTURE

Copper Corrector FUNGICIDE BACTERICIDE

Systemic

Characteristics

COPPER G is a deficiency corrector based on copper complexed as gluconate, it guarantees an appropriate input of copper on the leaf without phytotoxicity. The complexing agent presents great solubility into biological fluids and it is completely biodegradable in the soil.

COPPER G acts as a powerful plant activator against some illnesses caused by high humidity, high temperatures and bacteria.

Remarkable, fungicidal-bactericide action (Botrytis, Fusarium, Mildiu, Monilia, Phoma, Phythium, Phytophtora, Rhynchosponium, Rhizoctonia, Sclerotinia, Spilocacea, Xanthomonas)

DOES NOT STAIN THE PLANT
Systemic action
Resistance to washing
Improves conservation fruit
High efficiency


PHYTOPHTORA


PYTHIUM SPP.


RHIZOCTONIA SOLANI


XANTHOMONAS

Application

CROPS	FOLIAR	SOIL	Anual dosage
Landscape	200-400 ml/hl	400 ml/hl	-----
Cereals	2 L/Ha	------	------
Citrus	1,5-2 L/Ha	2-3 L/Ha	In spring and autumn
Fruit Trees	2-3 L/Ha	3-4 L/Ha	Pleforal applications and after harvesting
Vegetables	2-3 L/Ha	3-4 L/Ha	Depending on the conditions and cultivation
Olive-Tree	2-3 L/Ha	3-4 L/Ha	In spring, during the fruit development and autumn
Vine	2-3 L/Ha	----	According leaf development, as complement of phytosanitary treatments

It is recommended to treat between 6 and 25 °C. Avoid applications in cases of extreme drought, humidity, frost and rain. **Shake well before use. Do not freeze.** In case of mixing with other products, always carry out a previous test. Incorporate this product into the last phase.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Copper S

Deficiency corrector.
Fungicide Bactericide

foliar

Composition

Total Copper (Cu)	20% (200 g/L)
Copper sulfate	75% (750 g/L)
Sulfur (SO_3)	26% (260 g/L)
Density: 1,4	
pH: 4,5 - 5	

ECOLOGICAL AGRICULTURE

Approved by ECOCERT INPUTS

Product suitable for use in Ecological Agriculture in accordance with Regulations (EU) No. 2018/848 and 2021/1165. Control ECOCERT SA F – 32600

COPPER SULFATE

Adhesion
Coverage
Formulation
Protection

Characteristics

Copper S is a copper formula based on tribasic copper sulfate displayed in a concentrated suspension way. The size and form of the particles provide Copper S an extraordinary adhesion to the leaf, high resistance to the wash and also great persistence and fungal activity.

Key diseases controller

Especially active against: Alternaria, Anthracnose, Bacterial spot, Botrytis, Cercospora, Collectrochum spp., Downy mildew, Exorporium, Fire blight, Phomopsis, Pseudomonas leaf spot, Scab, Xanthomonas and different types of bacteria and repiles.

- **Control key fungal and bacterial diseases**
- **Crop safety and low use rates**

Key uses

Preventive treatment for the following crops:

Berries, vines and hops	Seed dressings
Chives	Tropical crops
Conifers	Turfgrass
Field crops, including citrus	Vegetable crops
Ornamentals	

Foliar Application

Crops	Dosage	Crops	Dosage
Citrus	**75-125 cc/Hl**	**Olive**	**300-600 cc/Hl**
Fruits Trees (Winter)	**250-400 cc/Hl**	**Pistachio**	**200-400 cc/Hl**
Forest nurseries	**150-180 cc/Hl**	**Vegetable**	**150-180 cc/Hl**
Herbaceous & Ligneous	**150-250 cc/Hl**	**Vine**	**200-300 cc/Hl**

Cautions

Compatible with most insecticides and fungicides. Do not mix with acides or alkalis. Do not add amino acids.
Apply foliar spray diluted in winter, shaking previously the container.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Crops

Introduction

Crops cathegory products are tailored fertilizers designed to meet the unique nutritional needs and challenges of particular crops. These products are formulated to address the specific growth stages, nutritional requirements, and common issues faced by individual crops, such as colza, cotton, fruit trees, horticulture, rice, pistachio and vine.

Our products

- COLZA MIX
- PROFOL
- RICE SPUR
- SONAR COTTON
- VINE ONE
- VINE TWO
- WANDEL MN

sonar agro

NEW
IMPORTED FROM SPAIN

COLZA Mix

Special for Colza

foliar

COMPOSITION	%w/v
Boron (B) water soluble	1,0
Manganese (Mn) water soluble	1,0
Magnesio (MgO) water soluble	1,2
Iron (Fe) water soluble	0,9
Zinc (Zn) water soluble	0,9
Molybdenum (Mo) water soluble	0,5
pH: 4-5	
Density: 1,2	

SYSTEMIC

GLUCO LIFE

Characteristics

COLZA MIX is a concentrated foliar nutrient solution with a tailored nutrient package to help oilseed rape crops reach their full potential.

The unique formulation of micronutrients has been specifically designed to boost oilseed rape growth particulary during the key establishment period. Essentially a brassica, the nutrient requirement of oilseed rape is substantial and very different from other arable crops such as cereals.

The micronutrients chelated by Gluconic acid, an organic molecule of natural origin bring several advantages, such as excellent solubility, biodegradability, and chemical stability of the complexes, even in alkaline conditions.

- ESPECIALLY FOR OILSEED PLANTS
- RAPID UPTAKE
- EASY TO APPLY

ACTIONS

- BETTER QUALITY AND YIELD.
- IMPROVED MICRONUTRIENTS UPTAKE.
- REGULAR FLOWER AND MATURATION.

Application

FOLIAR APPLICATION

OILSEED RAPE - Winter oilseed rape	General Dose
Autumn 4-8 leaves unfolded	1 L/ha
Spring after start of growing season / beginning of main stem elongation	1 L/ha
Bud formation	1 L/ha
From the beginning of petal fall – until the beginning of pods development	1 L/ha

FLAX	General Dose
“Herringbone” phase	1 L/ha
Phase of rapid growth	1 L/ha
Seting flower buds – until the beginning of flowering (optional)	1 L/ha

OILSEED RAPE - Spring oilseed rape	General Dose
Leaf development – until beginning of mean stem elongation	1 L/ha
Bud formation – until beginning of flowering	1 L/ha
Bud formation – until beFrom the beginning of petal fall – until the beginning of pods developmentginning of flowering	1 L/ha

SUNFLOWER	General Dose
2-4 leaves unfolded	1 L/ha
Beginning of steam elongation	1 L/ha

1L 5L 20L 200L

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

PROFOL

All agricultural crops

foliar

Composition

	%w/v		%w/v
Nitrogen (N)	20,0	Manganese (Mn)	0,12
Phosphate (P_2O_5)	20,0	Boron (B)	0,12
Potassium (K_2O)	20,0	Cobalt (Co)	0,001
Magnesium (Mg)	0,12	Molybdenum (Mo)	0,12
Iron (Fe)	0,34	Seaweed extract	28,0
Zinc (Zn)	0,12		
Copper (Cu)	0,12		

ECOLOGICAL AGRICULTURE

Characteristics

PROFOL is a highly concentrated emulsion containing macro and chelated micro elements. The organic material is seaweed derived.

Application of **PROFOL** will promote great root biomass and therefore maximise utilisation of moisture and nutrients.

PROFOL can also be used as a foliar fertilizer on a wide range of crops to improve crop colour and increase vigour and growth. Visual effects on many crops can be seen within a few hours of application in some situations.

Advantages

Helps prevent transplant shock in field vegetables

Relieves symptoms of stress in all crops

Promotes root growth when soil conditions are poor

- **CONCENTRATE EMULSION OF MICRO AND MACRONITRUENTS WITH SEAWEED EXTRACT**
- **ALL AGRICULTURAL CROPS**

Application

CROPS	Timing	Rate l/ha	Rate ml/l water	Comments
Cereals	2-6 leaves to 1st node	3		Apply if soil and weather conditions prevent optimum growth or to relieve crop stress. Promotes root growth and improves uptake of nutrients from the soil.
Field Vegetables	When crop is under stress of during rapid growth	3		Repeat as necessary every 10-14 days.
Fruit Tree	Once new leaf 80% open	3		Promotes growth, protects against stress, aids fruit swell and skin finish.
Grassland	As required or when stress is evident	3		Repeat as necessary every 10-14 days.
Legumes, Field and Root vegetables	As required or when stress is evident	3		Repeat as necessary every 10-14 days.
Potatoes	3-4 weeks after emergence Bulking	2 5		Promotes root growth and improves canopy cover. Follow with 2-3 applications at 14 days intervals once crop meets across the rows.
Protected Edibles	From 2 true leaves	0.5-1		Use early to promote root growth. Use lower rate on young plants and repeat after 14 days. Promotes root growth and reduces transplant shock.
Protected Ornamentals	Early sping growth		0.5-2	Promotes root growth and improves canopy cover. Use lower rate on young plants and repeat after 14 days.
Soft Fruits	4-8 true leaves	2		Use early to promote root growth, later applications will help to improve bud promotion.
Sugar Beet	4-8 leaf stage	3		Promotes root growth, protects against stress.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

RICE Spur

Special for Rice

seed foliar

Composition	%w/w
Total aminoacids	17,0
N-Acetyl Thiazolidine-4 Carboxilic	1,0
Iron (Fe) chelated EDTA	0,2
Manganese (Mn) chelated EDTA	0,4
Copper (Cu) chelated EDTA	0,2
Zinc (Zn) chelated EDTA	0,07
Boron (B)	0,1
Density : 1,20 g/ml	
pH: 7,0 +_0,5	

SYSTEMIC

Characteristics

RICE SPUR is a new natural organic food for crops.

RICE SPUR activates the biochemical functions in the plant, improving the metabolic process. It contains a naturally balanced mixture of Amino Acids available for proteins synthesis without energy uptake, saving biological energy.

Furthermore **RICE SPUR** contains natural bio promoters N-Acetyl Thiazolidine-4 Carboxylic Acid (ATCA) which through a slow enzymatic breakdown leads to the formation of proline which has a fundamental role to prevent the negative effects due to environmental stress (excessive heat, drought, poor fertilization, excessive rain fall etc...).

Cysteine whose anti-oxidant activity stimulate the regeneration of the enzymes, the catalytic agents for the proteins syntesis, lowering the cells senescence, and a mix of micronutrients: Boron favors pollen germination, fruit set and the growing of tissues. Iron and Manganese plays a fundamental role in chlorophyll synthesis and also in catalytic reactions. Zinc promotes the production of auxins, favors fruit enlargement, the transport of phosphates, formation of seeds and their ripening.

BENEFITS

- **Improves photosynthesis, respiration, synthesis of carbohydrates, nucleic acids, lipids, etc...**
- **Promote seed germination, blooming, seed enlargement.**
- **Faster and improved development of the root's system.**
- **Accelerated plant growth.**

Application

CROPS	SPRAY APPL	Nº APPL	APPL. AND INTERVAL
Rice seeds	-	-	Before sowing leave the seeds for 24h in solution with 2cc for 1L water
Dry rice	**600 - 800 ml/Ha**	**2**	First application 45 days after sowing repeat 70 days after sowing
Flooded Rice	**500 - 700 ml/Ha**	**2**	At germination stage repeat 10 days before tillering stage

RICE SPUR is compatible with most products used in agriculture unless strongly alkaline. RICE SPUR must be applied in the cooler daytime period.

IMPORTED FROM EU

1L 5L 20L 200L

sonar agro

SONAR COTTON

Special for Cotton

foliar

Composition	%w/w
Total Nitrogen	5,0
Copper (Cu) Complexed	2,0
Manganese (Mn) complexed	2,0
Zinc (Zn) complexed	1,0

SYSTEMIC

Characteristics

SONAR COTTON It's established as an organic product of vegetable origin. Because of its great purity and quick uptake in different vegetable tissues, **SONAR COTTON** makes an essential product for the growth, maintenance and protection of plants.

SYSTEMIC

SONAR COTTON is a product with a great stability, rapid absorption by leaves, stems and roots and easy translocation in the plant, both upward and downward (via xylem and phloem). The sap flows faster within the vascular bundles, carrying all the elements that compose **SONAR COTTON** (nitrogen, copper, zinc and manganese), together with the elements of reserve to the young parts of the plant (shoots, fruits, etc.) in the early stages of cultivation.

Application

First foliar application	From 3-4 node stage (3-4 true leaves) to 8-10 knots	Dose: 2L/Ha
2nd Foliar application	From first flowers to full flowering	Dose: 3L/Ha

We recommend a 3rd application at the end of the crop in case of attack of Verticillium , at the dose of 3L / Ha with the objective of recovering the plant.

Using SONAR COTTON will get these benefits both verticillium tolerant plants and genetically modified varieties.

HEALTH

It helps overcome vascular disorders (Verticillium dahliae, Fusarium..)

QUALITY

Increases micronaire index in fiber by 25%

It improves the rate of success in the nascencia and implantation, which reduces the costs of replanting and avoiding plants with different developments and phenological states in the field.

INCREASES:

- **Crop production**
- **Resistance to heat and water stress**
- **Number of capsules per plant**
- **Weight per capsule**
- **Retention of capsules, including upper ones**

SHAKE WELL BEFORE USE

1L 5L 20L 200L

IMPORTED FROM EU

sonar agro

VINE ONE

Special for Vine

soil foliar

Composition	%w/w
Potassium (K_2O)	21
Magnesium (MgO)	20
Sulfur (SO_3)	42

HIGH SOLUBILITY

Characteristics

VINE ONE is a highly concentrated fertilizer containing the nutrients:

Potassium, Magnesium and Sulfur, in sulphate form, in adequate rate. All three nutrients are readily water-soluble and immediately available to plants. VINE ONE ensures a high quality spread pattern due to its uniform particle size spectrum, enabling a precise distribution even at wide spreading widths. VINE ONE is free of Chlorine and has a low level of salinity.

Function of nutrients

- **Magnesium (Mg) is an essential constituent of chlorophyll and enzymes that takes part in the energetic processes into the plants**
- **Potassium (K) Activation of enzymes – potassium has an important role in the activation of many growth related enzymes in plants.**
- **Sulfur (S) is a vital part of all plant proteins, and certain plant hormones**

Application

FOLIAR

1-3 foliar applications during the spring from extended leaves until after fruit set.

DOSE: 1-5 Kg/ha (200gr/Hl)

FERTIRRIGATION

DOSE: 1-5 Kg/ha (200gr/Hl)

Cautions

Do not mix with oils and alkaline products. It's better not apply into a mixture with copper salts, especially the most soluble like sulfate, hydroxide, carbonate, etc… In case mixing with copper, use the lowest dose of product and apply the mixture immediately after the preparation.

FERTILIZER

CE

IMPORTED FROM EU

1Kg 5Kg 20Kg

sonar agro

VINE TWO

Special for Vine

soil foliar

Composition	%w/w
Potassium (K_2O)	14
Nitrogen (NO_3)	4
Magnesium (MgO)	4
Zinc (Zn)	1,5
Iron (Fe)	0,3
Manganese (Mn)	0,1
Boron (B)	3,0
Molybdenum (Mo)	0,01

HIGH SOLUBILITY

Characteristics

VINE TWO is an appropriate combination of nutrients to supply vine the right nutritional balance in order to achieve the ideal grape ripening, improving properties such as: weight, color, homogeneity, etc…

Cautions

Do not mix with oils and alkaline products. It's better not apply into a mixture with copper salts, especially the most soluble like sulfate, hydroxide, carbonate, etc… In case mixing with copper, use the lowest dose of product and apply the mixture immediately after the preparation.

Function of nutrients

- **Magnesium (Mg) is an essential constituent of chlorophyll and enzymes that takes part in the energetic processes into the plants.**
- **Zinc (Zn) is necessary in the protein synthesis and also in the growth regulation.**
- **Boron (B) is required in the formation of cell wall, in the retaining flower too and finally in the development and pollen germination.**
- **Manganese (Mn) and Molybdenum (Mo) are fundamental in photosynthesis as well in the nitrogen metabolism.**
- **Iron (Fe) is directly related to production of chlorophyll.**

Application

FOLIAR

1-3 foliar applications during the spring from extended leaves until after fruit set.

DOSE: 1-2 Kg/ha (200gr/Hl)

FERTIRRIGATION DOSE: 1-2 Kg/ha (200gr/Hl)

FERTILIZER

CE

IMPORTED FROM EU

1Kg 5Kg 20Kg

sonar agro

Wandel MN

Special for Potato Tubers and Roots

foliar

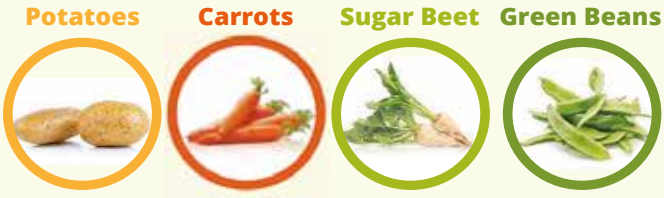
Composition	%w/w
Total Nitrogen	2,00
Phosphorus (P_2O_5)	30,00
Potassium (K_2O)	3,00
Boron (B)	0,01
Copper (Cu) chelated by EDTA	0,02
Iron (Fe) chelated by EDTA	0,02
Manganese (Mn)	4,00
Molybdenum (Mo)	0,001
Zinc (Zn)	0,01

Characteristics

WANDEL MN is specifically designed to improve crop yield and quality in potato and taproot crops (carrots, radish, sugar beet, etc.)

WANDEL MN is rich in Manganese, a Micronutrient activator of multiple enzymes involved in photosynthesis and carbohydrate biosynthesis. The effect of manganese is supplemented by Macro and other Micronutrients that optimize the plant nutritional status and by the presence of phosphorus in a highly bioavailable form that improves nutrients uptake and transport.
As a result, **WANDEL MN,** stimulates tuber formation, tuber enlargement, and starch accumulation, leading to increased number, size and quality of potatoes. Similarly, this product stimulates the development and elongation of taproots.

WANDEL MN can be mixed with all common formulations, except with products with alkaline reaction based on Copper and Sulphur, mineral oils and emulsions. A simple mixture test to check compatibility is advisable.



Application

Crops	Time of application	Application & Interval	Dosage
Industrial crops (Potatoes, carrots, radish, sugar beet, green bean, broad bean, soybean)	At the beginning of the crop cycle	3-4 applications every 7-10 days	2,5 - 3 L/Ha
Strawberries	At the beginning of the crop cycle	3-4 applications every 7-10 days	1,5 - 2 L/Ha
Fruit trees	At pre-flowering and fruit enlargement	3-4 applications every 7-10 days	2 - 2,5 L/Ha

Improves the development of taproot crops.

Increases number, size and quality of potato tubers

Recommended for crops with high manganese demand

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Field Crops

Introduction

Field crops products are specialized fertilizers, designed to support the growth and development of large-scale agricultural crops. These products are formulated to meet the unique nutritional needs and challenges of field crops, promoting healthy plant growth, optimal yield and quality.

Our products

- X CROP SPUR
- X N21
- X MICRO
- X SILIC

sonar agro

XCrop Spur

Special for field crops

foliar

Composition

	%w/w
Total aminoacids	15,0
Free aminoacids	10,0
Total nitrogen (N)	10,0
Total organic matter	40,0
Calcium (CaO) water soluble	0,10
Magnesium (MgO) water soluble	0,10
Iron (Fe) water soluble	0,10
Manganese (Mn) water soluble	0,50
Zinc (Zn) water soluble	0,75
Copper (Cu) water soluble	0,10
Boron (B) water soluble	0,10
Molybdenum (Mo) water soluble	0,02

Yield + Quality

Characteristics

XCROP SPUR is a foliar fertilizer with stimulating and anti-stress effects, intended for application in all the growth seasons of the plants. It contains amino acids and other natural nutrients which provides the nutrition and energy to plant, resulting in development of plant vigor, increase in flowering, fruiting and ultimately in crop yield.

MODE OF ACTION

In the case of any stress, consumption of aminoacids in plant increases. In these conditions, the plant requires the supplementary addition aminoacids to overcome its nutrition deficiency and resume its growth.

BENEFITS OF XCROP SPUR

- **Efficient nutrient uptake**
- **Improves plant growth/vigor, increases flowering and fruiting**
- **Increased retention of flowers and fruits**
- **Increases resistance and helps overcome stress condition**
- **A long - lasting effect**

Application

CROPS	APPLICATION TIMING	L/Ha TREATMENT	PURPOSES
Avena, Barley, Rye, Wheat	Maximum tillering state. Combine with herbicide,insecticide, fungicide or foliar nutrients treatments. At early bloom stage	1 -1,5	Improves vegetative development, tillering and fruit setting
Corn, sunflower, sorghum	At 2th to 4th leaf stage Repeat with 6th to 8th leaf stage At early bloom stage. Combine with common foliar treatments.	1 -1,5	Improves vegetative development specially on cool springs
Pastures (Lucerne, Clover	pply 10-15 days after every harvesting or shepherding, when sufficient foliage is present to intercept spray, 4 to 6 cm tall	1 -1,25	Provides a quick recovery of vegetative mass; reduction of the crop cycle
Rice	Maxmium tillering state. Beginning of pre-flowering Combine with foliar herbicide/fungicide treatment.	1 -1,5	Improves vegetative development, tillering and fruit setting. Reduces negative herbicide effects on crop. Improves systemic fungicide effect
Soybeans, colza	At 4th to 6th leaf stage At early bloom stage	1 -1,5	Improves vegetative development and fruit setting
Sugar beet	Apply at each of the following growth stages: 4-6 leaf stage, 6-8 leaf stage and 8-10 leaf stage	1 -1,5	Increases production of root and sugar.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

XN21

Special for Field Crops

Nitrogen solution with Dicyandiamide

foliar

Composition	%w/v
Total Nitrogen (N)	21,0
DCD (Dicyanamide)	0,8
pH (1% water solution 20°C)	6-7
Density (g/cm ^{3} at 20°C)	1,16

DCD Nitrification Inhibitor fertilizer

CHARACTERISTICS

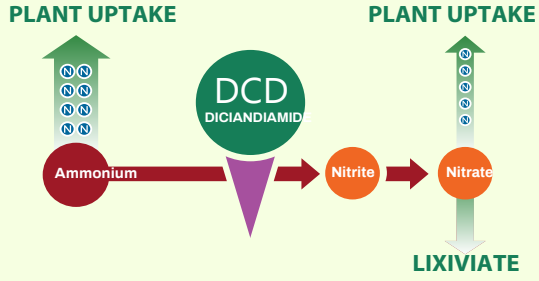
XN21 is a product specially designed for the effective use nitrogen fertilizers in spring (RAPE, CORN, CEREALS) carried out together with the herbicide or fungicide and insecticide.

XN21 is a high title liquid nitrogen fertilizer which is characterized by the presence of the inhibitor of the nitrification Dicyandiamide (DCD). The presence of the DCD Dicindiammide in XN21 reduces Ammonia and Ureic Nitrogen in the nitrate form period of transformation. The inhibitory activity of dicyandiamide against urease and nitrifying bacteria is manifested in a reduction of losses by leaching and volatilization.

- PROMOTES GROWTH AND VEGETATIVE DEVELOPMENT AND INCREASED PRODUCTION.
- RAPID AND PROLONGED NITROGEN SUPPLY.
- REVITALIZING AND STIMULATING EffECT.

Due to its characteristics and form of application, fast and economical, XN21 provides great advantages and allows the use of lower doses of fertilization due to the homogeneity and precision in the distribution.

NITRIFICATION INHIBITORY PROCESS



APPLICATION

CROPS	SOIL	FOLIAR	USE
Cereals	1-2 L/Ha	200-300 cc/100L	Spray 1-2 times from tillering to the last stage of leef formation
Rape	1-2 L/Ha	200-300 cc/100L	Spray 1-2 times from the stem elongation stage before flowering.
Sugar Cane	2 L/Ha	200-300 cc/100L	Spray 1-2 times from the leaf to the row capping step.
Corn	3-5 L/Ha	200-300 cc/100L	Spray 1-3 times at leaves at stage 4-8 for 10-14days.
Vegetables	5 L/Ha	200-300 cc/100L	Spray every 8-12 days entire growth period

CAUTIONS:
Keep out of reach of children. Keep away from foodstuffs, beverages and feed. Avoid to treat during the maximum heat hours. Avoid excessive doses as it may delay maturation and sensitize the attack of certain mushrooms.

COMPATIBILITY:
XN21 is generally compatible with conventional products used in agriculture. It is recommended not to apply with products containing Calcium products, mineral oils or mixed with products with alkaline reactions. Pour the product in the dispenser when it contains about half the solution you intend to prepare, mixing will be facilitated and solubilization will be sped up by shaking the solution.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

XSilic

Special for Extensive Crops

Silicon and Calcium Magnesium Fertilizer

foliar

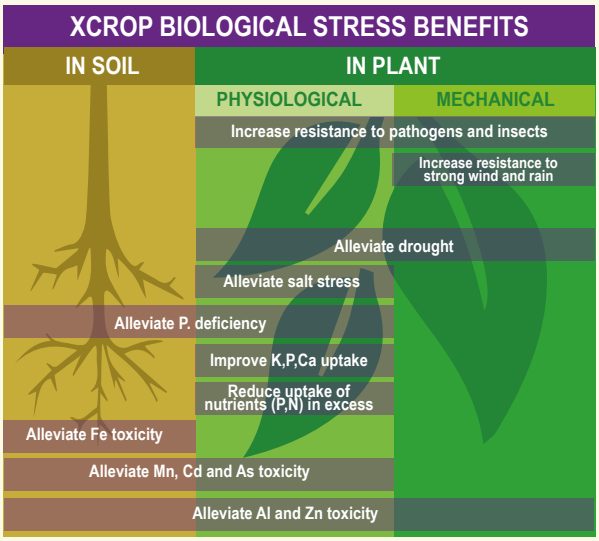
COMPOSITION	%w/w
Silicon (SiO2)	18,0
Calcium CaO)	13,5
Magnesium (MgO)	5,5
Density: 1,3	
pH: 5-6	

Yield and Quality

Characteristics

XSilic is a silicon based antistress agent with biostimulating properties, it protects plants against stress factors by providing the best possible developement conditions and stimulates plant growth and developement. There is a growing number of scientifics studies confirming the beneficial effect of silicon.

XSilic is a product wich fits perfectly into the concept of integrated crop production and may be used in organic farming."Silicon is the only nutrient wich is not detrimental when collected in excess" (Ma et al 2011) Ideal for use with Biological Products as part of a sustainable pest and disease Control Program.



Application

CROPS	DETAILS GENERAL DOSE 0,5L/Ha
Maize	**1:** 2-6 leaves unfolded (BBCH 12-16). Optimal time is 4 leaves un folded **2:** Developement of leaves - begining of stem elongation (BBCH 17 -31) **3:** Stem elongation cont. - begining of tassel emergence (BBCH 31 -51)
Oilseed Rape	**Autum:** 4-8 leaves - 2 tillers detectable (BBCH 14-18) **Spring: 1:** After de beginning of vegetation: beginning of side shoot developement - 6 internodes visible (BBCH 21-36) **2-3:** Developement of flower buds - beginning of flowering (BBCH 50-61), treatment every 10-15 days **4:** Full flowering 50% flowers on main raceme open, older petals falling - development of fruit stage (BBCH 65-73).
Potato	**1:** 3-6 leaves on main stem unfolded (BBCH 13-16) **2:** Forming side shoots - crop cover (BBCH 21-39) **3-4:** Forming and growth of tubers (BBCH 40-49), treatment every 7- 14 days.
Rice	**1:** Developement of leaves - tillering (BBCH 16-29) **2:** Stem elongation - early stage (BBCH 31-36) **3:** Beginning of heading (BBCH 51-53)
Rhye	**Autum:** 3 leaves - 2 tillers detectable (BBCH 13-22) **Spring: 1:** Beginning of stem elongation - node 2 stage (BBCH 30-32) **2:** Flag leaf fully unrolled - beginning of inflorescence emergence (BBCH 39-51) **3:** End of flowering - early milk (BBCH 69-73)
Sorgho	**1:** Developement of leaves - tillering (BBCH 13-29) **2:** Begining of stem elongation cont. - begining of heading (BBCH 31-51) **3:** Developement of fruit - early milk (BBCH 71-73)
Soybean	**1:** Developement of leaves and shoots (BBCH 13-29) **2:** Inflorescence emergence (BBCH 51-59) **3:** Beginning of pods developement (BBCH 71)
White Triticale	**Autum:** 3-6 leaves (BBCH 13-16) **Spring: 1:** Winter wheat - tillering (BBCH 22-29 Spring wheat - developement of leaves - tillering (BBCH 13-29) **2:** Stem elongation - heading - early stage (BBCH 30-51) **3:** Heading (stage cont.) - early milk (BBCH 51-73). Treatments are not recommended between stages BBCH 61-65

XSilic is compatible with most pesticides and fertilizers. DO NOT mix with products containing, dicofol, dimethoate, oils and cupper products. For other products follow the label direction. A mixture test is advisable for compatibility. **XSilic** is stable for at least 2 years since manufacturing date. Store in the closed original container in a cool and ventilated area. DO NOT store in direct sunlight. Keep away from food and animal feed. Keep out of the reach of children.

IMPORTED FROM EU

SHAKE WELL BEFORE USE

sonar agro

Flowering-Fruit Maturing

Introduction

Flowering and fruit setting, maturing stage products are specially formulated solutions designed to support the reproductive and fruit development phases of plants. These products contain a balanced blend of nutrients, hormones, and bioactive compounds tailored to enhance flowering, promote fruit setting, and facilitate the maturation process.

Our products

SONAR B-ZN

SPUR SET

sonar agro

sonar [B-Zn]

Boron and Zinc Corrector

soil foliar

Composition	%w/w
Boron (B)	15,0
Zinc (Zn)	9,0

flowering-vegetative growth

B Boron (B) exist primarily in soils solutions as the BO_3^{3-} anion the form commonly taken up by the plants. One of the most important micronutrients affecting membranes stability, B supports the structural and functional integrity of plant cell membranes. Boron-deficiency symptoms first appear at the growing points, and certain soil types are more prone to boron deficiencies.

B

Influences on fertilization and fruit set
Meristematic activity and growth
Protein synthesis
Sugar migration
Use of auxins by plants

Zn Zinc (Zn) is taken up by plants as the divalent Zn^{2+} cation. It was one of the first micronutrients recognized as essential for plants and the one most commonly limiting yields. Althought Zn is required only in small amounts, high yields are impossible without it.

Enzymatic function
Growth Hormone Synthesis
Protein synthesis

Zn

Characteristics

Sonar B-Zn is a solid foliar fertilizer that contributes a very good relation of Boron and Zinc, that applied in a suitable dose and in the propitious phenological moments, raises the levels of these nutrients in an efficient form. Boron and Zinc are key elements, both in the flowering to ensure an adequate fecundation, and in the foliage for the active vegetative growth of the fruit.

Improves Flowering

Increases Vegetative Growth

Specially formulated for fruit trees sensitive to deficiencies of Boron and Zinc

Application

Crops	Foliar	Application&Interval
Fruit Trees	2 Kg/Ha	Before flowering, fruit set, fall petal, floral buttons. Do not exceed 1% concentration
	4 Kg/Ha	On Reserve phase. Autumn application. Do not exceed 2% concentration
Olive	2-3 Kg/Ha	1st Cycle start - 2nd after 15 days - 3rd post-harvest. Do not exceed 0,5% concentration
Vigne	2-3 Kg/Ha	1st inflorescences - 2nd floral buttons - 3rd fruit set. Do not e xceed 0,5% concentration
	4 Kg/Ha	For reservation, application in autumn after harvest
Horticulture	3 Kg/Ha	2-3 applications. 1° with well-rooted plants and developed leaves - after: intervals 15 days
		In general 1-2 applications on well-developed leaves. Do not exceed 1% concentration
Extensive	3 Kg/Ha	Generally 1 to 2 applications on well-developed leaves. Do not exceed: 1% concentration
General Root Application:	4-8 Kg/Ha	1-2 applications from the beginning of the vegetative cycle

Cautions

Using mixtures with other products, a compatibility test with small amounts of the products is always needed. Adding Sonar B- Zn as first.

FERTILIZER

CE

IMPORTED FROM EU

1Kg 20Kg 1000Kg

sonar agro

Spur Set

Flowering and fruit setting inducer

soil foliar

Composition	%w/w
Potassium (K_2O)	12,5
Phosphorus (P_2O_5)	8,0
Molybdenum (Mo)	3,0
Boron (B)	2,0
Total Seaweed extract (Ascophyllum nodosum)	15,0
Manitol	0,18
Density: 1,34 g/cc	

CHARACTERISTICS

SPUR SET is a liquid biostimulant, hormone free, specially developed to naturally induce flowering and fruit setting, maximizing both quality and yield The balanced association of Molybdenum and Boron favors the production and fertility of pollen, by improving its germination abailability in the pollen tube of the female flower. In this way, it improves the fecundation of the flowers and the correct development of the fruit set.

The applications of **SPUR SET** reduce the abcission of flower buds and the release of fruits at the beginning of fruit set allows to favor the phase of fattening of the fruits.

In the fruiting phase, **SPUR SET** favors the development, growth and thickening of the fruit. In addition, the Phosphorus of its formulation favors the uptake of Molybdenum and facilitates the transport of sugars through the cellular membranes. The content in aminoacids helps the uptake and assimilation of molybdenum and boron by the plants. **SPUR SET** is enriched with assimilable phosphorus with synergistic effect and stimulating flowering and fruit setting, which allows to favor the phase of fattening of the fruits.

BENEFITS

- **FLOWERS: Enhancing floral fecundation**
- **FRUITS: Improves the fertility and viability of pollen**
- **RESISTANCE: To diseases and climatic accidents due to its nutritional and amino acid contribution**
- **PRODUCTION: Increases fruit size and uniformity and reduces fruit loss**

APPLICATION

CROP	Lts/Ha	cc/100L	APPLICATION
Courgette	0,5-1,0	70-100	3 - 4 applications each 5 - 7 days from first leaves
Cucumber, melon, watermelon	1,0 - 2,0	70-100	2 - 3 applications each 15 - 20 days with enough foliar area
Pepper, tomato	1,0 - 1,5	70-100	2 - 3 applications each 15 - 20 days with enough foliar area
Lettuce, cauliflower	2	100-200	1 application, 5 – 7 days after transplant
Berries	1,0 - 1,5	70-100	3 - 4 applications each 15 days from pre-flowering
Citrus and fruit trees	3	30 - 50	3 applications from pre-flowering to fruit growth
Olive trees	3	50 - 70	3 applications from pre-flowering to fruit growth
Table grapes	2	70-100	2 applications during berry growth before veraison
Subtropical crops	1,5 - 2,5	100 - 200	3 applications from flowering to fruit growth
Legumes	1,0 - 1,5	70 - 100	2 applications from first leaves
Ornamentals	2 - 3	30 - 50	2-3 applications distributed during the whole cycle
Industrials	1	100	2 applications during pre-flowering

SPUR SET is compatible with the majority of phytosanitary products and phytonutrients used in agriculture. It is necessary to carry out a previous compatibility and selectivity test of the products.

Both Boron and Molybdenum are essential in multiple flowering forced crops whose fruit setting and fattening phases overlap in time such as: Cucurbitaceas (Melon, Watermelon, Cucumber and Zucchini), Horticultural (Tomato, Pepper, Eggplant) and Strawberry.

IMPORTED FROM EU

sonar agro

Gluco Range

Introduction

Gluco range products are the primary alternative in terms of efficiency and technology for correcting micronutrient deficiencies in plants is represented by compounds chelated by gluconic acid.

Our products

MACRO

SONAR GLUCO CA

SONAR GLUCO K

SONAR GLUCO Mg

MICRO

SONAR GLUCO Fe

SONAR GLUCO Mo

SONAR GLUCO MN

SONAR GLUCO Zn

SONAR GLUCO MN+ZN

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco

soil foliar

GLUCO Products MACRO

sonar Gluco-Ca

COMPOSITION	%w/v
Calcium (CaO)	7, 5
pH 6-7	
Density: 1,2	
Natural Chelating Agent (Gluconic Acid)	

soil foliar

COMPLEXED ORGANIC CALCIUM CORRECTOR

sonar Gluco-K

COMPOSITION	%w/v
Potassium (K_2O)	30,0
Density: 1,31	
pH : 7	
Natural Chelating Agent (Gluconic Acid)	

soil foliar

COMPLEXED ORGANIC POTASSIUM CORRECTOR

sonar Gluco-Mg

Composition	%w/v
Magnesium	6,0
Complexant Agent Gluconic Acid	

foliar

COMPLEXED ORGANIC MAGNESIUM CORRECTOR

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO is complexed formulation with gluconic acid that gives stability to the product in extreme conditions. This complex ease the uptake and release of the nutrients in the plant.

SONAR GLUCO is compatible with all commonly used plant protection products. Since not all the influences appearing in practice are predictable, a miscibility test with small amounts of the products provided for the sprying is always useful.

In case of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add Glucco as the last componen. Apply immediately stiring constantly.

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco

soil foliar

GLUCO Products MICRO

sonar Gluco Mn+Zn

COMPOSITION	%w/v
Manganese (Mn)	3, 5
Zinc (Zn)	3, 5
pH 6-7	
Density: 1.27	

al Chelating Agent (Gluconic Acid)

foliar

COMPLEXED ORGANIC MANGANESE AND ZINC CORRECTOR

sonar Gluco-Zn

Composition	%w/v
Zinc (Zn)	5,8
pH 6-7	
Density: 1.27	
Natural Chelating Agent (Gluconic Acid)	

foliar

COMPLEXED ORGANIC ZINC CORRECTOR

sonar Gluco-Mn

COMPOSITION	%w/v
Manganese (Mn)	6, 1
pH 6-7	
Density: 1.3	
Natural Chelating Agent (Hepta-Gluconic Acid)	

foliar

COMPLEXED ORGANIC MANGANESE CORRECTOR

sonar Gluco-Mo

COMPOSITION	%w/v
Molibdenum (Mo)	6,0
Natural Chelating Agent (Gluconic Acid)	
Density: 1,2	

soil foliar

COMPLEXED ORGANIC MOLYBDENUM CORRECTOR

sonar Gluco-Fe

COMPOSITION	%w/v
Iron (Fe)	6, 9
pH 6-7	
Density: 1,2	
Natural Chelating Agent (Gluconic Acid)	

soil foliar

COMPLEXED ORGANIC IRON CORRECTOR

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCCO LIFE

1L 5L 20L

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco-Ca

COMPLEXED ORGANIC CALCIUM CORRECTOR

soil foliar

COMPOSITION	%w/w
Calcium (CaO) Water soluble	8,0

Density: 1.2
pH: 9-10

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO Ca is a gluco-complexed liquid fertilizer for use as a foliar feed to maintain or increase calcium levels in plants.

SONAR GLUCO Ca is specifically designed to provide Calcium to fruit and vegetable crops more efficiently than other forms of Calcium. Gluconic acid complexes calcium ion enabling it to move into the plant via the phloem.

SONAR GLUCO Ca complex reaches the fruit forming tissue, the sugar bond breaks down and the Calcium flows to where it is needed.

Unlike Calcium Chloride and Calcium Nitrate, **SONAR GLUCO Ca** will not produce injuries to the foliage and fruit, such as burned leaves and spotted fruit enabling **SONAR GLUCO Ca** to be used during the growing season.

ADVANTAGES

- As rapidly absorbed by the Plant Root System and their regular use improves the uptake of nutrients by the plant roots enhancing better growth
- Increases in number of leaves
- Increases yield

- Increases leaf area/size
- Increases height of the plant
- Better/increase dry weight

DOSES AND APPLICATION

Crop	Aim / problem	Recommendation	Time
Cereals	Vitality, stalk stability	1-3 times 5 l/ha	From the beginning of tillering.
Citrus fruits	Vitality, fruit firmness, storage and transport stability.	2-5 times 5 l/ha	From fruit set.
General Vegetables	Vitality, fruit strength, storage and transport stability, against internal fire, margin necrosis and flower rot.	2-5 times 5-10 l/ha	Once sufficient leaf mass had developed or from fruit set to harvest.
In all crops	For calcium supply, cell wall strength, reduction of radiation stress (anntioxidant), improvement of fruit quality and storage stability	5-10 l/ha (for leaf fertilisation with at least 500 litres of water. In case of application with the backpack sprayer 1%. Only in chloride-insensitive Cultures and not during flowering!)	When required
Oilseed rape	Vitality, stalk stability	1-3 times 5- 10 l/ha	From 4-leaf stage
Ornamental plants	Vitality, leaf quality, transport stability.	1-3 times 5 l/ha.	Once sufficient leaf mass has developed.
Pome fruit	Vitality, fruit firmness, storage and transport stability.	4-6 times 5-10 l/ha.	From walnut size to harvesting.
Potatoes	Tuber and skin quality, improvement in storage life.	2-4 times 5 l/ha	From beginning of row closure.
Stone fruit	Vitality, fruit firmness, storage and transport stability.	2-5 times 5-10 l/ha.	From fruit set.
Strawberries	Vitality, fruit firmness, storage and transport stability.	2-4 times 5 l/ha.	From fruit set
Sugar beet	Quality, storage and transport stability.	1-3 times 5 l/ha	From 6- leaf stage.
Sunflowers	Vitality, stalk stability	1-3 times 5 l/ha	From 4-leaf stage
Table grapes	Vitality, berry skin firmness, storage and transport stability.	2-5 times 5 l/ha	Pea size to harvesting.
Wine grapes	Vitality, berry skin firmness, storage and transport stability	2-5 times 5 l/ha	Pea size to harvesting.

! Shake it before use

CAUTION: check compatibility with standard jar test.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco-K

COMPLEXED ORGANIC POTASSIUM CORRECTOR

soil foliar

COMPOSITION	%w/v
Potassium (K_2O)	30,0
Density: 1,31	
pH : 7	
Natural Chelating Agent (Gluconic Acid)	

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO K is a potassium fertilizer with a neutral pH. It is fully soluble in water and can be assimilated by leaves or roots.

The potassium in **SONAR GLUCO K** is complexed by gluconic acid, which facilitates the absorption and transport of potassium through the phloem. This is the pathway through which the element reaches the tissues of the fruit and the rest of the plant where it is needed. The periods of highest potassium demand coincide with the development, growth, and maturation of fruits, roots, and tubers.

ENHANCES FRUIT SIZE AND COLOR.

PROMOTES FRUIT DEVELOPMENT AND MATURATION.

INCREASES RESISTANCE TO WATER AND THERMAL STRESS.

APPLICATION

Crop	Application	Dose
CITRUS	Curd, fatening before harvest	Fertigation: 15-40 L / ha Foliar application: 300-600 mL / 100 liters
COTTON	2-4 treatments throughout the crop cycle.	
FRUITS	In curd and coagulation, fatening before harvest.	
HORTICULTURAL	2-6 applications during the crop cycle.	
OLIVE TREE	In curd, in grilling, and before harvest.	
ORNAMENTAL	2-4 treatments during the crop cycle.	
STRAWBERRIES	1-3 treatments, barely fruit and tuber formation	
SUGARBEET	From two months before harvest.	
TROPICAL FRUIT	2-4 treatments during the crop cycle	
GRAPE WINE	During the fruit fatening and coloring period.	

SONAR GLUCO K is compatible with most fertilizers and phytosanitary products commonly used in agriculture. However, it is recommended to conduct a preliminary test before mixing them. To improve fruit quality (sugar, color, firmness, etc.), apply from the early stages of fruit development, with an interval of 10 to 20 days

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco-Mg

COMPLEXED ORGANIC MAGNESIUM CORRECTOR

soil foliar

COMPOSITION	%w/v
Magnesium (MgO)	6,0
Density: 1,32	
Natural Chelating Agent (Gluconic Acid)	

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

Magnesium deficiency corrector for foliar application, fertigation, and soil incorporation.

Metallic ions sequestered by gluconic acid do not react with other soil components, even in highly acidic or calcareous soils.

RAPID ACTION: SONAR GLUCO Mg, being derived from a natural sugar, quickly enters the plant's metabolism through foliar or root pathways. The application of chelated Magnesium ensures optimal absorption of this nutrient, particularly through foliar application, with high phytocompatibility.

THE ROLE OF Mg IN PLANT

- Mg is necessary for cell division and protein formation
- Mg is essential for plant respiration
- Mg acts as a phosphorus carrier in plants and is essential for phosphate metabolism
- Mg is the central component of chlorophyll

GENERAL DEFICIENCY SYMPTOMS

- Chlorotic leaves with brilliant colors
- Overall yellowing with green veins
- Dropping leaves
- Chlorosis appears first on older leaf tips, moves inward
- Necrotic spots on leaves
- Excessive, premature fruit drop

DOSES AND APPLICATION

Crop	Application mode	Dose
CITRUS	SOIL	Nursery: 1 – 7,5cc/stock Young trees: 7,5 – 50cc/stock Trees in production: 20 – 125cc/stock
	FOLIAR	300cc/hl before flowering, after petals drop and at the beginning of summer sprouting.
CORN, BEET	SOIL	1,5 – 2,5L/ha and application
	FOLIAR	300cc/hl
FRUIT TREES	SOIL	Nursery: 1,5 – 10cc/stock Young trees: 4 – 50cc/stock Trees in production: 10 – 150cc/stock
	FOLIAR	300 cc/hl since sprouting

Crop	Application mode	Dose
HORTICULTURALS	SOIL	1 – 2 cc/stock
	FERTIGATION	0,5 – 1L /ha
	FOLIAR	300cc / hl
STRAWBERRIES	SOIL	15 – 35L/ha
	FERTIGATION	10 – 30L/ha (Repeat during the whole cycle)
	FOLIAR	300 cc / hl since planting

1L 5L 20L

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

sonar Gluco Mn+Zn

COMPLEXED ORGANIC MANGANESE AND ZINC CORRECTOR

foliar

COMPOSITION	%w/v
Manganese (Mn)	3, 5
Zinc (Zn)	3, 5
pH 6-7	
Density: 1.27	

Natural Chelating Agent (Gluconic Acid)

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO MnZn is a product developed to prevent and correct deficiencies of Manganese and Zinc in all crops. The complexation of these nutrients by the gluconic acid molecule improves the uptake and transport of these nutrients in the crops.

SONAR GLUCO MnZn is a product recommended for the preventive control and treatment of states in which there are deficiencies of Mn and Zn.

IMPORTANCE OF ZINC IN PLANTS

Zinc is an essential constituent of several important enzyme systems that affects many metabolic processes in the plant. It controls the synthesis of indoleacetic acid, and important plant growth regulator that is crucial for active growing tips and leaf enlargement. Terminal growth areas are affected first when Zinc is deficient. Zinc is also critical in the bud differentiation process.

IMPORTANCE OF MANGANESE IN PLANTS

Manganese plays a key role in chlorophyll production. Because it is used to split the water molecule during Photosynthesis. It is essential for plant health. Manganese also activates more enzyms than any other nutrient. It is especially important in the production of proteins that are part of the plant´s natural defenses against disease.

- HIGH PENETRATION
- HIGHER QUALITY AND YIELD
- INCREASES THE VITAMIN C CONTENT
- IMPROVE FROST TOLERANCE
- OPTIMAL ASSIMILATION OF Mn AND Zn
- PREVENTIVE AND CURATIVE ACTION
- STIMULATES METABOLIC PROCESSES SUCH AS CHLOROPHYLL FORMATION

DOSES AND APPLICATION

Crops	Dosages	Objectives application
Citrus, avocado	2-4 L/ha 200-300 cc/100L	Boost vegetative growth. Start of sprouting in spring. Start of sprouting in autumn
Fruit trees of bone and pips	2-4 L/ha 200-300 cc/100L	Nutritional correction. From sprouting to post-harvest.
Vegetables in general	2-4 L/ha 200-300 cc/100L	Nutritional correction. From sprouting to post-harvest.
Strawberries and berries	1-2 L/ha 100-200 cc/100L	Nutritional correction. At any time of vegetative development.
Melon, watermelon, cucumber	2-3 L/ha 200-300 cc/100L	Nutritional correction. At any time of vegetative development.
Potatoes	2-4 L/ha 100-200 cc/100L	Nutritional correction. At any time of vegetative development.

SONAR GLUCO MnZn is compatible with most of the available fertilizers and phytosanitary products, even though it is advisable to perform a previous test.

Do not mix with mineral oils, dinocap or reactive alkaline products.

Shake it before use

1L 5L 20L

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

sonar Gluco-Zn

COMPLEXED ORGANIC ZINC CORRECTOR

foliar

Composition	%w/v
Zinc (Zn)	5,8
pH 6-7	
Density: 1.27	
Natural Chelating Agent (Gluconic Acid)	

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR Gluco Zn is a Zn fertilizers solution complexed with gluconic acid. Once applied, either into the soil, hydroponics or foliar, product is readily assimiliated by plants, and Zn ion it moves free into floem.

Zn (Zinc) in **SONAR Gluco Zn** is chelated by gluconic acid in a ferric ammonium salt, assimilable and usable form by the plant, both foliar and root application. This provides to the product a high solubility.

WHAT IS Zn IMPORTANT FOR?

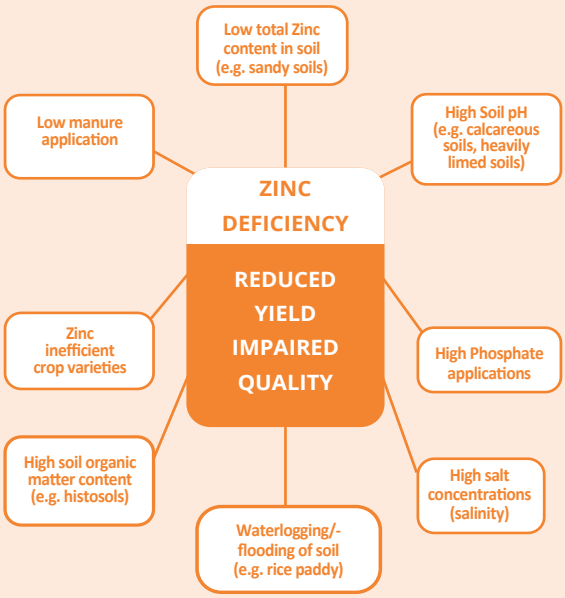
SONAR Gluco Zn is a key contituent of many enzymes and proteins. It plays an important role in a wide range of processes, such as growth hormone production and internode elongation.
Zinc deficiency is probably the most commons micronutrient deficiency in crops worldwide, resulting in substantial losses in crop yields and human nutritional health problems.
Deficiency in Zinc might result in significant reduction in crop yields and quality. In fact, yield can even be reduced by over 20% before any visual symptoms of deficiency occur.

Symptoms of Zinc deficiency include one or some of the following:
- Stunting
- Reduced height
- Interveinal chlorosis
- Brown spots on upper leaves
- Distorted leaves

APPLICATION

Crop	Recommendation	Time
In all crops	1-3 L/Ha (with foliar fertilizer in at least 200L of water. Upon application with backpack sprayer 0.25 - 0.5%)	When required
Cereals	2L /Ha (recommendation for winter cereals)	In autumn from the 3 - leaf stage
Cereals	2L /Ha (recommendation for winter cereals)	In spring from the start of vegetation
Cereals	2 times, 2L /Ha (recommendation for summer cereals)	From 3 leaf stage
Legumes (soy included)	1-2 times, 2L/Ha	From 6 leaf stage
Maize	2 -3 L /Ha	From 4 leaf stage
Hops	3 - 5 times, 2-3 L/Ha	0.5 m growth height to beginning of flowering
Apples and Pears	3L	2 applications, one early season and again after harvest in a minimum of 500L. Apply in 500 to 2000L water per ha.
Beans, groundnuts, peas, soybeans	2L	One to two applications early in 200L water per hectare.
Brassicae (cabbage, etc.)	2L	Apply at the first signs of a deficiency and repeat 3 to 4 weeks later if necessary. Apply in 500L water per hectare.
Citrus	3L	Apply as a full cover spray in spring to all new growth. Two to three applications. Do not spray directly before or during harvest. Apply in 2000L water per hectare
Cotton	2L	Do first application early in the season and repeat the application if required. Apply in 500L water per hectare
Cucurbit (Pumkins, etc)	2L	Apply at the first signs of a deficiency and repeat 3 to 4 weeks later. Apply in 500L water per hectare.
Lettuce	2L	One to two application early in the growing season. Apply in 500L water per hectare.
Solanaceae (peppers, etc.)	2L	Apply at the first signs of a deficiency and repeat 3 to 4 weeks later if necessary. Apply in 500L water per hectare.
Solanaceae (peppers, etc.)	2L	Apply very early in the season and then again after harvest. Apply in 500L water per hectare.

SCHEMATIC DIAGRAM OF THE CAUSES OF ZINC DEFICIENCY IN CROPS



CAUTION

Sonar Gluco Zn is compatible with most agricultural remedies. It is however advisable to do a miscibility test prior to mixing with other chemicals. Do not mix Sonar Gluco Zn with highly alkaline material such as LIME SULPHUR and BORDEAUX mixture, or with any phosphate-containing fertilizers.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

sonar Gluco-Mn

COMPLEXED ORGANIC MANGANESE CORRECTOR

foliar

COMPOSITION	%w/v
Manganese (Mn)	6, 1
pH 6-7	
Density: 1.3	

Natural Chelating Agent (Hepta-Gluconic Acid)

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO Mn is an organic fertilizer. Mn is chelated by gluconic acid, which makes an easier uptake and transport through the plant. This way it keeps or corrects the ideal levels of Mn in the crops.

Manganese supplied to plants in **SONAR GLUCO Mn** is:

- **Efficiently and quickly taken up by plants from solutions in foliar nutrition.**
- **Safe for plants (according to the recommended doses).**
- **Stable in multicomponent solutions used in foliar treatments.**

SONAR GLUCO Mn is essential for:
- Activation of enzymes for the synthesis of chlorophyll
- The assimilation of nitrogen.
- Synthesis of ascorbic acid
- Oxidation reduction reactions in photosynthesis

Manganese deficiency is shown by yellowing of leaves, black spots on the leaf, light green mottling between main veins, loss to quality, eg. Poor skin finish in potatoes.

WHY IS Mn IMPORTANT FOR?

Manganese is used in plants as a major contributor to several biological systems including photosynthesis, respiration and nitrogen assimilation. Manganese is also involved in pollen germination, pollen tube growth, root cell elongation and resistance to root pathogengs.

Transport of Mn within the phloem is limited. Therefore any deficiency symptoms will generally be visible first on the younger leaves. Severe deficiency symptoms can lead to interveinal yellowing with brown or grey flecks (grey speck in oats) and the brown discolouration of cotyledons and seeds of legumes.

Delayed maturity is another deficiency symptom in some species. White / Gray spots on leaves of some cereal crops are a sign of Manganese deficiency.

Once applied, either into the soil, hydroponics or foliar, product is readily assimilated by plants, and Mn on it moves free into floem.

DOSES AND APPLICATION

Crop	Aim / problem	Recommendation	Time
In all crops	To provide Mn	1-3 L/Ha (with foliar fertilizer in at least 200 L water. Upon application with backpack sprayer 0.5% - 1% numerous applications of small amounts increase effectiveness)	When required
Cereals	Yield, N efficiency, photosyntesis rate, winter hardiness	2-3 L/ha (recommendation for winter cereals)	In autumn from the 3 leaf stage
Cereals	Tillering, yield, N effciency, stability	2-3 L/ha (recommendation for winter cereals)	In spring from the start of vegetation
Cereals	Tillering, yield, N effciency, stability	2 times, 2-3 L/ha (recommendation for summer cereals)	From 3 leaf stage.
Potatoes	Reduction in susceptibility to scab	2-3 L /ha	From 3 leaf stage.
Potatoes	Skin quality, resilence	1-2 times, 2-3 L/ha	From the beginning of row closure
Legumes (soy included)	Yield, photosynthesis rate, resilience, winter hardiness	1-2 times, 2-3 L/ha	From 6 leaf stage
Oilseed rape	Yield, photosynthesis rate, resilience, winter hardiness	2-3 L/ha	In autumn from the 4 leaf stage.
Oilseed rape	Yield, photosynthesis rate, resilience, winter hardiness	1-2 times, 2-3 L/ha	In spring from the start of vegetation through to the beginning of flowering
Sugar beet	Yield, photosynthesis rate, winter hardiness	3-5 times, 2-3 L/ha	From 6 leaf stage
General vegetables	Improvement on leaf quality, photosyntesis rate, N efficiency	2-3 times, 2-3 L/ha	Once sufficient leaf mass has developed

SONAR GLUCO Mn is compatible with the common plant protection products. Since not all the influences appearing in practice are predicatble, a miscibility test with small amounts of the products provided for th spraying is always useful. In case of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add Glucco Mn as the last component.

Shake it before use

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco-Mo

COMPLEXED ORGANIC MOLYBDENUM CORRECTOR

foliar

COMPOSITION	%w/v
Molibdenum (Mo)	6, 0
pH 9 - 10	
Density: 1.2	
Natural Chelating Agent (Hepta-Gluconic Acid)	

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

Sonar Gluco Mo is a Mo formulation with gluconic acid that gives stability to the product in extreme conditions.

Sonar Gluco Mo ease the uptake and release the Molybdenum in the system soil -plant.

MOLYBDENUM – ROLE OF NUTRIENT

CONVERTS NITRATES INTO AMINO ACIDSAND PROTEINS WITHIN THE PLANT.

ESSENTIAL FOR THE PROCESS OF SYMBIOTIC NITROGEN FIXATION BY RIZHOBIA BACTERIA IN LEGUME CROPS.

OPTIMIZE PLANT GROWTH

INVOLVED IN SYNTHESIS OF ABA

- OPTIMIZES PLANT GROWTH
- AIDS IN THE FORMULATION OF LEGUME NODULES.
- CONVERTS NITRATED (NO_3) INTO AMINOACIDS AND PROTEINS WITHIN THE PLANT
- INVOLVED IN THE SYNTHESIS OF ABA.

Consequences of molybdenum deficiency:

- Reduction of leaf lamina in legumes.
- Edge and full leaf chlorosis.
- Necrosis.
- Disruption of formation of cauliflower and broccoli heads,
- Cauliflower leaves become lanceolate and younger leaves are reduced ("whiptail").
- Poor nitrogen utilization, excessive accumulation of nitrates in vegetables
- Limited bonding of atmospheric nitrogen.
- Wraker resistance of diseases.

DOSES AND APPLICATION

Crop	Aim / problem	Recommendation	Time
Citrus Fruits	N efficiency, vitality, leaf quality (yellow spot)	1-4 times 0,25 L/ha	From white buds
In all crops	For molybdenum nutrition, N efficiency, yield, photosynthesis rate.	0,25 L/ha (as foliar fertilization in at least 200L water. Upon application with backpack sprayer 0,1%)	When required
General Vegetables	Yield, improvement in nodulation, N efficiency, vitality	1-2 times 0,25 L/ha	Once sufficient leaf mass has developed
Legumes	Improvement in nodulation, N efficiency, vitality	1-2 times 0,25 L/ha	From 6 leaf stage
Medicinal plants, scented plants and spice plants	Yield, improvement in nodulation, N efficiency, vitality	1-2 times 0,25 L/ha	Once sufficient leaf mass has developed
Oilseed rape	To prevent whiptail symptoms, vitality, N efficiency	1-2 times 0,25 L/ha	From 4 leaf stage
Pasture land	Improvement in nodulation, N efficiency, vitality.	2-3 times 0,25 L/ha	During the vegetation period.
Sugar beet	To prevent distorted curding and whiptail symptoms, vitality, N efficiency.	1-2 times 0,25 L/ha	From 6 leaf stage
Sunflowers	N efficiency, vitality	1-2 times 0,25 L/ha	From 4 leaf stage

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Gluco-Fe

COMPLEXED ORGANIC IRON CORRECTOR

soil foliar

COMPOSITION	%w/v
Iron (Fe)	6, 9
pH 6-7	
Density: 1,2	
Natural Chelating Agent (Gluconic Acid)	

ECOLOGICAL AGRICULTURE

SYSTEMIC

GLUCO LIFE

CHARACTERISTICS

SONAR GLUCO Fe is a Fe complexed formulation with gluconic acid that gives stability to the product in extreme conditions. This complex ease the uptake and release of the nutrients in the plant.

WHAT IS Fe IMPORTANT FOR?

Iron deficiency. The most obvious symptom in plants is commonly called leaf chlorosis. This is where the leaves of the plant turn yellow, but the veins of the leaves stay green.

Tipically, leaf chlorosis will start at the tips of new growth in the plant and will eventually work its way to older leaves on the plant as the deficiency gets worse. Other signs can include poor growth and leaf loss, but these symptoms will always be completed with the leaf chlorosis.

- **Can be used in fertigation**
- **It's especially suitable for foliar application, as it is very gentle and acts without phytotoxicity**
- **It´s highly water-soluble**
- **It´s stable in the pH value range 2 - 12**
- **It´s suitable for use in organic agriculture**
- **Offers an environmentally friendly alternative due to its easy biodegradability (no accumulation in the soil and groundwater)**
- **Offers very good cost-effectiveness**

DOSES AND APPLICATION

FOLIAR APPLICATION

Crop	Aim/Problem	Recommendation	Time
In all crops	To provide iron	3 - 7 L/Ha (in at least 300L water. Upon application with backpack sprayer 1%. Early application are more effective).	When required
Dessert Grapes	Prevention and alleviation of iron chlorosis	3 - 7 L/Ha (not during flowering)	From 3 leaf stage
Greens	Prevention and alleviation iron chlorosis	5 - 7 L/Ha (in at least 400L water. 50-70mL/100m² in at least 4L water/100m²).	When required
Ornamental Plants	Prevention and alleviation iron chlorosis	3 - 7 L/Ha (1L per 100L spray water, not during fflowering)	When required
Pome fruit	Prevention and alleviation iron chlorosis	3 - 7 L/Ha	From hazelnut size
Soft fruit	Prevention and alleviation iron chlorosis	400-500mL (per 100m row)	In February/March
Stone fruit	Prevention and alleviation iron chlorosis	1-2 times, 3-7L/Ha	Fruit set to harvesting
Strawberries	Prevention and alleviation iron chlorosis	Numerous applications, 5-7L/ha	In spring from the start of vegetation
Wine grapes	Prevention and alleviation iron chlorosis	3 - 7 L/Ha (not during flowering)	From 3 leaf stage

SOIL APPLICATION

Crop	Aim/Problem	Recommendation	Time
Dessert Grapes	Prevention and alleviation of iron chlorosis	Lances per cane: 15-20 mL (with 1L water)	In February/March
Ornamental Plants	Prevention and alleviation of iron chlorosis	5-10mL(with 1L water/m² or for fertigation, a maximum of 400 mL in 1000L water.)	When required
Pome fruit	Prevention and alleviation iron chlorosis	3-7 L/Ha	In February/March
Soft fruit	Prevention and alleviation iron chlorosis	Numerous applications 3-7L/ha	In spring from the start of vegetation
Stone fruit	Prevention and alleviation iron chlorosis	30-60mL/tree (in the irrigation procedure)	In February/March
Strawberries	Prevention and alleviation iron chlorosis	300-400mL (per 100m row)	In February/March
Wine grapes	Prevention and alleviation iron chlorosis	Lances per cane: 15-20 mL (with 1L water)	In February/March

SONAR GLUCO FE is compatible with all commonly used plant protection products. Since not all the influences appaearing in practice are predictable, a miscibility test with small amounts of the products provided for the sprying is always useful.
In case of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add Glucco Fe as the last componen. Apply immediately stiring constantly.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Macronutrients

Introduction

Macronutrient deficiency products are specially formulated to address the lack of essential nutrients like nitrogen, phosphorus, and potassium in plants. These products provide a balanced blend of macronutrients to promote healthy plant growth, improve yield, and enhance overall crop quality. They are designed to be easily absorbed by plants, helping to correct deficiencies and restore optimal nutrient levels in the soil.

Our products

- COMPLEX DENSO YELLOW
- COMPLEX DENSO BLUE
- COMPLEX DENSO GREEN
- COMPLEX DENSO RED
- IDEAL SET
- K-PHOSPHORUS
- MAP PLUS
- PAINT K
- PAINT K EXPRESS
- SONAR CA FORTE
- SONAR CAL FLOW
- SONAR CA MG AA
- SONAR NK60

sonar agro

COMPLEX DENSO

NPK Fertilizer with trace elements. Gel formulation

soil foliar

COMPLEX DENSO 27-27-27+Te
COMPLEX DENSO 25-25-25+Te
COMPLEX DENSO 26-26-26+Te
COMPLEX DENSO 20-20-20+Te
COMPLEX DENSO 20-20-20+Te+3Aa
COMPLEX DENSO 20-20-20+Te+6,5%FA
COMPLEX DENSO 20-20-20+Te+4,7MgO
COMPLEX DENSO 25-25-25+Te+3,8MgO
COMPLEX DENSO 20-20-20+Te+5% Seaweed

During the vegetative and fruit

COMPLEX DENSO 30-10-10+Te
COMPLEX DENSO 18-11-14+Te
COMPLEX DENSO 28-11-14+Te
COMPLEX DENSO 45-00-00+Te+3Aa
COMPLEX DENSO 19-09-11+Te+10%FA
COMPLEX DENSO 14-07-14+Te+14CaO
COMPLEX DENSO 14-00-08+Te+17CaO+3,6MgO
COMPLEX DENSO 19-09-11+Te+5% Seaweed

For application during the vegetative stage and stress situation

GEL Formulation

COMPLEX DENSO 13-40-13+Te
COMPLEX DENSO 10-30-10+Te
COMPLEX DENSO 20-30-10+Te
COMPLEX DENSO 10-50-10+Te
COMPLEX DENSO 10-50-10+Te+3Aa
COMPLEX DENSO 12-65-05+Te+0,5MgO

Improves the development of the root system and promotes flowering and fruit set

COMPLEX DENSO 11-17-47+Te
COMPLEX DENSO 12-05-42+Te
COMPLEX DENSO 04-40-55+Te
COMPLEX DENSO 10-10-50+Te
COMPLEX DENSO 10-15-30+Te+3Aa
COMPLEX DENSO 15-10-30+Te+3Aa
COMPLEX DENSO 09-09-39+Te+6,7MgO
COMPLEX DENSO 18-11-59+Te+2MgO

Improves fruit sugar content and promotes fruit development and size

Neutral pH, unlike most liquid foliar that are highly acidic or highly alkaline. COMPLEX DENSO can be used at higher doses, not being aggressive with the cells that form stomas

More comfortable for the farmer to dosing per volume instead of on weight

Best solution in terms of speed and ease to use. Allow higher liquid dispersion homogeneity than solid products

Guarantee solubility by its GEL formulation

Adjuvant: promotes effectiveness of plant protection products when applied jointly

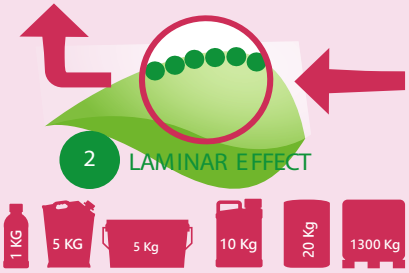
Multiple formulas for different crops and different stages of growth

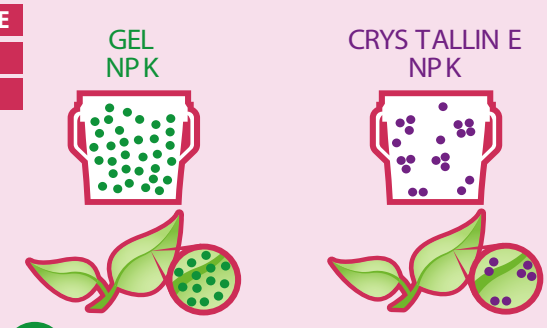
COMPLEX DENSO is a formulated nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form.

COMPLEX DENSO has an uniform and simultaneous solubility of all the nutrients, during use, while avoiding sedimentation in the storage containers of the nutrient solution. In contrast, common NPK water soluble powder fertilizers, which are produced through a mixture of raw materials, have increase variability in grain size that results in a non-uniform dilution of nutrients, since the smallest grains are dissolved firstly.

The conductivity and the salinity index are maintained in very low levels so that the soil will not be burndened with undesirable, salt concentration.

GREATER PERSISTENCE
BETTER UPTAKE
HIGHER EFFICIENCY





FERTILIZER
CE
IMPORTED FROM EU

sonar agro

COMPLEX DENSO
YELLOW GEL

NPK Fertilizer with trace elements. Gel formulation

soil foliar

Composition

	%w/v
Total nitrogen (N)	26,0
Phosphorus (P2O5)	26,0
Potassium (K2O)	26,0
Boron (B)	0,016
Iron (Fe) chelating agent EDTA	0,047
Copper (Cu) chelating agent EDTA	0,016
Manganese (Mn) chelating agent EDTA	0,016
Zinc (Zn) chelating agent EDTA	0,016
Density	1,40

GEL NPK Fertilizer

YELLOW GEL
26-26-26+Te

Neutral pH , **unlike most liquid foliar that are highly acidic or highly alkaline. COMPLEX DENSO can be used at higher doses, not being aggressive with the cells that form stomas**

More comfortable **for the farmer to dosing per volume instead of on weight**

Best solution **in terms of speed and ease to use. Allow higher liquid dispersion homogeneity than solid products**

Guarantee solubility by its GEL formulation

Adjuvant : promotes effectiveness of plant **protection products when applied jointly**

Characteristics

Complex Denso is a formulated nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form.

It has an uniform and simultaneous solubility of all the nutrients, during use, while avoiding sedimentation in the storage containers of the nutrient solution. In contrast, common NPK water soluble powder fertilizers, which are produced through a mixture of raw materials, have increase variability in grain size that results in a non-uniform dilution of nutrients, since the smallest grains are dissolved firstly.

The conductivity and the salinity index are maintained in very low levels so that the soil will not be burndened with undesirable, salt concentration.

Application

Application is suitable for different crops: fruit trees, coffee, olive trees, vegetable crops, industrial crops, meadows, etc. It can be used in drip irrigation, foliar application and flood irrigation. Complex Denso can be combined with almost all the fertilizers and pesticides. In case of doubt we recommend a trial or consult our technical department.

Crops	Dosages		Applications
Cereals	**2-5l/ha**	**600 ml/100l**	1-2 applications.
Citrus	**2,0 - 3,0l/ha**	**200-300 ml/100l**	2-3 applications with 15 day intervals.
Fruits and Vines	**1,5 - 3,0l/ha**	**100-200 ml/100l**	Apply before flowering. Repeat every 15 days.
Ornamentals	**1,0 - 2,0l/ha**	**50-100 ml/100l**	Use low rate on young or delicate plants.
Potatoes	**2,0 - 3,0l/ha**	**400 ml/100l**	1-2 applications early in crop cycle.
Sugar Beet	**3,0l/ha**	**500ml/100l**	1-2 applications early in crop cycle.
Vegetables	**2,0 - 2,5 l/ha**	**200 ml/100l**	2-4 applications once transplanting established
Rice			
Seed nursery	**3,0 l/ha**	**300 ml/100l**	1-2- applications before transplanting
Root soak	-	**200 ml/100l**	Soak roots prior to transplanting
Post transplant	**2,0 l/ha**	**200 ml/100l**	Apply at tillering

It is recommended to shake before use.

FERTILIZER
CE
IMPORTED FROM EU

sonar agro

COMPLEX DENSO
BLUE GEL

NPK Fertilizer with trace elements

foliar

COMPOSITION	%w/v
Total Nitrogen (N)	45,00
Boron (B)	0,016
Iron (Fe) chelating agent EDTA	0,047
Copper (Cu) chelating agent EDTA	0,016
Manganese (Mn) chelating agent EDTA	0,016
Zinc (Zn) chelating agent EDTA	0,016
Molybdenum (Mo)	0,016

GEL
NPK
Fertilizer

BLUE GEL
45-00-00+Te

CHARACTERISTICS

COMPLEX DENSO is a formulated crop nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form. It is an ideal supplement to a well-balanced crop nutrition program. COMPLEX DENSO has uniform and simultaneous solubility of all nutrients and does not result in sedimentation due to the presence high-quality dispersant and suspension agents. COMPLEX DENSO ensures very uniform dilution and dispersion of nutrients compared to powdered NPK formulations. COMPLEX DENSO maintains a very low conductivity and salinity index so that both plant and soil will not be stressed and burdened with underisable salt concentrations.

COMPATIBILITY

The product is generally compatible with other foliar fertilizer, insecticides, and fungicides. Do not mox with strong oxidant agents and agro-chemicals with high pH. If unsure about compatibility of the product with other agricultural chemicals, prepare a small separate mixture first and check compatibility. Text spray also on a few plants first.

STORAGE AND DISPOSAL

Store product in its original labeled container and store in a cool dry place. Keep away from any heat source and direct sunlight. Do not store in open or unlabeled containers. Avoid storing product in freezing temperature. Dispose empty containers in proper waste containers.

WARRANTY

SONAR AGRO S.L. warrants that this product is of high quality and conforms to the chemical description in this label.

WARNING AND PRECAUTIONS

Not a hazardous substance but keep away from fire, explosive materials, and other chemicals. No adverse effect on human health but it is always recomended to practice good hygiene and safety in handing the product. It should not be taken internally.

CROP	TIME OF APPLICATION	INTERVAL	DOSAGE
Rice	Rooting to tillering stage. Spray 2-3 times per cropping.	10-14 days	50-75ml/ 16L water
Corn	1 week after germination. Spray 3-4 times per cropping.	7-10 days	50-75ml/ 16L water
Fruiting Vegetables (tomato, eggplants, hot and sweet pepper, okra)	7-10 days after transplanting to end of vegetative stage. Spray 3-4 times/cropping	7-14 days	50-75ml/ 16L water
Brassicas (cabbage, cauliflower, broccoli, mustard, pechay, pakchoy)	3 to 4 true leaves stage to maturity. Spray 3-4 times per cropping.	10-14 days	50-75ml/ 16L water
Leafy Vegetables (Lettuce, Celery, Spinach)	3 to 4 true leaves stage to maturity. Spray 3-4 times per cropping.	7-10 days	50-75ml/ 16L water
Legumes / Cucurbits (Sitao, Beans, Upo, Ampalaya, Patola, Pipino, Squash, Watermelon, Melon)	4 to 6 true leaves stage to end of vegetative stage. Spray 3-4 times pero cropping.	10-14 days	50-75ml/ 16L water
Onions / Garlic	7 to 10 days after transplanting to bulb formation. Spray 3-4 times per cropping.	10-14 days	50-75ml/ 16L water
Plantation Crops (Banana, Pineapple)	Vegetative stage to pre-pflowering stage.	21-28 days	50-75ml/ 16L water
Root Crops (Potato, Carrots, Cassava, Ube, Kamote)	3-4 true leaves stage to tuber formation. Spray 4-5 times per cropping.	10-14 days	50-75ml/ 16L water
Fruit Trees (Mango, Papaya, Citrus, Cacao, Pomelo, Durian, Coffee)	Apply during growing stage and off-season period.	10-14 days	50-75ml/ 16L water
Ornamentals / Cut-Flowers / Herbs	4-6 true leaves stage. Do regular maintenance feeding.	10-14 days	50-75ml/ 16L water

NON TOXIC

Shake it before use

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

COMPLEX DENSO
GREEN GEL

NPK Fertilizer with trace elements. Gel formulation

soil foliar

Composition	%w/v
Total nitrogen (N)	10,0
Phosphorus (P_2O_5)	50,0
Potassium (K_2O)	10,0
Boron (B)	0,016
Iron (Fe) chelating agent EDTA	0,047
Copper (Cu) chelating agent EDTA	0,016
Manganese (Mn) chelating agent EDTA	0,016
Zinc (Zn) chelating agent EDTA	0,016
Density	1,35

GEL NPK Fertilizer

GREEN GEL
10-50-10 +Te

Neutral pH , **unlike most liquid foliar that are highly acidic or highly alkaline. COMPLEX DENSO can be used at higher doses, not being aggressive with the cells that form stomas**

More comfortable **for the farmer to dosing per volume instead of on weight**

Best solution **in terms of speed and ease to use. Allow higher liquid dispersion homogeneity than solid products**

Guarantee solubility by its GEL formulation

Adjuvant : promotes effectiveness of plant **protection products when applied jointly**

COMPLEX DENSO is a formulated nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form.

COMPLEX DENSO has an uniform and simultaneous solubility of all the nutrients, during use, while avoiding sedimentation in the storage containers of the nutrient solution. In contrast, common NPK water soluble powder fertilizers, which are produced through a mixture of raw materials, have increase variability in grain size that results in a non-uniform dilution of nutrients, since the smallest grains are dissolved firstly.

The conductivity and the salinity index are maintained in very low levels so that the soil will not be burndened with undesirable, salt concentration.

Application is suitable for different crops: fruit trees, coffee, olive trees, vegetable crops, industrial crops, meadows, etc. It can be used in drip irrigation, foliar application and food irrigation.

COMPLEX DENSO can be combined with almost all the fertilizers and pesticides. In case of doubt we recommend a trial or consult our technical department.

Crops	Dosages	Applications
Cereals	**2-5l/ha** **250 ml/100l**	Early in crop cyrcle. Followed by 2nd application 14 days later.
Paprika	**2,0 - 3,0l/ha** **200-300 ml/100l**	1st application 3 weeks after transplanting, followed with a 2nd application 14 days later.
Roses and Ornamentals	**2,0 - 3,0l/ha** **200-300 ml/100l**	Monthly applications on perennials. 2 applications 14 days apart on annual during initial growth stages.
Strawberries	**3,0l/ha** **300 ml/100l**	Single application 3 weeks after planting.
Tomatos and Peppers	**2,0 - 3,0l/ha** **200-300 ml/100l**	1st application 3 weeks after transplanting, followed by a 2nd application 14 days later.
Vegetables	**3,0l/ha** **200-300 ml/100l**	1 to 2 applications early on in growth period of crop.
Other crops	**2,0 - 2,5 l/ha** **300 ml/100l**	For crops with phosphate deficiencies, repeat at 10-14 days intervals as required.

It is recommended to shake before use.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

COMPLEX DENSO
RED GEL

NPK Fertilizer with trace elements. Gel formulation

soil foliar

Composition	%w/v
Total nitrogen (N)	18,0
Phosphorus (P_2O_5)	11,0
Potassium (K_2O)	59,0
Magnesium (MgO)	2,00
Boron (B)	0,016
Iron (Fe) chelating agent EDTA	0,047
Copper (Cu) chelating agent EDTA	0,016
Manganese (Mn) chelating agent EDTA	0,016
Zinc (Zn) chelating agent EDTA	0,016
Density	1,54

GEL NPK Fertilizer

RED GEL

18-11-59+2MgO+Te

Neutral pH, unlike most liquid foliar that are highly acidic or highly alkaline. COMPLEX DENSO can be used at higher doses, not being aggressive with the cells that form stomas

More comfortable for the farmer to dosing per volume instead of on weight

Best solution in terms of speed and ease to use. Allow higher liquid dispersion homogeneity than solid products

Guarantee solubility by its GEL formulation

Adjuvant: promotes effectiveness of plant protection products when applied jointly

COMPLEX DENSO is a formulated nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form.

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The conductivity and the salinity index are maintained in very low levels so that the soil will not be burndened with undesirable, salt concentration.

Application is suitable for different crops: fruit trees, coffee, olive trees, vegetable crops, industrial crops, meadows, etc. It can be used in drip irrigation, foliar application and food irrigation.

COMPLEX DENSO can be combined with almost all the fertilizers and pesticides. In case of doubt we recommend a trial or consult our technical department.

Foliar application	
Crops	**Applications**
Horticultural	200 - 250 cc/100L
Fruits, citrus and Vine trees	200 - 300 cc/100L
Olive trees	250 - 400 cc/100L
Extensive	200 - 250 cc/100L
Soil application	
Horticultural	5 - 10 L/100L
Fruits, citrus and Vine trees	5 - 10 L/100L
Olive trees	5 - 10 L/100L
Extensive	5 - 10 L/100L

FERTILIZER

CE

IMPORTED FROM EU

It is recommended to shake before use.

sonar agro

NEW
IMPORTED FROM SPAIN

IDEALSET

POTASSIUM AND CALCIUM CARBOXYLATES

Soil foliar

COMPOSITION	%w/w
Water-soluble Potassium Oxide (K_2O)	30,0
Water-soluble Calcium Oxide (CaO)	5,0
Glycine-betaine	15,0

HIGH SOLUBILITY

QUALITY CROPS

CHARACTERISTICS

IDEALSET is completely soluble.

IDEALSET is a fertilizer that combines carboxylic acids and osmo-protective agents with potassium and calcium. A balanced formulation, without nitrogen and chlorides, manufactured with high-quality raw materials to ensure complete assimilation and guarantee its agronomic effectiveness.

IDEALSET provides essential nutrients and osmo-regulators to enhance fruiting, from setting to fruit ripening. The combined and balanced application of potassium and calcium achieves synergistic effects on the increase in harvest quality. On one hand, it helps increase the size of reserve organs, their sugar content, and post-harvest preservation. At the same time, it reduces physiological disorders associated with to simple or combined calcium and potassium deficiencies

BENEFITS

- Enhances fruiting from setting to ripening.
- Improves harvest quality with balanced potassium and calcium.
- Increases sugar content and post-harvest preservation.
- Reduces physiological disorders linked to deficiencies.

FOLIAR APPLICATION

IDEALSET can be applied in any crop, especially during active periods with higher potassium demand. Apply regularly from the onset of fruiting until harvesting.

FOLIAR APPLICATION: 200-400 g/hl.
FERTIGATION: 5-10 kg/ha/application.

FERTILIZER
CE
IMPORTED FROM EU

1L 5L 20L

sonar agro

Map Plus

Phosphorus and Nitrogen Fertilizer

soil foliar

Composition	%w/v
Total Nitrogen (N)	10
Ammoniacal Nitorgen (N-NH_4)	10
Phosphorus Pentoxide (P_2O_5)	61

Density: 1,4

Acid pH

Quality Crops

HIGH CONCENTRATION SOLUTION

EASY TO HANDLE AND APPLY

FREELY SOLUBLE AND QUICKLY DISSOLVING

PRODUCT OF HIGH PURITY, NO RESIDUE OR CONTAMINANTS

ACTIONS

IMPROVES THE GROWTH OF HIGH QUALITY ROOTS AND SHOOTS

POWER THE OVERALL PERFORMANCE OF THE PLANT

BETTER ENU (EFFICIENCY OF NUTRIENT USE) IN ALKALINE AND ACID SOILS

Characteristics

MAP PLUS monoammonium phosphate is a deal for use in the initial growth phase of all crops, immeadiately before and after seeding and planting/transplanting.

MAP PLUS is a stable solution compatible with all direct fertilizers based on Phosphates. It is especially suitable during the first half of the crops cycle.

MAP PLUS is a liquid fertilizer free of chloride and sodium. It is the ideal fertilizer for increasing the availability of soil-phosphorus, especially in calcareous soils. It consists in high purity nutrients and no residue or contaminants.

APPLICATIONS

Crops	Timing	Rate L/ha	Comments
Cereals	Spring	4-5	Apply when deficiency is suspected, when soil/weather conditions prevent adequate phosphate uptake through the roots, or when SAP analysis shows low nutrient status. Repeat as necessary at 10-14 day intervals.
Maize	4-8 leaves	12	Apply when deficiency is suspected, when soil/weather conditions prevent adequate phosphate uptake through the roots, or when SAP analysis shows low nutrient status. Repeat as necessary at 10-14 day intervals.
Potatoes	7-10 days after tuber iniciation	4-5	At 7-10 days start of tuber iniciation. Crops are usually meeting along the rows at this stage.
Other crops	As required	4-5	Apply when deficiency is suspected, repeat after 10-14 days if required.

MAP PLUS can be mixed with all common formulations, except with products with acid reaction b ased on Calcium and Sulphur, min eral oils and emulsions. Asimple mixture test to check compatibility is advisable.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

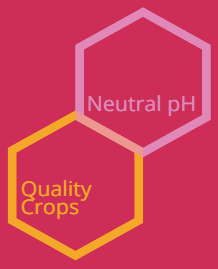
K-PHOSPHORUS

Phosphorus and Potassium fertilizer

soil foliar

Composition

	%w/v
Phosphorus (P_2O_5)	45
Potassium (K_2O)	55
Density: 1,6	
pH (solution 10%): 7-8	



Characteristics

K-PHOSPHORUS is a high solubility mineral fertilizer, which is in gel form for foliar or fertirrigation application.

K-PHOSPHORUS it has a particularly formulation suitable to be applied when required to provide an adequate supply of phosphorus and potassium in specific vegetative stages.

The proper ratio of phosphorus-potassium **K-PHOSPHORUS** promotes an optimal fruit development in size, color and flavor in addition to promoting proper lignfication of shoots, favoring flowering.

- **Fertilizer rich in phosphorus and potassium.**
- **Balanced composition.**
- **Neutral pH.**
- **High solubility of macronutrients (P,K).**
- **Maximum technology with highly selected raw materials.**
- **100% free of impurities and chlorine.**
- **Safety, comfort and easy handling.**

Applications

Crops	Details
Fruit trees and citrus	To increase the caliber accelerate ripening and increase the sugar content of citrus
Olive	To increase the caliber, the oil content and the hardness of the pulp
Vine	To increase the ripening and generally improve the quality of the harvest
Sugarbeet	To increase the sugar content
Vegetables	To improve size and quality

soil dosage: 5-7 L/Ha **foliar dosage: 300-400 cc/100L of water according to crop and vegetative stage**

CAUTION

K- PHOSPHORUS can be mixed with all common formulations, except with products with acid reaction based on Calcium and Sulphur, mineral oils and emulsions. Asimple mixture test to check compatibility is advisable.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

PaintK

Potassium fertilizer

soil foliar

Composition %w/w

Potassium (K_2O)	50,0
Nitrogen (N)	3,0
EDTA	1,0

Density: 1,5@18º

Characteristics

PAINT K is a concentrated formulation containing potassium and nitrogen. The presence of EDTA increases the efficiency by improving the availability of potassium in the plant when it most needs it.
Recommended for all types of crops.

PAINT K helps the plant create a leaf environment uninviting to leaf pathogens such as podery midew and botrytis. Potassium (K) plays a particularly crucial role in a number of physiological processes vital to growth, yield, quality and stress resistance of all crops.

Paint K increases:

- Concentration of sugars
- Average fruit weight
- Fruit size
- Production
- Stress Resistance

Application

Crop	State
Citrus fruits	Apply when the fruit is setting, swelling and before harvesting.
Cotton	2-4 treatments during the crop's life cycle.
Fruit trees	Apply when the fruit is setting, swelling and before harvesting.
Grapes	Apply when the fruit is swelling, ripening and gaining colour.
Horticultural crops	2-6 applications throughout the crops vegetative cycle.
Olive trees	Apply when the fruit is setting, swelling and before harvesting.
Strawberries	1-3 treatments during flowering, fruit formation and formation of the tubers.
Sugarbeet	From 2 months before harvesting and onwards.

soil dosage: 10-30L/Ha every 15 days

Cautions

SONNE AGRO S.L. guarantees the content and formulation indicated in the data sheet and label but not mixtures or manipulations carried out with the product. In case of mixture or combination with other product it should be previously tested for compatibility.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Paint K express

Potassium fertilizer

soil foliar

Composition	%w/w
Potassium (K_2O)	30,0
Total Humic extract	30,0
Fulvic Acids	27,0
Humic Acids	3,0

High level POTASSIUM Concentration

Yield + Quality

HIGH SOLUBILITY

Paint K express increases:

- Higher size fruit
- Best consistency
- More intense colour
- Advancement of ripening

Characteristics

PAINT K EXPRESS helps the photosynthesis and takes part in the balance acid-cell base. It ensures the transformation of organic acids into sugars in order to improve the precocity and increase the Brix degress.Is a product with high potassium content, nitrogen and chelating agent EDTA.

The presence of EDTA contributes by facilitating the absorption of micronutrients in the soil. **PAINT K EXPRESS** should be applied in stages of potassium peak demand, specially during the formation and maturation of the fruit. It plays an important rol in the production, transport and reserve of sugars into the plant.

CROP	INTERVALS	GENERAL DOSAGES
Vineyard	2-4 applications separated by 10-15 days starting from the nouasion stage and during ripening.	**Foliar dosage:** 3-4 Kg/Ha **Optimal concentration:** 300g/hl-400g/hl **Maximum concentration:** 1000g/hl On young and fragile foliage max. 500g/hl
Fruit trees (stone fruits, pip fruits)	2-3 applications separated by 15 days starting at the beginning of fruits growth and up to 2 weeks before harvest.	
Field crops (Beets, potatoes, taproots)	3-5 interventions on sufficiently developed foliage.	
Vegetables (tomatoes, peppers, melon...)	3-5 interventions on sufficiently developed foliage.	

soil dosage: 7-15 Kg/Ha x app.
(to be diluted to 10% max. in mother solution)

FERTILIZER

CE

IMPORTED FROM EU

1Kg 5Kg 10Kg 20Kg

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Ca FORTE

Calcium, Boron and Aminoacids

soil foliar

COMPOSITION	%w/w
Calcium (Ca)	8,0
Boron (B)	0,2
Free amino acids	4,5
Total amino acids	6,0

Yield and Quality Crops

ECOLOGICAL AGRICULTURE

Characteristics

SONAR Ca FORTE is a Calcium deficiency correct or th at is a ppli ed as a foliar spray or through fertirrigation . A faster response will be observed when foliar is being applied, especially during periods of stress (drought, high tempera- ture, etc).

SONAR Ca FORTE prevents and corrects:

- **Calcium deficiency in plants**
- **Firmness improvement**
- **Preservation improvement**
- **Less physiopathy incidence**
- **More marketable fruits**

Calcium from **SONAR Ca FORTE** is quickly uptaken and trans located to the growing points of the plant. In addition , the Free amino acids present in the formulation are used by the plant to increase its photosynthetic activity and other metabolic processes, thus reducing the stress factors and mobilizing the active Calcium.

- Blossom end rot (apical necrosis) in tomatoes, peppers, eggplants and watermelons.
- Watercore and glassiness in melons. Internal leaf and curb defects in cauliflower.
- Internal browning of Brussels sprouts. Leaf tipburn in spinach, lettuce, celery, cabbage and strawberry
- Internal browning, hollowheart, storage disorders, and poor skin set in potatoes.
- Cavity spots in carrots.
- Bitter pit, cork spot, cracking, internal brownspot, and water core in apples
- Meristem death or distortion of new growth from meristems in many plants (cupped leaves)
- Cracking in mango, cherry and plum

Applications

Crops

Horticulture	Tomato, Pepper, Cucurbits, Lettuce, Strawberry, Celery, Cabbage, Broccoli, etc
Fruit crops	Apple, Pear, Peach, Cherry, Plum, Citrus, Grapes
Tropical Fruits	Banana, Pineapple, Mango, Durian, Papaya, Cocoa, Guava
Field crops	Cotton Potato, Sugar beet, Rice, Turf, Pastures.

Dosage

FOLIAR: Horticulture and field crops	Apply 3-6 ml/L or 3-6 L/Ha
FOLIAR: Frui t / Vine crops	Apply 5-10 ml/L or 5-10 L/Ha
SOIL: Drip or localized irrigation	Apply 15-30 L/Ha

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L 1000L

sonar agro

NEW
Imported from Spain

sonar
CAL FLOW

Calcium nutrition

soil foliar

COMPOSITION %w/v

Calcium oxide (CaO)	55,0
Density: 1,65 g/cc	
Total Solubility	

ECOLOGICAL AGRICULTURE

CHARACTERISTICS

SONAR CAL FLOW is a highly soluble and stable calcium amendment, presented in concentrated suspension form. It serves as a calcium source known for its low salinity, easy application, and effective assimilation, replacing conventional forms of calcium supply such as nitrates, chlorides, or sulfates.

SONAR CAL FLOW prevents issues associated with calcium deficiency that can lead to reduced yields or crop quality losses, such as blossom end rot, fruit rot, cracking, corky tissue, etc. Calcium reinforces plant tissues during active growth stages, especially during root emergence, flowering, fruit setting, and fruit development.

SONAR CAL FLOW can be used as a sunblock to prevent sunscald damage to fruits and increase resistance to high temperatures and ultraviolet radiation. It can be applied at high doses without causing foliage burns, does not clog nozzles, or corrode application equipment.

BENEFITS:

- Prevents calcium deficiency-related problems like blossom end rot, fruit rot, cracking, and corky tissue.
- Reinforces plant tissues during active growth stages, including root emergence, flowering, fruit setting, and fruit development.
- Provides sun protection to fruits.
- Increase the tolerance to high temperatures and UV radiation.

APPLICATION

Apply **SONAR CAL FLOW** in all types of crops, especially during periods of high vegetative activity critical for calcium nutrition: apex development, root formation, fruit setting, and fruiting.

The dosage should be adjusted according to the crop's calcium requirements, typically ranging between 60-100 kg/ha/cycle (30-60 l/ha/year). Distribute the total dosage in regular applications with weekly frequency.

SOIL APPLICATION

TYPE OF CROPS	Dosis: L/ha
Citrus and tropical fruits	2.5-4 l/ha via fertigation
Fruit trees and olive trees:	2.5-4 l/ha via fertigation
Vineyards	2.5-4 l/ha via fertigation
Vegetable crops	2.5-4 l/ha via fertigation
Field crops	2.5-4 l/ha via fertigation

FOLIAR APPLICATION

While soil application through various irrigation systems is recommended, foliar application is also possible at a rate of 250-500 cc/hl. For foliar applications aimed at protecting fruits from sunscald damage, apply at a dosage of 1.5-2 l/hl.

Work with water volumes that completely cover plant tissues. It is recommended to use a wetting agent to improve product dispersion on fruits.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

sonar Ca Mg Aa

Prevention of physiopathologies caused by Ca and Mg deficiencies

foliar

Composition

	%w/v
Calcium (CaO)	24
Aminoacids	10
Magnesium (MgO)	3
Iron (Fe)	1000 ppm
Manganese (Mn)	1500 ppm
Copper (Cu)	500 ppm
Zinc (Zn)	300 ppm
Boron (B)	1000 ppm
Molybdenum (Mo)	20 ppm
Density: 1,5	
pH (10% solution): 5,5-6	

sonar Ca Mg Aa benefits:

- Increases the sugar content of the fruit
- Improves fruit firmness, color and skin
- Prevents and cures physipathologies causes by Ca and Mg deficiencies
- Increases resistance to fruit cracks and browning
- Lengthens shelf-life and storability

Characteristics

Sonar Ca Mg Aa is a fully water soluble fluid emulsion fertilizer that allows an immediate and well-balanced uptake of calcium and magnesium, even in conditions of water imbalance and enviromental stresses. It is highly effective in any stage of the crop cycle by foliar application. The presence of aminoacids is useful to the plant in the fruit enlargement stage.

Sonar Ca Mg Aa in fruits prevents and cures physiopathologies such as bitter pit in apple trees and rachis dessication in grapes. In horticulture prevents and cures physiopathologies caused by calcium and magnesium deficiencies: blossom and rot in tomato and pepper, desiccation of leaf stalk, leaf margin in melon, collar tip in salad. In floricultre increases leaves and flowers growth and color and prevent leaf spot.

Application

Crops	Condition Control	L/Ha	ml/100L	Details
Apples	Bitter pit	2 - 3	200 - 300	5-7 app.starting at the first sign of growth. Combine sprays
Avocados	Pulp spot	4 - 8,5	400 - 850	Multiple applications
Broccoli	Brown head	2 - 3	200 - 300	4-6 applications starting shortly before head formation
Brussels Sprouts	Internal browning	4 - 6	400 - 600	Multiple applications
Cabbage, Cauliflower, Lettuce, Endive	Tip burn	2 - 4	200 - 400	4-6 applications starting shortly before head formation
Celery, Chicory	Black heart	3,5 - 5	350 - 500	Weekly app. starting shortly before black head symptoms arise
Cherries, Plums	Cracking	3,5 - 6	350 - 600	3-4 applications starting 6-8 weeks before harvest
Cotton	Square shedding	4	400	3 applications between 5-7 leaf stage and flowering
Cucumbers, Melons, Peppers, Tomatoes	Blossom end rot	1,5 - 3,5	150 - 350	6-12 applications during periods of heat stress
Grapes	Reduction of stem dieback and shot berry	3 - 6	300 - 600	3-4 applications from beginning of berry softening to maturity
Kiwis	Blossom end rot	4 - 8,5	400 - 850	Multiple applications
Ornamentals	Improved vase life	2,5	250	Weekly applications
Peaches, Nectrines	Improved fruit firmness	3,5 - 5	350 - 500	4-5 treatments from fruit-set
Potatoes	Internal brown spot	2,5 - 5	250 - 500	Multiple applications during periods of heat stress
Pears	Superficial scald	4 - 6	400 - 600	Multiple applications
Strawberries and other berries	Increased fruit firmness	6	600	3 app. in conjunction with last pre-harvest pesticide sprays

FERTILIZER

CE

IMPORTED FROM EU

FLOW

sonar agro

sonar NK60

Potassium fertilizer

soil foliar

Composition

	%w/v
Potassium (K_2O)	46
Nitrogen (N)	13
pH (10% solution): 6-7	
Specific Gravity: 1,45	

Characteristics

SONAR NK 60 is a highly concentrated, water soluble emulsion containing both Potassium and Nitrogen.

Potassium increases crop yield and improves quality. It is required for numerous plant growth processes.

Visual deficiencies of potassium are light mottling of the leaves around the margins and between the veins.

Benefits

- Increases root growth and improves drought resistance
- Activates many enzyme system
- Maintains turgor, reduces water loss and witing
- Aids in photosynthesis and food formation
- Reduces respiration, preventing energy losses
- Enhances traslocation of sugar and starch
- Procduces grain rich in starch
- Increases protein content of plants
- Builds cellulose and reduces lodging
- Helps retard crop diseases

Application

Crops	Rate L/Ha	Rate ml/100L	Details
Avocados	2,5	500	Multiple applications required up to 30 days before harvest
Apples	2,0	400	2-3 applications starting at petal fall to fruitlet stage
Citrus	2,0	400	1-3 applications
Cotton	2,5	500	2 applications at beginning and end of boll ripening. Apply with boron at 2 L/Ha
Flowers	2,0	400	3-4 applications during main growth stage
Grapes	2,0	400	2-3 applications from flowering to ripening
Maize	2,0	400	1-2 applications during growth period
Olives	2,0	400	3-4 applications during fruit development
Peppers & Tomatoes	2,5	500	2-3 applications from fruit set
Potatoes	2,0	400	2-3 applications from flowering to tuberisation
Rice	2,0	400	2 applications starting at flowering

Cautions

SONAR NK 60 has Good compatibility with all phytosanitary products. With products based on trace elements, reduce the dose and make a test

SONAR NK 60 should be stored in frost free conditions with optimum storage range between 5-40°C. **SONAR NK 60** is a non-hazardous and not flammable foliar fertilizer.

Always shake the container before opening.

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Micronutrients

Introduction

Micronutrient deficiency products are formulated to address the lack of essential micronutrients in plants, such as iron, zinc, manganese, and boron. These products contain a balanced blend of micronutrients in bioavailable forms that are readily absorbed by plants.

Our products

KALBOR

KELAT Fe 10

KELAT MIX MICRO

KELAT MIX MICRO L

SONAR BORON

SONAR BORON SOLID

Kalbor

Boron and Calcium Corrector

soil foliar

COMPOSITION	%W/W
BORON (B)	15,0
CALCIUM (CAO)	7,0

HIGH SOLUBILITY

Quality and Post-Harvest Life

Characteristics

KALBOR is a formulation with Calcium and Boron as a synergic nutrient, totally soluble and assimilable. It is quickly fixed in vegetal tissues and therefore it is particularly useful to produce fruits and berries more resistant to physiopaties and to strokes during harvest, to improve their keeping and to reduce the cracking (or splitting) of fruits. Applied just after fruit-set it stimulates cell division and increases the size of fruits.

KALBOR is easily absorbed by the plant and is able to metabolize it immediately. It serves as an activator in the cellular respiration process and enables the active confirmation of many enzymes. Regulates the transport of the products resulting from photosynthesis through the phloem and takes care of the distribution to the organs. Therefore the results of their application are visible in period of vegetative development or stress.

Characteristics

Boron deficiency is shown by bursting of tissue, persishing of the growing points, heart and dry rot, bad blossom quality and reduced fruit setting, deformed fruits.

Calcium deficiency is shown by tipburn, leaves rolled inwards, damaged growing points, reduced fruit firmness, bitter pit and low sotrage potential.

Characteristics

- **Improves the filling and fruit fattening**
- **It also promotes the synthesis of protein and starch (Increase of the Brix degress)**
- **It facilitates the ripening of fruit**
- **Accentuating the color of the fruit without reducing its useful life**

Application

Crops	Soil	Foliar Spray*	Application&Interval
Flowers and ornamentals	2 - 4 Kg/Ha	100 - 200 g/100L	Before flowering
Horticulture	4 - 8 Kg/Ha	100 - 300 g/100L	After fruit set every 15-25 days
Nursery	2 - 3 Kg/Ha	200 - 300 g/100L	In case of stress condition
Industrial crops	-	150 - 200 g/100L	In cereals before the formation of pinacle, generally before flowering
Orchards, vineyards, citrus	-	250 - 500 g/100L	After fruit set, along the season every 15 days

Cautions

Kalbor is compatible with the common plant protection products. Since not all the influences appearing in practice are predictable, a compatibility test with small amounts of the products spraying is always useful. Don't mix with fertilizers containing phosphate or sulfate In case - of mixture with fertilizers or plant protection products fill sprayer up to 2/3 with water and add products separately. Add as the last component.

FERTILIZER

CE

IMPORTED FROM EU

1 Kg | 5 Kg | 20 Kg

sonar agro

Kelat Fe 10

Iron EDTA Chelate

soil foliar

Composition

	%w/v
Iron (Fe)	10
Chelating Agent: EDTA	

EDTA COMPLEX

Kelat Quality

Characteristics

- ESSENTIAL FOR CHLOROPHYLL DEVELOPMENT AND FUNCTION
- PRODUCTION OF THE PLANT HORMONE ETHYLENE
- REACTIONS INVOLVING CELL DIVISION AND GROWTH
- YIELD AND QUALITY

KELAT Fe 10 is a fully chelated, plant available liquid iron micronutrient and ethylenediaminetetra acetic chelating agent.
Provide the necessary chelated iron, stable, soluble and directly assimilated by plants.

- PROTECTION OF MICRONUTRIENT AGAINST PRECIPITATION IN A MODERATE PH – RANGE (PH 4-7).
- FOR FERTIGATION AND FOLIAR APPLICATION
- COMPATIBLE WITH THE MOST WATER-SOLUBLE FERTILIZERS

Dosage and Application

SOIL APPLICATION

CROP	Application Date	Total dosage in L/ha	Total dosage in ml/tree
Banana	3 applications: -1x: establishment stage -2x: during intensive vegetative growth	80-100 L/ha	40-60 ml/unit
Citrus	3 applications: -just after flowering -at beginning of fruit coloring -after harvest	50-80 L/ha	100-160 ml/tree
Strawberry	3 applications: -just before blooming (white bud-stage) -at fruit growth -after harvest	5-10 L/ha	
Stone Fruit	3 applications: -just after fruit setting -during intensive vegetative growth -after harvest	5-40 L/ha	5-40 ml/tree
Vegetable & Flowers	2-3 applications: -4-6 leave stage -during intensive growth	30-50 L/ha	

FOLIAR APPLICATION

CROP	Application Date	Total dosage in L/ha	Total dosage in ml/tree
Agricultural crops (e.g. cereals, potatoes, sugar beet, rape)	2-3 applications, as of the first symptoms of chlorosis	1,3 – 20 L/ha	200-300 L water
Fruits general Preventive treatment: Curative treatment:	1 application after blooming 2-3 applications, as od the first symptoms of chlorosis	 0.7-0.9 L/ha 0.7-0.9 L/ha	 500-1000L water 500-1000L water
Vegetables Preventive treatment: Curative treatment:	1 application, at the start of the generative stage 2 applications, as of the first symptoms of chlorosis	 0.4-0.7 L/ha 0.7-1.3 L/ha	 500-1000L water 500-1000L water

FERTILIZER

CE

IMPORTED FROM EU

sonar agro

Kelat MIX micro

Multiple deficiencies corrector

soil foliar

Composition	%w/w
Iron (Fe)	7,50
Manganese (Mn)	3,50
Zinc (Zn)	0,70
Boron (B)	0,65
Copper (Cu)	0,28
Molybdenum (Mo)	0,03
Chelating Agent: EDTA	

HIGH SOLUBILITY

Kelat Quality

Characteristics

Kelat MIX micro is a solid compound, highly-soluble in all types of water and whose Iron, Manganese, Copper, Zinc, Boron, Molybdenum and Magnesium micronutrients contribute simultaneously to the plant by providing the necessary dosage of nutrients that are indispensable for the perfect development of any crop.

Kelat MIX micro allows easy and correct dosage which offers instant solubility and high agronomic efficiency; obtaining good yields and high quality crops.

Except for the Boron and Molybdenum, the nutrients in Kelat MIX micro are included in a molecule (EDTA, ethylenediaminetetraacetic acid) that protects them in the soil and, when applied to the leaves, facilitates their uptake and transport to the plant.

Its unique manufacturing process obtained by chemical mixing in the liquid phase ensures a complete chelation and a total homogeneity; keeping the same composition, size, density, color and guaranteed nutritional balance in each microgranule.

Application

Crops	Dosage	Treatment
Fertirrigation		
General dose	3 - 4 Kg/Ha	Every 7-10 days during the crop cycle
Hydroponic		
General dose	0,3 - 0,5 Kg/m³ of water	Prepare a stock solution 100 times concentrated and employ 1L each 100 L of water irrigation. Use the larger doses during periods of increased growth of crops.
Foliar		
General dose	1 - 1,5 Kg/Ha or 100 - 150 g/100L	Applied when symptoms appear.
Horticultural	3x75 - 100 g/hl of water (3x0,5 - 1 Kg/Ha)	At 10-15 day intervals, beginning when the foliage is enough.
Fruit trees, vines, citrus and olive trees	100 g/100 L of water (1 Kg/Ha) 100 g/100 L of water (1 - 1,5Kg/Ha)	First bloom After fruit set
Field crops, industrial crops	1 Kg/Ha	During the crop cycle
Potatoes and vegetables Bulb	4 x 1 Kg/Ha	At 7/10 days intervals, starting at 10 cm of growth. Apply in a minimum of 500 L / Ha water.
Ornamental	75 - 150 g/hl of water (0,5 - 1,5 Kg/Ha)	2-4 applications with intervals of 7-10 days at the beginning of the growing season

FERTILIZER

CE

IMPORTED FROM EU

1Kg 3Kg 5Kg 20Kg 500Kg

sonar agro

Kelat MIX micro L

Liquid fertilizer corrector of multiple deficiencies

soil foliar

Composition	%w/v
Iron (Fe)	7,50
Manganese (Mn)	3,00
Copper (Cu)	0,40
Zinc (Zn)	5,00
Boron (B)	0,65
Molybdenum (Mo)	0,20
Chelating Agent EDTA	

EDTA COMPLEX

Characteristics

KELAT MIX MICRO L is a GEL chelated micronutrient fertilizer containing Boron, Copper, Iron, Manganese, Molybdenum and Zinc for foliar and soil application to prevent deficiencies and to treat Iron, Manganese, Copper, Zinc, Boron and Molybdenum deficiency in a wide range of crops.

A concentrated liquid alternative to EDTA powder. KELAT MIX MICRO L avoids all the problems associated with storage, handling and mixing powdered chelate; no dust, no weighing, no mess and no problems with storing partly used containers.

- HIGH CONCENTRATION FOR A LIQUID CHELATE
- GOOD TANK MIX ABILITY
- VERY SAFE FORMULATION
- FOR ALL KIND OF CROPS
- QUICK AND EFFECTIVE ASSIMILATION

ACTIONS

- CORRECTS SEVERES MICRONUTRIENTS DEFICIENCIES.
- YIELD AND QUALITY IN CROPS.
- EDTA (CHELATING AGENT), FACILITATES THE UPTAKE AND TRANSPORT TO THE PLANT.

Application

FOLIAR	DOSAGE AND TREATMENT
General dose	1–1,5L/Ha or 100–150 ml/100L Applied when symptoms appear.
Horticultural	3 x 75–100 ml/hl of water (3 x 0,5–1L/Ha) At 10-15 days intervals, beginning when the foliage is enough.
Fruit trees, vines, citrus and olive trees	100 ml/100L of water (1L/Ha) First bloom. 100 ml/100L of water (1-1,5L/Ha) After fruit set.

FOLIAR	DOSAGE AND TREATMENT
Cereal, Field crops, Industrial crops	1L/Ha during the crop cycle.
Potatoes and Vegetable Bulb	4 x 1L/Ha At 7/10 days intervals, starting at 10 cm of growth. Apply in a minimum of 500L/Ha water.
Ornamental plants	75–150 ml/hl of water (0,5–1,5L/Ha) 2-4 applications with intervals of 7-10 days at the beginning of the growing season.

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L

sonar agro

sonar BORON

Boron Deficiency Corrector

soil foliar

COMPOSITION	% w/v
Boron (B)	15,0
Density: 1,35-1,4 at 18ºC	

YIELD & QUALITY

Characteristics

SONAR BORON is a liquid defiency corrector for foliar application or directly to soil by fertirrigation. For its high content of BORON, is used at low doses, and it's fully exploiting in crops.

In sugar beet prevents heart diseases or putrid of the root. In apple and pear, **SONAR BORON** prevents bitter pit, and cracked. In grape, **SONAR BORON** improves flowering and prevents the bunch, avoid small and wrinkled fruit. In the olive tree, **SONAR BORON** prevents loss of production, and the deformation of the olive. In horticulture, **SONAR BORON** prevents heart rot in celery, the coiled of leaves in cauliflower and broccoli. In lettuce prevents hearts rotting and burning side, in stud prevents drying of the tip and stems, in potato avoid the necrotic of tubers with deformities.

Doses and application

Horticulture, fruit, citrus, vines and olive trees:

- Weak deficiencies: 100-200 cc/100L
- Moderate deficiencies: 300-400 cc/100L
- Strong deficiencies: 500-600 cc/100L

Field crops: 4-6 L/Ha

Compatibilities

SONAR BORON is compatible with most products. Do not mix with mineral oils, alkaline products or sulfocalcics mixtures.

Application

Crops	Nr. of applications	Crop phenological stage	Product application rate (L/ha)	Sray solution application rate (L/ha)
Arable crops				
Legumes	2	Stem elongation. Pod and seed development.	1.5 1	200-400
Maize	2	4-6 leaves. 6-8 leaves.	0.5 0.5-1	
Potatoes	3	Inter-row closure. Tuber formation. Fruit development.	1 1 1	
Rapeseed	3-4	4-8 leaves. Beginning of stem elongation. 3 to 8 visibly extended internodes. Green bud.	1.5 1.5 1.5 1	
Soybean	1	Development of side shoots and the main shoot	1	
Sugar beets	2	4-6 leaves. Inter-row closure.	2 2	
Wheat *s/w	1	First node to flag leaf.	0.3	
Vegetable crops				
Brassica plants (cabbage,cauliflower, Broccoli)	2-3	Leaf development. Rosette growth. Development of harvestable vegetative plant parts.	0.5 1 0.5-1	300-500
Bulb vegetables (onion, leek)	1-2	Leaf development. Development of harvestable vegetative plant parts.	0.5 0.5	
Cucurbits (pumpkin, zucchini, Cucumber)	3	Leaf development. Formation of side shoots, inflorescence emergence. Flowering, fruit development.	0.5 1 0.5	

* s/w – spring/winter

Crops	Nr. of applications	Crop phenological stage	Product application rate (L/ha)	Sray solution application rate (L/ha)
Vegetable crops				
Leaf vegetables	3	Development of harvestable vegetative plant parts.	0.5	300-500
Legumes (bean, pea)	3	Leaf development. Development of side shoots and the main shoot. Inflorescence emergence and flowering.	0.5-1 1 0.5	
Root vegetables (carrot, celery, beet)	2-5	Leaf development. Development of harvestable vegetative plant parts. Development of harvestable vegetative plant parts.	0.5 1 0.5-1	
Solanaceous (tomato, pepper, early potato)	3-4	Leaf development, formation and growth of side shoots, tuber formation. Inflorescence emergence and flowering. Fruit development. Ripening of fruit and seeds.	1 1 0.5-1 0.5	
Orchard crops				
Pome trees (apple, pear)	4	Bud burst. Pink bud. Flowering. Before leaves fall.	1-2 1-2 1-2 1-2	500-1000
Soft fruits (strawberry, blueberry)	3	Vegetable beginning. Before flowering. Flowering. Before dormency.	1-2 1-2 1-2 1-2	300-500
Stone-fruit trees (sour cherry, sweet cherry)	3	Bud burst. White bud. Flowering. Before leaves fall.	1-2 1-2 1-2 1-2	500-1000

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L 200L 1000L

sonar agro

NEW imported from Spain

sonar BORON SOLID

Boron
Deficiency Corrector

soil foliar

COMPOSITION	% w/w
Boron (B)	20,50

B NATURAL SODIUM BORATE

ECOLOGICAL AGRICULTURE

HIGH SOLUBILITY

Characteristics

Boron (B) is a micronutrient required for all plant nutrition.

Boron (B) is required for all plant growth. Adequate Boron (B) nutrition is critical for high yields and quality of crops. Deficiencies of Boron (B) result in many anatomical, biochemical, and physiological changes in plants. In **sugar beet,** it prevents heart diseases or rotting of the root. In **apple and pear**, it prevents bitter pits and cracks. In **grapes,** it prevents the bunch from developing, avoiding small, wrinkled fruits. In **olive trees,** prevents the loss of production and the deformation of the olives. In **horticulture,** prevents heart rot. In **celery** and the coiled leaves. In **cauliflower and broccoli**. In **lettuce,** it prevents heart rot.

Soil application of **SONAR BORON SOLID** or foliar sprays or can be used to ensure an adequate B supply for optimum growth.with deformities.

Benefits

- CELL WALL STRUCTURE
- FORMATION OF NEW CELLS
- SUGAR TRANSPORT
- FLOWERING AND FRUITING
- DEVELOPMENT OF VIABLE SEEDS
- HIGH SOLUBILITY

Foliar application

CROP	DOSE (g/hL)	APPLICATION TIME
Alfalfa	500(1–2 Kg/ha)	After each cut
Apple and Pear tree	100 – 200	Open buds
	100	Flowering
	100 – 200	Setting and young fruit
Beetroot	1Kg / ha	2-3 applications when first true leaves appear
Cotton	500	2-3 applications when first true leaves appear
Flowers and ornamentals	150-200	When deficiency appears
Horticulture	150-250	When deficiency appears
Kiwi	150-200	------
Olive tree	200 - 400	20-30 days before flowering
Stone fruit trees	200 - 400	2-3 treatments in pre or post flowering
Strawberries and small berries	150-250	When deficiency appears
Vine	200 - 300	2 applications between pre-flowering and each 8-10 days

SOIL APPLICATION

Apply BORON SOLID at 2-4Kg/ha per application

FERTILIZER

CE

IMPORTED FROM EU

1L 5L 20L 200L 1000L

sonar agro

pH Corrector

Introduction

The pH Correctors products offer effective solutions for balancing pH levels in various environments. Whether it's maintaining optimal pH levels in water systems, soil for agriculture, or industrial processes, our range of pH Correctors ensures precise adjustments to meet your specific needs.

Our products

SONAR pH COLOR

sonar pH Color

pH REGULATOR, SURFACTANT WITH COLORING EFFECT

foliar

Composition	%w/w
Total Nitrogen (N)	3
Phosphorus (P_2O_5)	15
Tensioactive	20

pH REGULATOR, SURFACTANT WITH COLORING EFFECT

Characteristics

Sonar pH COLOR is a triple action product that has the following characteristics:

Its acidifying characteristics allows to REGULATE THE pH OF THE SOLUTION of the application between 4.5 to 6.5 (depending on the dosage used).

Increases the foliar dispersion. SURFACTANT EFFECT. It reduces surface tension of water by increasing wetting and spreading properties that improves pesticides and fertilizers performance and reduces losses and phytotoxic effects

THE SYSTEM CONTAINS A pH VALUE INDICATOR BY COLOR which helps an adequate preparation of the solution. Apply by foliar and irrigation.

For these three reasons, Sonar pH COLOR improves the effectiveness of phytosanitary treatments to prevent degradation and facilitate not only a more uniform distribution, but also an enhanced uptake.

SURFACTANT EFFECT

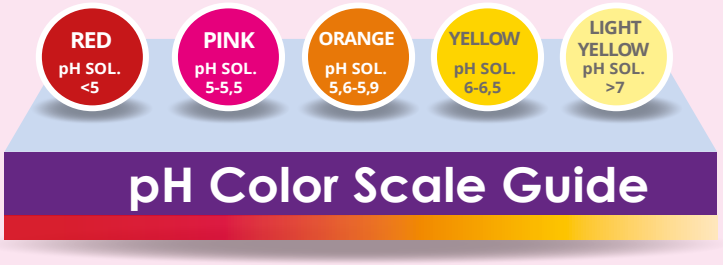
Application

Dosages necessary to carry 1.000 L of solution at pH 6:

Dosages necessary to carry 1.000 L of solution at pH 6:

- If the pH of the solution is 7.0 a 8.0: 400 - 600 c.c.
- If the pH of the solution is 8.0 a 9.0: 500 - 600 c.c.
- If the pH of the solution is 9.0 a 10.0: 600 - 1000 c.c.

Fill the tank with a volume of water higher than the products to add:
Add sonar pH COLOR shaking the solution, put the products of treatment and complete the deposit, then apply.



CAUTIONS:
Keep out of reach of children. Keep away from foodstuffs, beverages and feed. Avoid to treat during the maximum heat hours. Avoid **excessive doses as it may delay maturation and sensitize the attack of certain mushrooms.**

COMPATIBILITY:
XCrops pH is generally compatible with conventional products used in agriculture. It is recommended not to apply with products containingCalcium products, mineral oils ormixed withproducts with alkaline reactions. Pour the product intothe dispenser when it containsabout half the solution you intend to prepare, mixing will be facilitated and solubilization will be sped up by shaking the solution

IMPORTED FROM EU

1L 5L 20L 200L

SHAKE WELL BEFORE USE

sonar agro

Plant Defense Inductors

Introduction

Plant Defense Inductors products strengthen plant defenses against pests, diseases, and environmental stressors. With advanced technology and natural ingredients, they promote healthier, more resilient crops.

Our products

EXCELLENT

SONAR PHOS PK

sonar agro

Excellent

Plant defense inductor

soil foliar

Composition

	%w/w
Phosphorus (P_2O_5)	30
Potassium (K_2O)	20
Free aminoacids	4
pH: 4,5 - 5,5	
Density: 1,42	

Characteristics

EXCELLENT actives the natural mechanisms of the plants defense to protect them against the attack of pathogens.

The incorporation of phosphopeptide, makes the absorption of phosphorus faster and more systematic. This way, their fungicide and ambient anti-stress are strengthened.

Double effect in the global stress:

Against biotic stress: It causes a specific response in the vegetable, stimulating the Proteins of Pathogenic Stress, that protects the plant against a biotic stress by pathogen attack. This response increases the resistance (for generic causes) of the plant.
These amino-acids help keeping the osmotic potential against foliar drying caused by a fungus infection.

Against abiotic stress: Amino-acids contained in EXCELLENT the product offer a great generic response, increasing the tolerance of the plant against the abiotic stress (hydric, temperature, etc.).

With phosphopeptides

Benefits

- Fungicide action
- Safety period: 0 days
- It doesn't cause resistance to pathogens
- High bioavailability
- Excellent compatibility

Applications

All crops	Dose	Nº of applications
Foliar application	250 - 350 mL/Ha	Depending on the stress intensity, make between 2 and 4 applications each 7-14 days
Soil application	8 - 12 L/Ha	

In case of "paint the trunk", apply the product concentrated in a 50%.
In case of submerging the plants, use a dose of 1,0 and 1,5 liters of product each 100 liters of water.

Re-entry to the treated area

0 hours. Not applicable.

Make between 2 and 4 applications each 7-14 days.

EXCELLENT can be applied in every moment. There aren't contradictions or use limitations. It can be use even in the most critical phenological moment (budbreak, flowering, harvest, etc).

IMPORTED FROM EU

sonar agro

sonar Phos PK

Plant defense inductor

soil foliar

COMPOSITION	%w/w
Potassium Phosphonate	96,0
Phosphorus (P_2O_5)	58,0
Potassium (K_2O)	38,0

Characteristics

SONAR PHOS PK is a greater activator of the natural defense of the plant against certain pathogenic fungi and bacteria.

It stimulates the production of Phytoalexins, which enhance the host's natural defences against Oomyces fungi: Phytohtora spp., Plasmopara viticola, Bremia, Pseudoperonospora, Peronospora, Pythyum and also bacteriae: Pseudomonasand Erwinia.

It is specially recommended to prevent diseases caused by these pathogens, such as:

- Water spot and brown rot in citrus fruits.
  Foot rot and trunk-branch canker (Gummosis) in avocados, citrus, top fruits and ornamental trees.
- Fire blight in top fruits.
- Downy mildew in table and vine grapes, lettuces and onions.
- Blight of pepper.
- Root rot and downy mildew in: Strawberries, tomatoes, cucurbits, vegetables and ornamentals.
- Brown blight of conifer fences.
- Damping-off in turf and lawns.

Doses and Application

Crop	Application	Doses/ treatment	Spray volume	Remarks
CITRUS AVOCADO TOP FRUITS	Foliar spray (H.V.)	250 g/hl	1.000 - 3.000 l/ha	Three (3) preventive treatments per season are recommended: in the beginning of Spring, Summer and beginning of Autumn. In top fruits, treat once or twice in pre-blossom or/and petal fall, to prevent Fire blight.
	Foliar spray (mistblower)	600 g/hl	300 - 1.200 l/ha	
	Trunk painting	300 g/l	-	Scratch the infected part of the stem and paint the affected area. In case of high pressure of the disease, make three (3) treatments per season.
	Soil (through drip irrigation)	5 - 7 kg/ha	-	Make 2 preventive treatments: 1st in spring: 2nd in autumn.
STRAWBERRIES	Soil (through drip irrigation)	2,5 - 5 kg/ha	-	Make 2 - 3 treatments from rooting to flowering to prevent attacks of Phytophthora cactorum.
	Foliar spray	250 g/hl	800 - 1.000 l/ha	From the start of flowering to end of harvesting, make 3 - 4 treatments.
VINEYARD	Foliar spray (mistblower)	500 g/hl	300 - 500 l/ha	Treat every 15 days from flowering to ripening. A tank mix with preventive fungicides as Folpet or Mancozed are recommended.
TABLE GRAPES	Foliar spray	250 g/hl	600 - 1.000 l/ha	
LETTUCE and leaf crops	Foliar spray	2,5 Kg/ha	600 - 1.000 l/ha	Two (2) treatments are recommended: 1st: 7-10 days after transplanting. 2nd: 15 days later.
ONIONS	Foliar spray	1,5 - 2,5 Kg/ha	300 - 500 l/ha	Three (3): preventive treatments per season are recommended: 1st: three (3) true leaves stage. 2nd: 15 days later. 3rd: 15-21 days later.
FENCES OF CONIFERS	Foliar spray	250 g/hl	600 / 1.000 l/ha	Make 4 treatments every month from Spring to mid Summer. •Use up to 20-30 g in case of isolated big trees (soil drenching).
	Soil (drip irrigation or drenching)	10 g/m of fence	-	
TOMATOES/ CUCURBITS	Foliar spray	150 - 250 g/hl	800 - 1.000 l/ha	To prevent attacks of Phytophthora infestans/ Pseudoperonospora cubensis fortnightly (15 days) from flowering until mid-end harvesting. A tank mix with Aliado is recommended to also control Alternaria.
PEPPERS	Soil (through drip irrigation or drenching)	2.5 Kg/ha	-	To prevent Phytophthora capsiciattacks, treat every 15-21 days from one week after transplanting to harvesting. A tank mix with Hymexazol is recommended to also control Pythium.
TURF & GOLF COURSES	Foliar or sprinkler irrigation	0,75 -1 Kg/1000m²	-	Monthly treatments from beginning of Spring to mid Autumn are recommended. To control also Helminthosporium sp.and Rhizoctonia, treat (in tank mix) with Chlorothalonil and

IMPORTED FROM EU

sonar agro

Plant Growth Regulator

Introduction

The Plant Growth Regulators products enhance plant growth and development, maximizing yields and quality for your crops. Tailored to meet the specific needs of various crops, these regulators enable precise control over key growth processes such as flowering, fruiting, and branching

Our products

SONAR FORCE

SONAR FRUIT

SONAR GIB

SONAR GROWTH

SONAR SEA

sonar agro

NEW
IMPORTED FROM SPAIN

sonar FORCE

Biostimulant Plant Growth Regulator

Soil foliar

COMPOSITION	%W/V
Free amino acids	17,0
AATC	6,0
Total Nitrogen (N)	3,0
Organic nitrogen (N)	3,0

It acts against water and temperature stress

Characteristics

SONAR FORCE is a organic biostimulant that works without altering the natural processes of metabolism in crops.

SONAR FORCE increases the quality and the quantity of the harvest, while providing a greater defense against stress and pathogen attacks (virus, bacteries).

It acts at two levels:

Provides thiol groups, which increase the enzyme activity and plant metabolism, favoring the vegetative development and a better harvest.

VEGETABLES
-BLOOMING
-FRUIT SET
-FRUIT FORMATION

sonar FORCE
INCREASES HARVEST

FRUIT TREES
-BUDDING
-BLOOMING
-FRUIT SET
-FRUIT FORMATION

Foliar Application

CROPS	DRIP IRRIGATION	FOLIAR APPLICATION
General Dosis	1,5 – 2,5 L/ha	50 – 200 ml/100L

CROPS	DRIP IRRIGATION
Berries, Raspberry, Blueberry and Blackberry	1L/ha. Apply minimum twice: full blooming and fruit set. It can also be applied at fruit sizzing stage.
Citrus	1-1,5L/ha
Potatoes	1L/ha

CROPS	FOLIAR APPLICATION
Strawberries	100ml/100L water. Apply every 3 weeks from first flower.
Fruiting vegetables	100ml/100L water. Apply twice, initially at first flower and repeat 15-20 days later.
Citrus	50-200 ml/100L water. Apply during budbreak and from petal fall to 60% fruit size.
Grapes	150-200ml/100L water. Apply twice. Apply pre-flowering (when the flower truss down), repeat at 75% cap fall.
Nuts, Almonds	100ml/100L water. Apply at leaf expansion and repeat 15 days later.
Potatoes	50ml/100L water. Perform 2-3 applications from emergence to tuber initiation.

IMPORTED FROM EU

sonar agro

sonar FRUIT

Plant Growth Regulator

foliar

Composition

	%w/v
ANA (1-Naphthaleneacetic acid)(SL) 85g/L	8,5

Characteristics

SONAR FRUIT is completely soluble in water, which affect on the the processes related into fruit abscission. The abscission occurs by formation of several layers of specialized cells that ensure the connection between the fruit and plant. Auxin **(SONAR FRUIT)** promotes abscission when applied immediately after fruit set, but, if applied later, to delay fruit abscission preventing fruit drop.

SONAR FRUIT is licensed for clearing of apple fruit, and apple and pear trees to prevent fruit drop.

Actions

PRECAUTIONS FOR USE: if you have no experience with SONAR FRUIT or similar products, consult the or similar products, consult the technical service of the company.

SAFETY: There is no safety term between the last application and harvest term security.

STORAGE: Store in original container in a cool place (not direct sunlight), dry and locked out of reach of children. Do not allow product to freeze.

APPLICATION CONDITIONS: High relative humidity (> 70%). High water volumes are recommended 1000-1500 l / ha Avoid treat with high or very low It is preferable to treat at dusk or on cloudy days. The ANA is destroyed by UV 1500 l/ha) is recommended.

Application

SONAR FRUIT

Apply by spraying, wetting the fruit well, with the indicated doses for guidance. Treatment is done when the temperature is between 15 and 25ªC, and avoid the presence of dew such as the hours of high heat and will NOT MIX WITH OTHERS PRODUCTS if compatibility is unknown.

FRUIT THINNING

ONLY APPLE: 15-20cc/hl apply the old wooden central fruit have a size of 10-15min in diameter, approximately 15-21 days after full flowering.

AVOID FRUIT DROP

APPLE 40cc/hl PEAR 15-25cc/hl apply between 3 and 10 days before harvest, possibly repeated treatment with aten to fifteen days. In late harvest varieties of higher doses may be required.

Cautions

Before using the product, read the label. Use limited to farmers and professionals. To avoid risks to man and the environment, follow the instructions.

IMPORTED FROM EU

sonar agro

sonar GIB

Plant Growth Regulator

foliar

Composition	%w/v
Gibberellic acid (GA3)	1,6
Soluble liquid (SL)	

CHARACTERISTICS

SYSTEM AND TIME OF APPLICATION

Ensure that the wind does not drag the spraying to other neighboring crops. Apply the product shortly after mixing with water to prevent decomposition.

In the event of a precipitation, at 8 hours after treatment, it will lose some of its effectiveness, it is advisable to repeat the treatment.

Growth, blooming and fruiting

USAGE INSTRUCTIONS

Treat with high water volume (600-1500 L / Ha). Add wetting

SONAR GIB is a plant growth regulator characterized by its physiological and morphological effects. Acts at very low concentrations; is translocated inside the the plant and usually affects only the aerial parts.

SONAR GIB reinforces apical dominance ,stimulating flowering, fruiting set, breaking the dormancy of seeds and vegetative organs and removing stress from some virus.

APPLICATION

CROPS	DOSE (cc/hl)	APPLICATION
Artichoke	40	To induce growth and harvest earliness. Treat to start fruiting.
Clementine	30-50	To improve the consistency of the peel (when the green treat is gone).
Lemon and clementine boneless	40	To induce fruit set and fruit setting. Treat at petal drop and repeat the treatment at 3-4 weeks.
Pear (cv.Blanquilla)	60-70	To reduce fruit drop during filling and prevent frost damage. Treat with 30-60% open flower or 48 hours to avoid the effect of frost.
Tangerine	40	To prevent fruit drop (treat at petal drop, repeating at 3-4 weeks) and improve the consistency of the peel (when the green treat is gone).
Vine (cv. Macabeo)	30-50	To induce the elongation of the cluster and peduncles of the fruit. Apply before the falling of the flowerhoods.
Strawberry	60	To promote fruit set and fruit growth. Treat a little before the start of flowering. Can be reduced the dose in plantations over a year old.

IMPORTED FROM EU

sonar agro

sonar GROWTH

Plant Growth Regulator

foliar

Composition	%w/v
Calcium (Ca)	0,8
Zinc (Zn)	2,0
Sulfur (S)	0,8
Fulvic acids	25,0
Nitrogen (N)	9,0

Composition	ppm
Gibberellines	500
Auxines	500
Cytokinins	200
Cisteine	500
Tiamine	1110
Inositol	200

Optimal hormonal balance

Characteristics

SONAR GROWTH is a balanced plant growth regulator with nutrients, and fulvic acids, all of great importance and which have an impact on All compon ents in **SONAR GROWTH** are in ass imilable form by leaves and other plant organs.

The balance between the concentrations of auxins, gibberellins and cytokines in **SONAR GROWTH** allows to have a significant contribution of these compounds to the plant without causing a hormonal imbalance.physiological and metabolism processes of plants.

Excelent flowering and fruit set

Applications

Chard, spinach and open leaf lettuce	Apply 0,75 to 1 L/Ha of 3 to 4 weeks after emergence.
Cotton	Apply 0,75 to 1 L/Ha at the time of first or second squares. Apply mainly in medium and low size varieties or to exit from a stage of stress.
Garlic and onions	Apply 0 ,75 to 1 L/Ha in the moments before the bulb differentiation (10-12 weeks after planting).
Alfalfa	Apply 0 ,75 to 1 L/Ha after each cut when regrowth appears.
Celery	Apply 0 ,75 to 1 L/Ha o f 4 to 6 weeks before cutting.
Broccoli, Cauliflower, Cabbage and Lettuce:	Apply 0, 75 to 1 L/Ha at the beginning of the formation of the head (inflorescence).
Scallion and leek	Apply 0,75 to 1 L/Ha at 30 days after transplantation for leek and 45 days after planting for onions, repeated 30 days later.
Cucurbits (cucumber, melon and watermelon):	Apply 0,75 to 1 L/Ha when the plants are 3-5 true leaves. Repeat at the beginning of the formation of elvers, continue every 15 days until the last cut.
Cereals (wheat, barley, oats, triticale):	Apply 0,75 to 1 L/Ha when full tillering, be ginning of stalk formation and boot stage.
Melon	In plantations with 1 or 2 years, apply 0,75 to 1 L/Ha during the cycle. In cultured 3 more years to 2 applications with 30-day interval between each. The first when the plant is 30 cm height and the second 50cm height.
Flowers	Apply 0 ,75 to 1 L/Ha at the time of the appearance of the flower stems.
Beans, Green Beans, Soybeans	Apply 0, 75 to 1 L/Ha at the time of the appearance of flower buds and repeat 1-3 times every 15 days.
Maize and sorghum	Apply 0, 75 to 1 L/Ha between 6 and 8 fully developed leaves, and if possible repeat in full bloom.
Potato	Apply 0 ,75 to 1 L/Ha at the time of tuber initiation and repeat 15-30 days later.
Tomato, pepper and aubergine	Apply 0. 75 to 1 L/Ha to the appearance of the flowers, repeat every 2 or 3 weeks until the last commercial flowering.
Tobacco	Apply 0 ,75 to 1 L/Ha at 30 days after transplanting and repeat 30 days later.
Citrus, avocado, mango, papaya and guava	Apply 150 to 200ml p er 100 L of water to the appearance of repeating blooms 30 days.
Apple and peach	Apply 150 to 200ml p er 100 L silver tips water (apple) and green tips (peach) and repeat when the fruit has 1 to 2 cm diameter.
Strawberry	Apply 0 ,75 to 1 L/Ha once a month, starting at the time of appearance of the first flower cluster.

IMPORTED FROM EU

sonar agro

sonar SEA

Plant Growth Regulator

soil foliar

Composition	%w/v
Ecklonia Maxima Extract	30,00
Naftilacetic Acid (ANA)	0,45
ANA Amide	1,20
Folic acid	0,10

Characteristics

SYSTEM AND TIME OF APPLICATION

Plants absorb rapidly **SONAR SEA**, form maximum nutritional benefit. Applications of Sonar Sea are recommended to imrpove fruit development. Use in foliar spraying after flowering. Rate and frequency of applications may vary due to active growth and particular crop conditions.

STABILITY AND STORAGE

SONAR SEA is stable for at least three years since manufacturing date. Store in the closed original container in a cool and ventilated area. Do not store for prolonged periods in direct sunlight. Keep away from food, drink and animal feel. Keep out of the reach of children.

SONAR SEA stimulate cell division and cell elongantion, increasing the size of the cells by induction of protein syntesis. This result in healthier plants and increased crop production.

SONAR SEA promotes production of longer and more hormogeneous fruits which keep their flavour and consistency after harvest for a longer period of time. Other benefits include delayed growth, being the result of a stimulated metabolism.

HIGH CONCENTRATION OF NATURAL HORMONES

Actions

- Alleviates the effect of stress.
- Improve nutrient uptake.
- Improves shel-lifes during color
- Increases root mass and growth of seedings.
- Increases the number of fruit, size, color, number and sugar.

Application

CROPS	DOSE (cc/100L water)	APPLICATION
Curcubitaceae (cucumber, zuchinni, etc)	75-100	Apply 10 days after full flowering
Kiwi	100	Apply the 1st 18 days after full flowering and 28 days after full flowering
Grapevine	100	Apply along GB3 for berry growth
Legumes (broad bean, green bean, pea, etc	75-100	Apply 10 days after full flowering
Pomes and stone fruit trees	75-100	Apply 10 days after full flowering
Solanaceae (tomato, potato, eggplant, etc)	75-100	Apply 10 days after full flowering
Strawberry	75-100	Apply 10 days after full flowering

Cautions

Sonar Sea is compatible with most pesticides and fertilizers. For application with plant protection products follow pesticide label directions and make jar test for compatibility.

ECKLONIA MAXIMA SEAWEED EXTRACT

IMPORTED FROM EU

sonar agro

Repellent

Introduction

Repellents products offer effective protection against Birds. With proven formulas and easy application, our products provide long-lasting defense against birds

Our products

Repellent for Bird

Repellent For Bird

FOLIAR APPLICATION

NATURAL CROP PROTECTION AGAINST ATTACKS OF BIRDS

foliar

Composition	%w/w
Methyl Anthranilate	30,0

Characteristics

BIRD Repellent is a powerful biodegradable product for all kinds of birds, to be used in those places where rest, feed or nest.

Its taste and odor is very unpleasant for birds, causing the eviction of them from the place of the application.

It acts as a birds repellent without affecting them or cause them harm. Its effect is purely repellent.

DISSOLVES EASILY IN WATER AND CAN BE APPLIED WITH ANY TRADITIONAL SPRAY EQUIPMENT.

DOES NOT ALTER THE PHYSIOLOGY OF FRUITS, UNCHANGED THEIR ORGANOLEPTIC OR AESTHETIC FEATURES.

IT HAS NO RISK OF WASTE AND OTHER POLLUTING ELEMENTS.

ORGANIC PRODUCT
100% NATURAL

Application

For all kinds of birds; sparrows, pigeons, gulls, swallows, blackbirds, magpies, crows, etc.
Apply 3 to 5 L/ha

Repellency active period: seven days.

In an application perform a week before harvest.
In two applications do at fourteen days and seven days before the harvest.
Apply with conventional equipment (1000 L/ha water), electrostatic (60 L/ha water), back pump and/or pressurized.

For aerial applications, apply the product with volumes of moistening of 40-50 L of water/ha. Do not apply this product on wet surfaces. Shake well before using.

Do not apply with adjuvants, surfactants, adherents, dispersants, etc. It is incompatible with styrene and some plastic products, paints and varnishes. If you want to mix with any pesticide or fertilizer perform a compatibility test.

WAITING PERIOD: 8 DAYS BEFORE HARVEST

IMPORTED FROM EU

sonar agro

Root Development

Introduction

Root development solutions are specially formulated to promote strong and healthy root systems in plants. With carefully selected ingredients and advanced technology, our products stimulate root growth, enhance nutrient uptake, and improve overall plant vigor.

Our products

SONAR ROOT

SONAR ROOT SOLID

sonar agro

sonar ROOT

Plant Growth Regulator.
Root development

soil

COMPOSITION	%w/v
Total Nitrogen (N)	2,50
Potassium (K_2O)	9,30
Phosphorus (P_2O_5)	3,10
Seaweed Extract (Ascophyllum nodosum)	
Mannitol	0,30
Amino acids	12,24
Density: 1,24 g/cc	

WITH NATURAL HORMONES

Characteristics

Rhizogenic free amino acids solution, and micronutrients, tuning to be used as a Stimulant of plants, particularly as it relates to the formation of new roots.

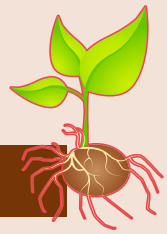
- Development of higher density of roots
- Increase in the uptake of water and nutrients. Greater resistance to stress factors
- Recovery of roots damaged by nematodes and fungi activity
- Increase in the synthesis of endogenous cytokinins in roots

Specific aminoacids

Rooting bioinductor

SONAR ROOT accelerates the biosynthesis of natural phytohormones (auxins, cytokinins, gibberellins and polyamines). This help achieving a complete developement of the root system, will also promote growth of both primary and lateral roots.
Its composition helps the plant to achieve its maximun genetic potential and stablish a strong root system which will increase both nutrients and water absorption.

SONAR ROOT also activates different physiological processes, increasing the protein synthesis and metabolic energy produced in photosynthesis. These effects lead to a direct improvement on the root growth and developement thus producing a positive feedback on the nutritional status of the crop. It is suitable for applications during vegetative growth and after root damage (caused by nematodes, fungi or machinery).



Enhances the formation of the root system

Soil Applications

Vegetables

Crop	Time of application	Dosage	Observations
Artichoke	First application after transplant, repeat every 20 days	2L/ha	3 applications
Green Beans, Fava Beans, Peas	First application after transplant, repeat during flowering	2L/ha	Apply 3 times since flowering
Garlic, Onion	Appy 15 days after transplant, repeat each 15 days	3L/ha	2 - 3 applications
Lettuce, Cabbage	First application after transplant, repeat every 3 weeks	2L/ha	3 applications
Strawberry and other Berries	First application after transplant, repeat every 3 weeks	2L/ha	4 - 5 applications
Vegetables in general	First application after transplant, repeat every 2 weeks	2 - 3L/ha	3 - 4 applications

Fruit trees

Crop	Time of application	Dosage	Observations
Banana	Applications distributed during the whole cycle	5L/ha	3 applications
Citrus	Apply at the beginning of fruiting shoots, repeat every 2-3 weeks	10 - 15 cc/tree	3 applications
Fruit trees in general	Apply at the beginning of fruiting shoots, repeat every 2 weeks	10 - 15 cc/tree	3 applications
Grapevine	Apply from the beginning of bud development, repeat every 15 days	1,5L/ha	4 applications
Ornamental			
Ornamentals	Apply after every 15 days	3L/ha	3 - 4 applications
Extensive Crops			
Alfafa	Apply after each cut	3L/ha	After cutting apply at 0,2%
Buches	Every 15 days	1,5 cc/plant	3 applications
Tubers	Apply every 15-20 days	2L/ha	3 applications
Nurcery			
Nurcery	Ask your local dealer for advice	1 - 2 cc/L	2 applications

IMPORTED FROM EU

sonar agro

NEW
IMPORTED FROM SPAIN

sonar ROOT SOLID

Root development

soil foliar

Composition	%w/w
Nitrogen (N) Total	7,00
Phosphorus (P_2O_5)	35,0
Free amino acids	20,0
Rooting bio Inductor 01 (Indolbultyric acid)	1500 ppm
Rooting Bio Inductor 02 (Naphthyacetic acid)	500 ppm

WITH EXCLUSIVE FORMULATION

Characteristics

sonar ROOT SOLID is a solid product specially designed to induce and stimulate the growth of roots and the thickening of the stems. Its formulation is based on a balanced mixture of "rooting" hormones, macronutrients and amino acids that act to achieve a faster and more effective result.

sonar ROOT SOLID promotes higher root production and better quality, thus reducing the adaptation time of the seedlings when they are established in the agricultural field.

sonar ROOT SOLID provides the environment and the elements that root needs, enhancing their growth and producing increased vigour and strength.

sonar ROOT SOLID provides high phosphorus content and amino acids to improve the physical and chemical characteristics of the soil and increase the availability of nutrients and stimulate the physiological processes taking place in the roots.

Due its type of amino acids, it acts as a stimulator of root protein metabolism, so its effects are very visible when used in periods of root growth in the early stages of vegetative development.

sonar ROOT SOLID is formulated with:
1. **Nitrogen (N):** Promotes the development of the plant and biomass production.
2. **Phosphorus (P_2O_5)**: Stimulates root development
3. **Free amino acids:** Precursors of auxins and polyamines
4. **Rooting bio inductors:** Enhance rooting process

- Increases the root system
- Increases the assimilation of nutrients
- Increases the vigour of plants
- Improves the quality and production of crops
- Regulates transplant stress
- Better use of water and nutrients

sonar ROOT SOLID is specially recommended in the following situation:
1. Initial stages of the crop
2. Transplanting
3. Stress conditions (temperature, hydric, etc.)
4. Critical stages: flowering, start of ripening, development of the fruit.
5. In nurseries.

	ROOT ACTIVITY	SOIL MICROBIAL ACTIVITY	INCREASED NUTRIENT AVAILABILITY
AMINOACIDS	✓	✓	✓
ROOTING BIO 1	✓		✓
ROOTING BIO 2	✓		✓
MACROELEMENTS	✓	✓	✓

Application

CROP	DOSAGE Kg/Ha	APPLICATION TIME
Substratum or substrate for trays	Dissolve 125-250g in enough water to humidify 100 kg of substrate	Use the low dosage at temperatures below 20ºC and the high dosage at temperatures higher than 20ºC
Nurcery bad and trays	100g for each 200L of water	Apply once a week, starting in the third week of seeding development
FIELD APPLICATIONS		
Transplant	100g for each 100L of water	Apply at the time of transplantation or one week after applying 400g pero 100L of water, apply directing to the base of the plant
Foliars	0.5 to 1 Kg/ha	Apply in the second and third weeks after transplantation
Drip irrigation	2kg/Ha	Dllute the product in irrigation water. Apply to the 2nd, 3rd and 4th week after transplantation

IMPORTED FROM EU

1Kg 5Kg 10Kg 25Kg 500Kg

sonar agro

Salinity Corrector

Introduction

Salinity correctors products provide effective solutions for managing high soil salinity levels. Designed to restore the natural balance of soil, our products help mitigate the harmful effects of excess salts, promoting optimal plant growth and productivity. With easy application and proven results, our salinity correctors are the trusted choice for revitalizing salt-affected soils and ensuring healthy crop development.

Our products

POLY SAL

SONAR SAL

sonar agro

POLY sal

Soil salinity corrector
Speed action

Composition

	%w/w
Polymaleic acid	33,0

Density: 1,1

Characteristics

POLY SAL is a aquous solution of polymaleic acid, if it's integrated to the soil, it solubilizes the calcium, magnesium and sodium; the first two replace sodium at the myceliums, keeping the last one in the disposition to be lixiviating for the irrigation water.

Action

POLY SAL has a quick effect of desalination and it doesn't affect to the soil organic matter. It keeps cleans the irrigation systems, increasing the speed of the water to uptake into the soil, expanding it and releasing nutrients.

POLY SAL has low toxicity and it's biodegradable.

Benefits

- Accelerates the lixiviating of the salts with a positive and inmediate response of the crop.
- Keeps the quality of the soil.
- Makes easier the tasks for crops.
- Greatest assimilation by the plant.
- Safety and not polluting use.

Application

CROPS	L/Ha	ml/100L	Details
Alfalfa	5 L/Ha at the first irrigation and 2,5 L/Ha at the irrigations next to each cut		
Avocado, citrus, stone fruit trees, seed trees, louquat and bananas	2-4 L/Ha at the first irrigation of the season previous to the budding and 1-2 L/Ha at each irrigation during the formation of the fruit until 8-16 L/Ha per year		
Cotton	8 L/Ha at the irrigation before to the sowing time or 4 L/Ha at each one of the firsts two irrigations.		
Grass	5-10 L/Ha at the first irrigation and 2,5 L/Ha at successive irrigations.		
Cucurbitaceae, pepper and tomato	4-7 L/Ha before the sowing time or transplants y 2,5 L/Ha at the next irrigation.		
Asparagus	5-10 L/Ha at the first irrigation and 2,5-5 L/Ha at successive irrigations until add up to 10-14 each year		
Horticultural and industrials	4-8 L/Ha at the first irrigation of the season and 1-2 L/Ha weekly until add up to 8-16 each year.		
Strawberries	8-16 L/Ha each year		
Artichoke, cabbage, lettuce, beetroot and carrot	12-15 L/Ha each year. It's recommended integrating in the irrigation water 200-400 cc/m		

IMPORTED FOR EU

sonar agro

sonar Sal

Soil salinity corrector
organic calcium complex

soil

COMPOSITION

	%w/w
Complexed Calcium oxide (CaO)	12,5
Water soluble Calcium (CaO)	12,5
Nitrogen(N)	9,5
Density: 1.4 g/cc	

ECOLOGICAL AGRICULTURE

Characteristics

SONAR Sal add to soil water soluble calcium and organic acids, in soluble and stable form, so drastically reducing the "toxic" level of complex colloidal sodium.
SONAR Sal reduced salinity, decreasing the levels of: electrical conductivity (EC), exchangeable sodium percentage (ESP) and Sodium Absorption Ratio (SAR / SAR)

- SONAR Sal contributes and releases calcium to the soil, decreasing and correcting Calcium deficiency suffered by crops.
- SONAR Sal increases the rate of Soluble Calcium, flocculate the soil and improves drainage in compacted soils.
- SONAR Sal improves soil structure by increasing the germination capacity of crops with problems with "crust formation"

Application

SONAR Sal add to soil water soluble calcium and organic acids, in soluble and stable form, so drastically reducing the "toxic" level of complex colloidal sodium. SONAR Sal reduced salinity, decreasing the levels of: electrical conductivity (EC), exchangeable sodium percentage (ESP) and Sodium Absorption Ratio (SAR / SAR)

CROPS	APPLICATION
AVOCADO, KIWY AND CHERIMOYA	50-70 L / Ha in 2-4 irrigations from spring to harvest.
LUCERNE	50-60 L / Ha in 4-5 treatments from the second irrigation
CITRUS	50-70 L / Ha in 2-4 treatments from shooting to fall.
STRAWBEERRY	Initial planting (Oct-Nov) 10-15 L / Ha. From pre-flowering to fruit set (Dec-Mar) 4-5 L / Ha and week. Full production / Mar-Jun) 3-4 L / Ha and week.
FRUIT TREES	75-125 L / Ha divided between three irrigations.
INDUSTRIALS	20-30 L / Ha divided into several irrigations from the fourth leaf.
ORNAMENTAL & HORTICULTURAL	40-60 L / Ha divided between 3-5 irrigations.
BANANA	40-60 L / Ha to 2-3 applications during the growing season.
TOMATO	Plantation 1-1.5 cc / plant. Preflowering-Beginning harvest 4-7 L / Ha and week. Full production 3-5 L / Ha and week
VIP AND GRAPE	30-50 L / Ha, 3-5 applications util the color change

SONAR Sal is completely soluble in water, so it can be applied through irrigation systems (drip, pivot, etc) on crops that need it: vegetables, fruit, citrus, ornamentals, etc..

COMPATIBILITY

SONAR Sal it is compatible with insecticides, nematicides, fungicides and herbicides edaphological use.
SONAR Sal It is compatible with most fertilizers used in agriculture except fertilizers rich in phosphates, phosphoric acids.
SONAR Sal can not be used with mixtures of herbicides based trifluralin

IMPORTED FOR EU

sonar agro

Seaweed Biostimulant

Introduction

BENEFITS OF SEAWEED EXTRACT IN FERTILIZERS

1- Stimulate plant growth.
2- Increase stress resistance (droughts, extreme temperatures, etc.).
3- Improve soil structure and water retention.
4- Provide essential micronutrients like magnesium and potassium.
5- Promote the activity of beneficial soil microorganisms.

Our products

ALGAE

ALGAE AMYN

ALGAE SOLID

sonar agro

Algae

Seaweed extract.
Biostimulant

soil foliar

COMPOSITION

	%w/v
Seaweed extract	36,0
Potassium (K_2O)	6,5
Nitrogen (N)	6,0
Alginic Acid	5,8
Mannitol	1,7

ECOLOGICAL AGRICULTURE

Ascophyllum Nodosum

Health Yield Quality

CHARACTERISTICS

ALGAE is a natural stimulant that is capable of intensifying the vegetal metabolism and the efficiency of the crops.

ALGAE is a proper phytofortifier for all types of crops, especially citrus, strawberries, fruit trees, olive trees, ornamiental and vine. It is recommended during the phases of greater vegetative activity (transplantation, flowering, fruit setting and fruit growth) or under unfavourable conditions /frosts, drought, hail, pests, diseases, etc).

ACTIVE PRINCIPLES

Growth regulators:

Mainly cytokins (effects in growth, mobilization of assimilated elements to the fruit, decrease of oxidant stress). It also contains auxins, gibberellins and endogenous synthesis promoters of these growth regulators.

Complex polysaccharides:

They have effects that stimulate the natural defense of plants against plagues and illnesses.

SEAWEED EFFECT IN PLANTS

ABIOTIC STRESS TOLERANCE

1-Salinity and drought tolerance
2-Freezing tolerance
3-High temperarure, flooding and pollution

POST-HARVEST

1-Improved shelf life
2-Improved storage quality
3-Enhanced nutritional value

GROWTH RESPONSE

1-Improved Shoot & Root growth
2-High flowering and fruit set
3-Better yield

BIOTIC STRESS RESISTANCE

1-Resistance to fungi
2-Resistance to insect pest.

Doses and applications

CROP	DOSAGE (cc/100L)	TIME OF APPLICATION	RECOMMENDATI
Apple, Pear	**150-250**	Apply from beginning of shooting	Apply every 15-20 days
Artichoke	**150-250**	During the vegetative growth	Apply every 15-20 days
Citrus	**150-250**	Apply during the vegetative growth and flowering	Apply every 15-20 days
Cucumber, Melon, Watermelon, Courgette	**150-250**	After transplant during the vegetative growth	Apply with 4-5 leaves and every 15 days
Hydroponics	**2-3 L/ha**	---	----
Kiwi	**150-250**	From shooting and post-harvest	Apply every 15-20 days
Lettuce, Cabbage	**150-250**	During the vegetative growth	Apply two weeks after transplant and every 15 days
Potato	**150-250**	At 30 to 60 days post-emergence	2 applications
Stone Fruits	**150-250**	From the beginning of flowering every 15 days	Together with Excellent 45, 30 and 15 days before harvest in cherries
Strawberries, berries, grapes	**150-250**	Apply from beginning of shooting / post-harvest and during fruit growth	Fruit fattening
Vegetables in general	**150-250**	After transplant during the vegetative growth	3 applications every 15 days

Cautions

Warning: Do not mix with products containing calcium or magnesium. For mixing with any other product conduct a test in a small volume to assess compatibility. If you have any doubt, please contact with our technical department.

Shake it before use

1L 5L 20L

IMPORTED FROM EU

sonar agro

Algae amyn

Seaweed extract.
Biostimulant

soil foliar

Composition	%w/v
Seaweed extract	30,0
Total Nitrogen (N)	6,0
Free Aminoacids	4,0
Alginic Acid	5,0
Mannitol	1,5

ALGAE AMYN is a product that combines in a balanced way the action of the L-α Amino acids of vegetable origin and seaweed extract of Ascophyllum Nodosum and Fulvic acids, obtaining a complete biostimulant.

This product is suitable for all agricultural horticultural plants, particulary those suffering and from environmental growth stresses such as heat, cold, salinity and dryness. **ALGAE AMYN** can enhance the performance of fertilizers and reduce input cost.

ALGAE AMYN releases locked up soils nutrients and improves drought and diseases resistance. It promotes early season root growth and enhances the establishment of overseed by stimulating photosynthesis and increasing microbial activity.

Characteristics

YIELD INCREASES

ALLEVIATES STRESS

BIOFORTIFIES IMMUNE SYSTEM

Promotes the synthesis of protein and natural growth substances

Stimulation of the root growth

Enhanced uptake of nutrients into both roots and leaves

Resistance to disease and pest

Precursor of auxins, wich stimulate plant vegetative

Improves fruit setting, ripening and fruit color, increasing quality and quantity

Application

Crop	Doses	Application
FOLIAR **General recommendation** 1-3 L/1000 L or 1-3 L/ha		
Fruit trees, citrus, grapes, nut , olive	2-3 L/ha per application (appl.)	3-4 applications at 10-14 days intervals, from bud burst to flowering and during fruit developement
Horticultural crops: Capsicum, cucurbits, strawberries, tomatoes	2-3 L/ha per appl.	Apply 2 weeks after transplantation for fast plant developement and during fruit growth
Lettuce and leaf vegetables	1,5-2 L/ha per appl.	2-3 applications with 7-10 days interval, starting with leaves well developed.
Potato	2-3 L/ha per appl.	Apply during vegetative growth
Cereals	1-2 L/ha per appl.	1-2 applications from beginning of stem elongation to flowering
SOIL		
Fertirrigation drip irrigation	1-5 l/ha divided into several appl. of 2-3 l/ha per appl.	Apply every two weeks to mantain extended crop response

Cautions

Avoid mixtures of **ALGAE AMYN** with copper or mineral oil products.
Doses are approximate and may vary depending of the area characteristics and crops needs.

IMPORTED FROM EU

sonar agro

Algae solid

Seaweed extract.
Biostimulant

soil foliar

Composition

	%w/w
Seaweed Extract	25,0
Free Aminoacids	18,5
Humic Extract	40,0
Fulvic Acids	32.5
Humic Acids	7,5
Manitol	1,0
Alginic Acid	2,5

ECOLOGICAL AGRICULTURE

Ascophyllum Nodosum

Health Yield Quality

Algae solid

- **Increases the growth of crop**
- **Improves the germination of seeds**
- **Delays ageing**
- **Reduction of infestation by nematodes**
- **Increase of resistance against stress made by fungus and bacterial illnesses**
- **Greatest mobilisation of nutrients through the organs of the plants**
- **Improvement of root growth**
- **Elevation of maduration degree in fruit**

Characteristics

Algae solid is a spray-dried, microgranular powder-based growth stimulant, manufactured from Ascophyllum nodosum which improves the coloring of crops.

Algae solid contains natural substances that act as growth promoters, which increase the yield and vigor of crops and improves their color.

Algae solid is indicated in metabolic and biochemical processes that increase the resistance of the plant against differents conditions of biotic and abiotic stress.

- **Greatest resistance against stress produced by abiotic factors (temperature, drought...)**
- **Helps crops to resist against stress by phytotoxicity caused by fungicide, insectidice and herbicide**

Incorporates

Natural Phytohormones
(auxins, cytokinins, betaines and gibberallines)

Application

Crop	Period of application	Doses
Foliar Application		
Citrus	1º preflowering, 2º petal fall and 3º fattening	75 g/hL
Fruit trees	3 applications, preflowering (C) stage (E) stage (G) petal fall	75 g/hL
Vineyard and vine arbour	1º separates inflorescences 2º floral buds y 3º fruit set	75 g/hL
Olive tree	1º application at the beginning of the period (spring), 2º at 15 days and 3º post-harvest	75 g/hL
Horticultural crops	Make the 1º application with a good rooted and great leaves development. Then, each 15 days	75-100 g/hL
Forage, industrials, ornamentals crops and vine grower	1-3 applications since the beginnig of the growth stage	50-75 g/hL
Root application	Each 15-20 days, qhen the plant needs root activation	0,75-1 Kg/Ha
Application to take root	2-3 applicacions after the transplant or plantation, each week	1,5 Kg/Ha

General dosage
Foliar: 50-100 g/hL each application in every crops
Root: 1 Kg/Ha
Maxim concentration 1% (1 Kg/hl of water)

Cautions

Algae solid can be mixed with all common formulations, except for products with alkaline reaction, oils, based on and sulfur, mineral oils and emulsions.

IMPORTED FROM EU

1Kg 3Kg 5Kg 20Kg 500Kg

sonar agro

Seed Treatment

Introduction

The seed treatments optimize seed health and performance, providing protection and promoting germination. Give your seeds the best start possible with our seed treatment solutions, laying the foundation for a bountiful harvest.

Our products

SEED START

Seed Start

Seed treatment

Seed

Composition	%w/w
Total aminoacids	9,0
Free aminoacids	6,0
Total nitrogen (N)	5,0
Total organic matter	30,0
Seaweed extract	6,0

Characteristics

SEED START is extracted from vegetables and seaweed. It contains amino acids and other natural nutrients which provide the nutrition-energy to seeds, thus increasing the seeds germination percentage and providing a vigorous start for the plant. SEED START has an excellent sticking ability to seeds. After a seed treatment with the product will cover all the seeds surface, and after the germination of root from the seed, the product will be immediately be uptaken by the plant. It provides the nutrition and energy for the plant to emerge from the soil, improving its root development in the process. SEED START produces a greater number of plants ready to produce, resulting in an increase in the final productivity.

Benefits of Seed Start

- Better inoculant viability.
- Excellent sticking ability to seed.
- Has an effect on the uniformity and speed of emergence.
- Improves root development.
- Improves quality.
- Increases yield.
- Increases the percentage of seed germination.
- Protects the seeds from desiccation.

Applications

CROPS	L/1000Kg seeds	Water Qty. (L)	ml/Kg	Water Qty (ml)
Wheat	1-1,5	10	1-1,5	10
Corn	2-2,5	12	2-2,5	12
Sunflower	1,5	10	1,5	10
Soy	2	10	2	10
Rice	2	10	2	10
Rape	3-4	12-15	3-4	12-15
Barley	1-1,5	10	1-1,5	10

Apply SEED START directly to the seed in a container that provides a good distribution of seeds.
Place half of the seeds in a container and apply half of the required product on the surface of the seeds. Mix and stir manually or using suitable machinery. Add the remaining seed and the product and stir.SEED START certainly applies in seeds treated with inoculants, fungicides and insecticides. It is advisable to first add the inoculant, fungicide and insecticide and then SEED START.

IMPORTED FROM EU

sonar agro

Silicon

Introduction

The silicon fertilizers provide plants with essential nutrients to enhance growth and fortify against stressors. With a focus on strengthening cell walls and improving nutrient uptake, our products promote healthier, more resilient crops. Boost your plant's natural defenses with our silicon fertilizers for optimal growth and yield.

Our products

SONAR SILIC

SONAR SILIC CALCIUM

SONAR SILIC CA MG

SONAR SILIC FULVIC

sonar agro

Sonar Silic

Silicon and
Potassium fertilizer

soil foliar

Composition	%w/w
Silicon (SiO_2)	21,0
Potassium (K_2O)	11,5

Characteristics

SONAR SILIC is a specially developed silicon and potassium formulation to imrpove plant growth, biomass.

Update of Nutrients
Particularly Nitrogen, Phosphorous, Potassium and Micronutrients

Resistance to Environmental Stress
·Reduced drought and heat stress. The deposition of Si in the plant tissues.
reduces transpiration rates.
·Reduce salt stress by inhibiting Sodium uptake.
·Alleviate toxicity of heavy metals: Iron, Manganese, Cadmiun, Aluminium, and Zinc by regulating plant uptake.

Post Harvest Life
Si can associate with cell wall proteins where it might exert an active production of defence compounds.

Resistance to Disease and Pest
Si deposition in the epidermal tissues increases the mechanical estability of the plant. Reduces the incident of lodging.

Photosynthetic Activity
The improved structure produces stronger stems with more erect leaves, increasing its ability to capture light.

NUTRITION | MITICIDE
FUNGICIDE | INSECTICIDE

Application

Crops	Doses	Details
Annuals: Vegetables, cut flowers, nursery, strawberries, sugarcane, wheat	2-3L/Ha or 300-500 ml/100L	Foliar. Apply in a minimum of 600 L water. Apply every 10-15 days from first visible leaf onwards. For best results apply first sprays before leaf hardening of crop. Apply to sugarcane during the lead-up to the dryer months
Perennials: tree crops, vines, bananas, turf	2-3L/Ha or 300-500 ml/100L	Foliar. Apply in a minimum of 600 L water. Apply during leaf flush and after fruit set and every 10-14 days during disease events
Soil&Drip or hydroponic nutrient solution	200ml/1000L	6-8 time sper crop cycle. Maximum of 8 L/Ha

Silicon and postharvest life or produce

Researchers have shown that Silicon can inhibit ethylene which reduces the speed of aging and death of harvested plant parts. Silicon treated plant have also been shown to maintain their chlorophyll (green) content over a longer period. The end result is produce with better shelf life and appearance.

IMPORTED
FROM EU

sonar agro

sonar Silic Calcium

Silicon and Calcium fertilizer

soil foliar

Composition	%w/v
Silicon (SiO_2)	24,0
Calcium (Ca)	15,0
Density	1,40
pH	7-8

Silicon and Calcium fertilizer

Characteristics

sonar Silic Calcium is a fortifier of plant tissues for foliar and soil use whose purpose is to increase the tolerance of the crop to the attack of pathogens, increasing the life of the fruit and increasing the resistance of the plant and the fruit to the physical damages caused by friction, manipulation, etc.

Calcium is a key element in all stages of a plant's cycle. It is essential for growing reaching from germination up to ripeningof the fruits. Calcium makes vegetal tissues more resistant.

NUTRITION | MITICIDE | FUNGICIDE | INSECTICIDE

Resistance to Disease and Pest
Si deposition in the epidermis tissues provides a physical barrier to pathogens and insects, allowing for a reduction in the frequency of chemical applications

Cell Structure
Si accumulated in the epidermal tissues increases the mechanical estability of the plant. Reduces the incident of lodging

Photosynthetic Activity
The improved structure produces stronger stems with more erect leaves, increasing its ability to capture light

Uptake of Nutrients
Particularly Nitrogen, Phosphorous, Potassium and Micronutrients

Resistance to Environmental Stress
· Reduced drought and heat stress. The deposition of Si in the plant tissues reduces transpiration rates.
· Reduce salt stress by inhibiting Sodium uptake.
· Alleviate toxicity of heavy metals: Iron, Manganese, Cadmiun, Aluminium, and Zinc by regulating plant uptake

Post Harvest Life
Si can associate with cell wall proteins where it might exert an active production of defence compounds

Dosage and Application

Crops	Doses (L/ha/application)	
	SOIL	FOLIAR
Garlic and onion	5-10	1-4
Banana		0.5-1
Berries	7-15	1-4
Crucifers	5-10	1-3
Cucurbitaceae	5-10	1-4
Fruit trees		
Gramineae	5-10	2-4

Crops	Doses (L/ha/application)	
	SOIL	FOLIAR
Lettuce		1-4
Legumes		1-4
Ornamental	7-15	2-6
Papaya	5-10	1-6
Grass	10-40	
Solanaceous	5-10	1-4
Carrot	5-10	1-3

Caution

Avoid contact with eyes, food or drinks. Keep out reach of children. If swallowed seek medical advice.

Do not store in direct sunlight. Store between 5ºC and 35ºC.

SHAKE WELL BEFORE USE

1L 5L 20L 200L

IMPORTED FROM EU

sonar agro

sonar Silic Ca Mg

Silicon and Calcium Magnesium Fertilizer

foliar

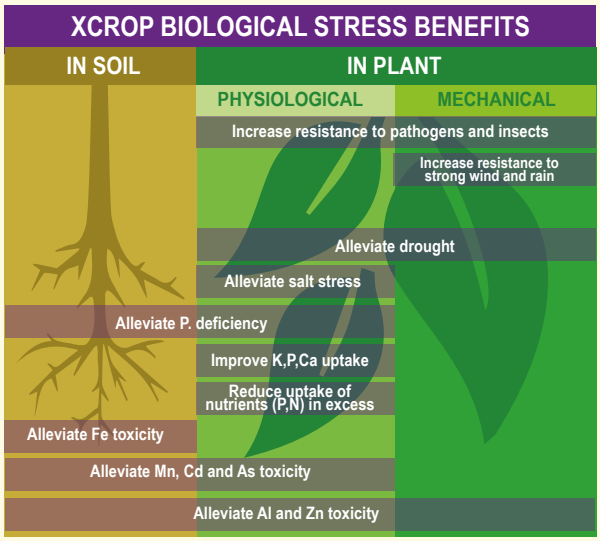
COMPOSITION	%w/w
Silicon (SiO_2)	18,0
Calcium CaO)	13,5
Magnesium (MgO)	5,5
Density: 1,3	
pH: 5-6	

Yield and Quality

Characteristics

SONAR SILIC Ca Mg is a silicon based antistress agent with biostimulating properties, it protects plants against stress factors by providing the best possible developement conditions and stimulates plant growth and developement. There is a growing number of scientifics studies confirming the beneficial effect of silicon.

SONAR SILIC Ca Mg is a product wich fits perfectly into the concept of integrated crop production and may be used in organic farming."Silicon is the only nutrient wich is not detrimental when collected in excess" (Ma et al 2011) Ideal for use with Biological Products as part of a sustainable pest and disease Control Program.



Application

CROPS	DETAILS GENERAL DOSE 0,5L/Ha
Maize	**1:** 2-6 leaves unfolded (BBCH 12-16). Optimal time is 4 leaves un folded **2:** Developement of leaves - begining of stem elongation (BBCH 17 -31) **3:** Stem elongation cont. - begining of tassel emergence (BBCH 31 -51)
Oilseed Rape	**Autum:** 4-8 leaves - 2 tillers detectable (BBCH 14-18) **Spring: 1:** After de beginning of vegetation: beginning of side shoot developement - 6 internodes visible (BBCH 21-36) **2-3:** Developement of flower buds - beginning of flowering (BBCH 50-61), treatment every 10-15 days **4:** Full flowering 50% flowers on main raceme open, older petals falling - development of fruit stage (BBCH 65-73).
Potato	**1:** 3-6 leaves on main stem unfolded (BBCH 13-16) **2:** Forming side shoots - crop cover (BBCH 21-39) **3-4:** Forming and growth of tubers (BBCH 40-49), treatment every 7- 14 days.
Rice	**1:** Developement of leaves - tillering (BBCH 16-29) **2:** Stem elongation - early stage (BBCH 31-36) **3:** Beginning of heading (BBCH 51-53)
Rhye	**Autum:** 3 leaves - 2 tillers detectable (BBCH 13-22) **Spring: 1:** Beginning of stem elongation - node 2 stage (BBCH 30-32) **2:** Flag leaf fully unrolled - beginning of inflorescence emergence (BBCH 39-51) **3:** End of flowering - early milk (BBCH 69-73)
Sorgho	**1:** Developement of leaves - tillering (BBCH 13-29) **2:** Begining of stem elongation cont. - begining of heading (BBCH 31-51) **3:** Developement of fruit - early milk (BBCH 71-73)
Soybean	**1:** Developement of leaves and shoots (BBCH 13-29) **2:** Inflorescence emergence (BBCH 51-59) **3:** Beginning of pods developement (BBCH 71)
White Triticale	**Autum:** 3-6 leaves (BBCH 13-16) **Spring: 1:** Winter wheat - tillering (BBCH 22-29 Spring wheat - developement of leaves - tillering (BBCH 13-29) **2:** Stem elongation - heading - early stage (BBCH 30-51) **3:** Heading (stage cont.) - early milk (BBCH 51-73). Treatments are not recommended between stages BBCH 61-65

SONAR SILIC Ca Mg is compatible with most pesticides and fertilizers. DO NOT mix with products containing, dicofol, dimethoate, oils and cupper products. For other products follow the label direction. A mixture test is advisable for compatibility. **SONAR SILIC Ca Mg** is stable for at least 2 years since manufacturing date. Store in the closed original container in a cool and ventilated area. DO NOT store in direct sunlight. Keep away from food and animal feed. Keep out of the reach of children.

IMPORTED FROM EU

1L 5L 20L 200L

SHAKE WELL BEFORE USE

sonar agro

Sonar SilicFulvic

Silicon and Calcium fertilizer with Fulvic acids

soil foliar

Composition	%w/w
Silicon (SiO_2)	7,0
Calcium Oxide (CaO)	7,0
Fulvic acids	14,5

Characteristics

SONAR SILIC FULVIC is a product designed to provide crops Ca and Si. It also incorporates Fulvic Acids that act as effective synergists in the uptake and transport of Ca and Si within the plant.

Improved cell structure strench
reducing the incidence of lodging. Si accumulates in the epidermal tissues increasing the mechanical stability of the plant.

Improved resistance to pathogens and insects
Si deposition in the epidermis tissues provides a physical barrier to pathogens and insects.

Improved photosynthetic activity.
The improved structure of the plant has been shown to improve its ability to capture the light.

Reduced drought and heat stress
The deposition of Si in the plant tissues reduces transpiration rates.

Reduced salt stress by inhibiting sodium absorption.

Improved utilization of applied fertilizers particularly Nitrogen, Phosphorus and Potassium.

Alleviates toxicity of Iron, Manganese, Cadmiun and Aluminium

NUTRITION
ENHANCE PLANT FROWTH
INCREASES RESISTANCE TO DISEASES
QUALITY

Applications

Crops	Rate/ha 300L water	Details
Beans, Carrots, Celery, Lettuce, Brassicas	2-3L/Ha	Apply at 2 leaf stage. Apply 2 - 4 days after sowing via solid set Apply as a soil drench at transplant or emergence. Repeat 7-10 days later.
Citrus	5-7L/Ha	Apply to juvenile trees at early establishment - repeat as necessary. Mature trees-treat at spring and autumn growth flush.
Cucurbits, Cut flower production and Bulb production	2-3L/Ha	Apply at 1 - 2 leaf stage - repeat application at 2 - 4 leaf stage. Apply at emergence or transplant. Drench bulb at planting. Repeat 2 weeks after emergence. Continue if weak steem symptoms are evident.

Crops	Rate/ha 300L water	Details
General production	2-3L/Ha	Apply at emergence or transplant - repeat 7 - 10 day intervals as required.
Trickle irrigation	5-7L/Ha	1:300 minimum for trickle.
Top fruit Potatoes	2-3L/Ha	Apply at transplant - repeat as required during establishment. Apply 1 week after planting - repeat at 7 - 10 day intervals.
Maize, Cereals and other field crops	3-5L/Ha	Apply when leaf area is suffcient to intercept foliar spray. Silica treatments can reduce droopy growth and lodging.
Tomatoes/ Capsicum	2-3L/Ha	Apply at transplanting - trickle or foliar. Mature plants: repeat when stalk weakness is evident.
Vines		Apply at vine establishment, repeat at flower truss visible.

Silicon and postharvest life or produce

Researchers have shown that Silicon can inhibit ethylene which reduces the speed of aging and death of harvested plant parts. Silicon treated plant have also been shown to maintain their chlorophyll (green) content over a longer period. The end result is produce with better shelf life and appearance.

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1L 5L 20L 200L

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Solar Protection

Introduction

The solar protectors fertilizers offer vital defense against the damaging effects of solar radiation. With specially formulated ingredients, they create a protective barrier that shields plants from excessive sunlight, preventing sunburn and heat stress. Safeguard your crops and promote healthy growth with our solar protectors fertilizers.

Our products

SONAR SUN

SONAR SUN FLOW

sonarsun

Solar Protection

foliar

Composition

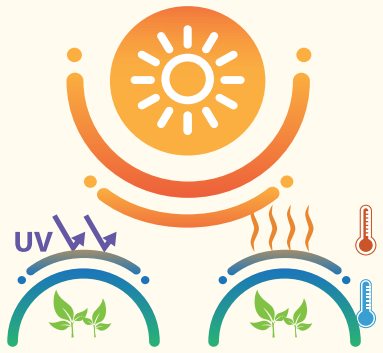
	%w/w
Calcium (CaO)	55,00
Magnesium (MgO)	0,15

Quality

Health

HIGH SOLUBILITY

QUALITY AND HEALTH IN PRE-HARVEST



REFLECTS UV RAYS

PROTECT FROM HIGH TEMPERATURES

Characteristics

Sonar Sun is a solar protector for fruit and vegetables based on Zinc Oxide in an excipient of Calcium Carbonate, which reduces damage by heat and sunburn stress.

Sonar Sun reduces the temperature of the leaf, allowing the stomatal opening to extend for a longer time, increasing photosynthesis. The reflective action of its particles illuminates in a better way inside the tree or any other plant, improving fruit color in the darkest places.

Sonar Sun is designed to be applied by any phytosanitary treatment standard equipment and also by aerial. Contains Zinc which is absorbed by the plant, thus improving its resistance to stress conditions, including nutritionals.

v

SUNBURN EFFECT

APPLIED PRODUCT

Application

Crops	Doses	Remarks
FRUIT TREES: Apple trees, Pear trees, Lemon, Orange, Tangerine, Clementine, Grapefruit, Olives, Peaches, Nectarines, Pomegranates, Persimmons, Avocado	5-10 Kg/100 L water	Apply in aqueous solutions in a traditional way, with nebulizer. It is recommended to apply on two consecutive passes and in opposite directions. It is necessary that the tree is completely covered (homogeneous distribution) and white color. Make 3-5 applications every 7 days maximum. These applications should be initiated before the period of maximum susceptibility. Use wetting from 1500 to 3000 L / ha
VEGETABLES: Tomatoes, Peppers, Melon, Watermelon	4-7 Kg/100 L water	It's recommended to apply on a volume of 600L/ha two consecutive passes in opposite directions. Apply during periods of higher susceptibility corresponding to the start of veraison when the fruit begins to change from green to orange.

Application time: applications should begin when temperatures exceed the thermal threshold established by the technicians of the area.
Frequency of application: every 20 to 30 days, depending on weather conditions and/or rate of growth of the fruit.
Number of applications: 3-4 applications per season and depending on weather conditions.

1 Kg | 5 Kg | 20 Kg

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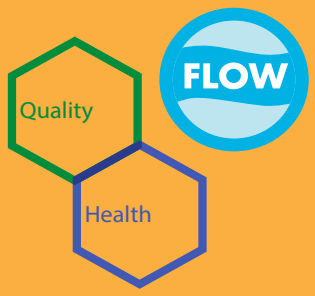
sonarSUN FLOW

Solar Protection

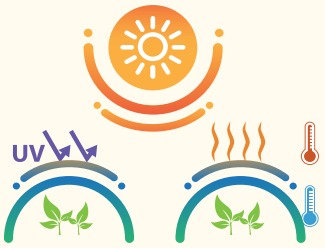
foliar

Composition

	%w/v
Calcium (CaO_2)	34,0
Silicon ($CaSiO_3$)	5,0
pH (solution 1%)	7-8



QUALITY AND HEALTH IN PRE-HARVEST



SUNBURN EFFECT

APPLIED PRODUCT

Characteristics

SONAR SUN FLOW is a micronized calcium carbonate liquid sunscreen and next-generation silicon, designed to provide protection to the plant and fruit during the period of growth, improving the health of the plant and eliminating sunburn.

The foliar application of **SONAR SUN FLOW** at the defined dosage, allows to create an indirect protection of the plant and the fruits from sunburn and more generally from thermal stress. The homogeneous film that forms on the plant protects the crops from UV rays: reducing absorption and increasing the light diffusion.

EFFECTS

- Reduces the temperature in plants and fruits by 3 - 4 °C
- Reduces damage from sunburn
- Improvement of post-harvest quality
- Protects against water stress
- Enhances the fruit color
- Extends post-harvest life
- Reduces the attack of insects
- Prevents mildew and oidium
- Easy removal in post-harvest

SONAR SUN FLOW can be used on many crops, such as: almonds, apples, apricots, citrus, figs, grapes, melons, nectarines, olives, peaches, pears, plums, tomatoes, walnuts and watermelons.

CROP	Application per season	Amount of formulated /Ha	Amount of water /Ha
Apples	3	20-30 L/Ha	800-1000 L/Ha
Citrus	3	20 L/Ha	800-1000 L/Ha
Tomatoes	3	20 L/Ha	750 L/Ha
Melons	2	20 L/Ha	1000 L/Ha
Watermelons	2	20-30 L/Ha	1000 L/Ha
Grape	3	10-20 L/Ha	1000 L/Ha
Pomegranate	3	20 L/Ha	1000 L/Ha
Avocado	3	20 L/Ha	1000 L/Ha

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