sonar agro

2023

Product Catalog

Biotecnology for Agriculture

www.sonaragro.com

PRODUCTS

IDEAS

RESOURCES

RESEARCH

Adjuvants
index

NEW
IMPORTED FROM SPAIN

NIS 700
Non-Ionic Surfactant

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

NEW
IMPORTED FROM SPAIN

PINOK 96
ADJUVANT, NATURAL ENCAPSULATOR

COMPOSITION	%w/w
Polymers terpenes	96,0
pH	6,5

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Biostimulants index

NEW IMPORTED FROM SPAIN

Folkon

Biostimulant

Composition	%w/w
Nitrogen (Amonium)	10
Phosphosrus (P205)	20
Potassium (K2O)	5
Folcisteina	5
Humic Acid	5
	ppm
Iron (Fe)	500
Zinc (Zn)	100
Manganese (Mn)	100
Magnesium (Mg)	100
Boron (B)	80
Molybdenum (Mo)	2
Gibberellines	30

Spur

Aminoacids

Approved by ECOCERT INPUTS

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	

Spur Mix

Aminoacids. Micronutrients

Composition	%w/v
L-Aminoacids (Free)	4,20
Copper (Cu)	3,25
Iron (Fe)	3,25
Manganese (Mn)	3,25
Zinc (Zn)	3,25
Density: 1,3 @18ºC	
pH (10% solution): 6-7	

Spur Power

Solid. Aminoacids

HIGH QUALITY

Composition	%w/w
Free aminoacids	80,0
Total Nitrogen (N)	12,0
Calcium (CaO)	0,6
Potassium (K_2O)	4,0
Phosphorus (P_2O_5)	0,65
pH: 7	

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Biostimulants index

ZOOM

Humic Acids. Biostimulant

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

NEW IMPORTED FROM SPAIN

ZOOM AMYN

Liquid fertilizer of high concentration of Fulvic Acid and Amino Acids

Composition	%w/v
Total Fulvic Acid	22,0
Free Amino Acids	16,5
Total Polysaccharides	8,0
pH: 5– 6	
Density: 1,27 g/cc	

ZOOM fulvic

Fulvic Acids. Biostimulant

Composition	%w/v
Total Organic Matter	59,0
Fulvic acids	46,2
Total humic extract	46,2
Total Nitrogen (N)	6,6
Phosphorus (P_2O_5)	4,0
Calcium (CaO)	1,3

	ppm
Iron (Fe)	1840
Manganese (Mn)	660
Zinc (Zn)	660
Copper (Cu)	660
Boron (B)	270
Molybdenum (Mo)	33

Density: 1,32
pH: 6-7

Biostimulants index

ZOOM mix

Fulvic Acids. Macro. Micronutrients.

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	

ZOOM SOLID

Humic Acids. Biostimulant

Composition	%w/w
Total Humic Acid	80,0
Humic Acids	65,0
Fulvic Acids	15,0
Potassium (K_2O)	7,0

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Coppers index

NEW IMPORTED FROM SPAIN

Copper G

Deficiency corrector.
Fungicide Bactericide

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

Copper S

Deficiency corrector.
Fungicide Bactericide

Approved by ECOCERT INPUTS

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	

NEW IMPORTED FROM SPAIN

Copper T

Biofungicide – Bactericide
Cu Deficiency Corrector

Composition	%w/v
Copper (Cu)	25,0
Copper (Sulfate)	30,0
Copper (Oxychloride)	20,0
Copper (Hydroxide)	10,0
Density: 1,4	
pH: 7-8	

Crops index

CitriC Mn Zn

Manganese and Zinc.
Special for Citrus

Composition	%w/v
Total Zinc (Zn)	13,5
Total Manganese (Mn)	13,5
Total Nitrogen (N)	6
Density: 1,65	
pH (10% solution): 6	

NEW IMPORTED FROM SPAIN

Pistachio sonar

Composition	%w/w
Magnesium (MgO)	**2,0**
Copper (Cu)	**2,0**
Zinc (Zn)	**1,0**
Sulfur (SO_3)	**7,4**

PROFOL

All agricultural crops

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

Crops index

Rice Spur

Special for Rice

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 at 20°C : 1,20 g/ml	
pH: 7,0 ± 0,5	

SONAR COTTON

Special for Cotton

Composition	%w/w
Total Nitrogen	5
Copper (Cu) Organic Complex	2
Manganese (Mn) Organic Complex	2
Zinc (Zn) Organic Complex	1

VINE ONE

Special for Vine

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

Crops index

VINE TWO

Special for Vine

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

Wandel mn

Special for Potato Tubers and Roots

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

Field Crops
index

NEW IMPORTED FROM SPAIN

XCrop Spur

Special for Field Crops

Biostimulant for field crops

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

NEW IMPORTED FROM SPAIN

XMap Plus

Special for Field Crops

Phosporus and Nitrogen Fertilizer

Composition	%w/v
Total Nitrogen (N)	10
Ammoniacal Nitorgen ($N\text{-}NH_4$)	10
Phosphorus Pentoxide (P_2O_5)	61
Density: 1,4	
pH (solution 10%): 1-2	

XMicro

Special for Field Crops

Manganese, Zinc and Copper Fertilizer with Aminoacids

Composition	%w/v
Manganese (Mn)	15
Zinc (Zn)	14
Copper (Cu)	6
Free Aminoacids	3
Density	1,8
pH	6-7

Approved by ECOCERT INPUTS

Field Crops
index

XN21

Special for Field Crops

Nitrogen solution with Dicyandiamide

Composition	%w/v
Total Nitrogen (N)	21,0
DCD (Dicyanamide)	0,8
pH (1% water solution 20 C)	6-7
Density g/m³ at 20°C)	1,16

XSilic

Special for Field Crops

Silicon and Calcium Magnesium

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

XSilicFe

Biostimulant - Inmunity activator
Special for Field Crops

Composition	%w/v
Silicon (SiO_2)	17,5%
Iron (Fe)	3%

Flowering-Fruit Maturing

index

NEW
IMPORTED FROM SPAIN

MADUR

Biostimulant for Maturation Stage

Composition	%w/w
Total Nitrogen (N)	3,0
Potassium (K_2O)	5,0
Calcium (CaO)	5,0
Magnessium (MgO)	2,0
Polysaccharides	25,0
Uronic Acid	2,0

sonar Zn-B

Zinc and Boron Corrector

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

Spur Set

Flowering and fruit setting inducer

Composition	%w/w
Total Nitrogen (N)	6,00
Phosphorus (P_2O_5)	7,00
L-aminoacids	3,00
Boron (B)	4,50
Molybdenum (Mo)	4,50

Gluco Range
index

NEW
IMPORTED FROM SPAIN

sonar Gluco-Ca

COMPLEXED ORGANIC CALCIUM CORRECTOR

COMPOSITION	%w/v
Calcium (CaO) Water soluble	6, 15
pH 9-10	
Density: 1,2	

NEW
IMPORTED FROM SPAIN

sonar Gluco-Fe

COMPLEXED ORGANIC IRON CORRECTOR

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

NEW
IMPORTED FROM SPAIN

sonar Gluco-Mn

COMPLEXED ORGANIC MANGANESE CORRECTOR

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

Gluco Range
index

NEW
IMPORTED FROM SPAIN

sonar Gluco-Zn

COMPLEXED ORGANIC ZINC CORRECTOR

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

NEW
IMPORTED FROM SPAIN

sonar Gluco Mn+Zn

COMPLEXED ORGANIC MANGANESE AND ZINC CORRECTOR

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

Macronutrients index

COMPLEX DENSO YELLOW GEL

NPK Fertilizer with trace elements. Gel formulation

Formulations

COMPLEX DENSO	27-27-27+Te
COMPLEX DENSO	25-25-25+Te
COMPLEX DENSO	22-22-22+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

COMPLEX DENSO BLUE GEL

NPK Fertilizer with trace elements. Gel formulation

Formulations

COMPLEX DENSO	30-10-10+Te
COMPLEX DENSO	18-11-14+Te
COMPLEX DENSO	28-11-14+Te
COMPLEX DENSO	45-00-00+Te
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

COMPLEX DENSO GREEN GEL

NPK Fertilizer with trace elements. Gel formulation

Formulations

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

COMPLEX DENSO RED GEL

NPK Fertilizer with trace elements. Gel formulation

Formulations

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

Macronutrients index

K-PHOSPHORUS

Phosphorus and Potassium fertilizer

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

Paint K

Potassium fertilizer

Composition	%w/v
Potassium (K_2O)	50
Nitrogen (N)	3
EDTA	1
Density: 1,5@18ºC	
pH: 12	

Paint K express

Potassium fertilizer

Composition	%w/w
Potassium (K_2O)	50
Total Nitrogen (N)	3
Magnesium (MgO)	1
Chelating Agent EDTA	5

Macronutrients index

sonar Ca forte

Calcium, Boron and Aminoacids

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

sonar Ca Mg Aa

Prevention of physiopathologies caused by Can and Mg deficiencies

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	

NEW
IMPORTED FROM SPAIN

sonar Ca PLUS

Calcium and Magnesium

Composition	%w/v
Calcium (CaO)	15,0
Magnesium (Mg)	2,0
Silicon (SiO3)	1

Macronutrients index

sonar Mg Flow

Magnesium corrector

Composition	%w/v
Magnesium (Mg)	30
Density at 20°C: 1,4 g/cc	
pH: 9-10	

sonar NK60

Potassium fertilizer

Composition	%w/v
Potassium (K_2O)	46
Nitrogen (N)	13
pH (10% solution): 6,5	
Specific Gravity: 1,45	

sonar S

Sulfur fertilizer

Composition	%w/v
Nitrogen (N)	16
Sulfur (SO_3) water soluble	85
Density: 1,3 g/cc 18°C	
pH: 8	

Micronutrients
index

Kalbor

Boron and Calcium Corrector

Composition	%w/w
Boron (B)	15
Calcium (CaO)	7

sonar BORON

Boron Deficiency Corrector

Composition	%w/w
Boron (B)	11
Total Nitrogen (N)	5
Density: 1,35-1,4@18ºC	
pH (10% solution): 8-9	

Micronutrients index

NEW IMPORTED FROM SPAIN

Kelat Fe 10

Iron EDTA Chelate Liquid

EDTA COMPLEX

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

NEW IMPORTED FROM SPAIN

Kelat FMZ

Iron, Manganese and Zinc Corrector

Composition	%w/w
Iron (Fe) Soluble	4,5
Iron (Fe) EDDHA	4,5
Manganese (Mn) EDTA	1,5
Zinc (Zn) EDTA	0,5
Humic Acids	6,0

Micronutrients index

kelat MIX micro

Multiple Deficiencies Corrector

Composition	%w/w
Iron EDTA (Fe)	7,5
Manganese EDTA (Mn)	3,5
Zinc EDTA (Zn)	0,7
Copper EDTA (Cu)	0,3
Boron (B)	0,65
Molybdenum (Mo)	0,3
pH (1% water)	4,5

NEW
IMPORTED FROM SPAIN

kelat MIX micro L

Liquid fertilizer corrector of multiple deficiencies

EDTA COMPLEX

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	

pH Corrector
index

NEW IMPORTED FROM SPAIN

sonar pH Color

pH regulator, surfactant with coloring effect

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

PDI (Plant Defense Inductors)
index

Excellent
Plant defense inductor

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

sonar Phos Al
Plant defense inductor

Composition	%w/w
Phosphorus (P_2O_5)	21,4
Aluminium (Al)	4,2
Density: 1,32 g/cc	
pH: 2 - 3	

sonar Phos Cu
Plant defense inductor

Composition	%w/w
Phosphorus (P_2O_5)	25
Copper (Cu)	6
Density: 1,4 g/cc	

PDI (Plant Defense Inductors)

index

sonar Phos Mn Zn

Plant defense inductor

Composition	%w/w
Phosphorus (P_2O_5)	14,5
Zinc (Zn)	5
Manganese (Mn)	3
Density at 20ºC: 1,3 g/cc	
pH: 2 - 3	

sonar Phos PK

Plant defense inductor

COMPOSITION	%w/w
Potassium Phosphonate	95,0
Phosphorus (P_2O_5)	57,0
Phosphorus (K_2O)	38,0

sonar agro

PGR (Plant Growth Regulators)
index

NEW IMPORTED FROM SPAIN

sonar FRUIT

Plant Growth Regulator

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

sonar GIB

Plant Growth Regulator.

Composition	%w/v
Gibberellic acid (GA_3)	1,6
Soluble liquid (SL)	

sonar GROWTH

Plant Growth Regulator.

Composition	%w/w
Calcium (Ca)	0,8
Zinc (Zn)	2,0
Sulfur (S)	0,8
Fulvic acids	25,0
Nitrogen (N)	9,0
	ppm
Gibberellines	500
Auxines	500
Cytokinins	200
Cisteine	500
Tiamine	1110
Inositol	200

NEW IMPORTED FROM SPAIN

sonar SEA

Plant Growth Regulator.

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

Repellent INDEX

NEW
IMPORTED FROM SPAIN

Composition	%w/w
Methyl Anthranilate	30,0

NATURAL CROP PROTECTION AGAINST ATTACKS OF BIRDS

sonar agro

Root development
index

sonar ROOT

Root development

Composition %w/w

L-free amino acids	10,0
Iron (Fe) Water soluble	2,0
Manganese (Mn) Water soluble	1,0
Zinc (Zn) Water soluble	2,0
Boron (B) Water soluble	0,2
Molybdenum (Mo) Water soluble	0,05

NEW
IMPORTED FROM SPAIN

sonar ROOT
SOLID

Root development

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

Salinity Corrector
index

POLY sal

Soil salinity corrector
Speed action

Composition	%w/w
Polymaleic acid	33
Density: 1,1	

sonar sal

Soil salinity corrector
organic calcium complex

Composition	%w/w
Complexed Calcium oxide (CaO)	10
Water soluble Calcium (CaO)	10
Total Nitrogen (N)	4
Density: 1,4	
pH: 6,5 - 7,5	

Seaweed Biostimulant
index

Algae

Seaweed extract.
Biostimulant

Composition	%w/v
Ascophylum Nodossum sp	25
Total Organic matter	37,5
Fulvic acids	21,8
Potassium (K_2O)	5,25
Manitol	1,75
Alginic Acid	3
	ppm
Equivalent Citocinetic Activity	250

Algae amyn

Seaweed extract.
Biostimulant

Composition	%w/v
Seaweed extract	20
Free aminoacids	10
Fulvic acids	15
Polysaccarides	10
Nitrogen (N)	6,0
Phosphorus (P_2O_5)	2,5
Potassium (K_2O)	4,8

Algae KELP

Seaweed extract.
Biostimulant

Composition	%w/v
Seaweed extract (Eklonia Maxima)	30,0
Free Aminoacids	3,0

Algae solid

Seaweed extract.
Biostimulant

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

Seed treatment
index

Seed Start

Seed Treatment

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

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Silicon index

Sonar Silic

Silicon and Potassium fertilizer

Composition	%w/w
Silicon (SiO_2)	22
Potassium (K_2O)	9

sonar Silic Calcium

Silicon and Calcium fertilizer

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

Sonar SilicFulvic

Silicon and Calcium with Fulvic Acids

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

Solar Protection
index

sonarsun

QUALITY AND HEALTH IN PRE-HARVEST

foliar

Composition	%w/w
Ca (CaO)	55,00
Mg (MgO)	

sonarsun Flow

QUALITY AND HEALTH IN PRE-HARVEST

foliar

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

sonar agro

Adjuvants

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

sonar agro

NEW
IMPORTED FROM SPAIN

PINOK 96

ADJUVANT, NATURAL ENCAPSULATOR

foliar

COMPOSITION	%w/w
Polymers terpenes	96,0
pH	6,5

CHARACTERISTICS

PINOK 96 is an adjuvant that enhances the efficacy of phytosanitary treatments. It is Non-Ionic, biodegradable, derived from pine resin and can be used in organic agriculture.

PINOK 96 forms an elastic adhesive film which encapsulates and keeps the pesticide on the foliage of the crop, allowing the passage of the systemic pesticides molecules to the inside of the leaf. This film reduces the effects of environmental factors, increasing the effectiveness of the applications.

PINOK 96 does not produce foam or clogged nozzles in addition to improving the initial deposit of pesticides and allows a redistribution of aerial or ground spraying, helping to improve coverage.

MODE OF ACTION

PINOK 96 is an adjuvant, which reduces the dynamic tension of the surface of the water.

- ADHERENT.
- NATURAL ENCAPSULATING AGENT.
- NATURAL PRODUCT.
- NON-TOXIC PRODUCT.
- PROTECTS AGAINST ULTRAVIOLET RAYS.
- PROTECTS AGAINST HEAT.
- PROTECTS FROM THE HIGH TEMPERATURES.
- PRODUCTS NOT DANGEROUS FOR THE ENVIRONMENT.
- PROTECTS THE BIOLOGICAL INSECTICIDES.
- PROLONGS THE INTERVAL BETWEEN APPLICATIONS.
- REDUCES THE EVAPORATION.

APPLICATION

DOSE	RECOMMENDATION
0.3 to 1.0 L / Ha with ground or aerial equipment.	
At a dose of 300 ml PINOL 96 provides excellent adherent activity. To prolong the biological activity of most insecticides and fungicides apply minimal doses of 0.5 to 1.0 L per hectare.	Expand the activity and increase the effectiveness of insecticides and fungicides applications in all crops.
250 to 300 ml/200 L of water, 100 ml / 200 L of spray.	Hydraulic gun or spray trees with air blast.
0.5 l / Ha to prolong the biological activity of the herbicide and increase retention of the herbicide into the root zone by reducing leaching losses.	For herbicides applications.

PRE-HARVEST INTERVAL

When the product is applied to the prolongation of the biological activity of pesticides, should not be applied to crops 30 days before harvesting, with the exception of copper fungicides or products based on Bacillus thuringiensis. At doses below 1 liter per hectare, the interval pre-harvest depends on the pesticide product with which it is mixed.

PINOK 96 is compatible with the commercial agrochemicals in the form of concentrated emulsions, soluble liquids, wettable powders and suspensions concentrated. However, if the compatibility is not known previously, test on a small scale.

IMPORTED FROM EU

1L 5L 20L

sonar agro

Biostimulants

NEW
IMPORTED FROM SPAIN

Folkon

Biostimulant

foliar

Composition	%w/w
Nitrogen (Amonium)	10
Phosphosrus (P205)	20
Potassium (K2O)	5
Folcisteina	5
Humic Acid	5
	ppm
Iron (Fe)	500
Zinc (Zn)	100
Manganese (Mn)	100
Magnesium (Mg)	100
Boron (B)	80
Molybdenum (Mo)	2
Gibberellines	30

Folkon is a liquid foliar fertilizer high concentration, additional supplement to the normal fertilization program. **Folkon** is a product that has a formulation of major elements 10-20-5 and is supplemented with trace elements, plant hormones, folcisteine and humid acids.

The folcisteine contained Folkon increases plant biochemical reserves and optimices phisiological pathways.

Folcisteine is prevent to increase yield and crop performance in crops such as tomato (Morales. Payan, 1998), bell pepper (Valera, 1986), apple (Dubravec, 1995) and manu other crops.

Folkon increases the intern activity of phytohormones and stimulates the principal metabolic processes as: photosynthesis, breathing, cellular division and protein synthesis among others, is resulting into the increase of the capacity to explore the generic potential of the crops.

Characteristics

- ASSISTS PLANT RECOVERS FROM ABIOTIC STRESS
- CORRECTORS NUTRITIONAL DEFICIENCIES
- HELPING TO RECOVER FROM HARMFUL EFFECTS OF STRESS
- INCREASES CROP YIELD AND QUALITY
- INCREASES UTILIZATION OF NUTRIENTS
- REACTIVATES THE PLANT PHYSIOLOGICAL PROCESSES

Application

Crops	Time of application	Doses (L/Ha)	Appl.
Alfalfa	10-15 days after cutting		2-3
Bean, peas and soybeans	2 times, first application when 9 or more leaves unfolded, repeat when 3rd side soot visible.		2-3
Cereals: wheat, barley, oat, rice, etc	2 times, first application when 9 or more leaves unfolded, repeat when 3rd side soot visible.		1
Corn and Sorghum	2 times, first application when 4 true leaves unfolded, repeat when 6 true leaves unfolded.		2
Cotton	3 times, first application when third true leaf unfolder, repeat when first floral buds visible and when 20% of bolls have attained their final size.		2-3
Fruit trees: apple, peach, cytrus and walnut	3 times, first application when new vegetative growth have more then 20cm, repeat 15 days after when developing fruits.		2-3
Other crops: cucurbits	3 times, firt application 10 days after transplanting, repeat two times more with 8-10 days interval.		2-3
Potato	3 times, first application 9-10 leaves of main stem unfolded, repeat 15 days after and 20% of total tuber mass reached.		2-3
Strawberry	3 times, first application 9 or more leaves unfold, repeat at the beginning of stolon formation and after 2nd harvest. Can be used monthly after 3rd harvest.		2
Vegetable, tomato and pepper	3 times, first application 15 days after transplanting, repeat at beginning flower bottom formation and when fruits have more than 1 cm diameter. For undetermined tomato add one or more applications with 15 days interval after 3rd application.		2-3

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	

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

Spur

- **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...)**

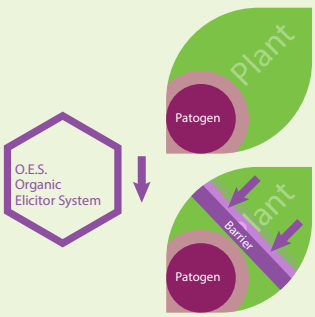
Increase

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

Characteristics

Spur is a natural bioactivator based on Amino acids obtained through enzymatic processes, making *Spur* more efficient than chemical process 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.

sonaragro has developed a group of molecules that we call I.S.I. capable of acting as **DISEASE RESISTANCE ACTIVATORS**.



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

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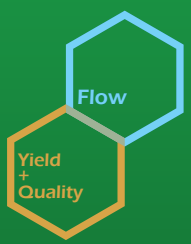
Spur Mix

Aminoacids. Micronutrients

foliar

Composition

	%w/v
L-Aminoacids (Free)	4,20
Copper (Cu)	3,25
Iron (Fe)	3,25
Manganese (Mn)	3,25
Zinc (Zn)	3,25
Density: 1,3 @18°C	
pH (10% solution): 6-7	



Benefits of Spur Mix

- Increases crop yield and quality
- Rapid uptake and translocation of micronutrients
- Supports plant resistance to stress
- Natural organic fertilizer
- Supports the plant with the needed aminoacids and peptides, saving the biological energy
- Enhances the efficacy of plant protection agents and fertilizers

You should not mix with cupric or organ-cupric products, mineral oils, sulphur or any kind of product very alkaline (*pH greater than 8*).

Characteristics

Spur Mix is a liquid compound of micronutrients complexed to organic molecules produced by hydrolysis of natural protein. The unique formulation of naturally chelated microelements and amino acids helps to prevent micronutrient deficiencies stimulating simultaneously the metabolism of the plant.

Spur Mix is a multifunction product performing at the same time as biostimulant (*free amino acids are responsible for a rapid recovery in the event of stress*) and deficiency corrector (balanced pool of micronutrients.

Combining microelements and amino acids leads to an increase of micronutrient treatment efficacy and reduces the fertilizer application dose.

Foliar application

Crops	Season	Annual dosage
In all crops	5-7 L/Ha in case of stress (salinity, drynes divided in several doses 2-3 L/Ha)	Stress reduction, improvement of efficiency protection treatment, micronutrients deficiency corrector
Cereals (*wheat, rye, barely, oat, maize, rice...*) potatoes, beans, peanuts	6-8 L/Ha divided in 3 applications every 15 days after the first true leaves appear	Output, micronutrient deficiency correction
Horticultural trees (*kiwis, citrus groves, banana, wine grapes, stone fruit*)	5-7 L/Ha every 10-15 days, from pre-blooming stage until the beginning the colouring stage	Fruit setting, fruit growth and quality micronutrients deficiency correction
Open field vegetables	5-7 L/Ha every 7-10 days after the first true leaves	Output, micronutrient deficiency correction
Ornamental plants and forest nursery, turf and grass	7 L/Ha every 7-12 days after the transplanting	Root formation, sprouting leaf quality, growth, micronutrient deficiency correction
Vegetables in gren houses (*tomatoes, peppers, eggplants, cucumbers*)	7 L/Ha in 2-3 applications every 10-15 days, from the transplanting to peak the yield	Outpot, sprouting leaf quality, growth, micronutrient deficiency correction

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Spur Power

Solid. Aminoacids

soil foliar

Composition

	%w/w
Free aminoacids	80,0
Total Nitrogen (N)	12,0
Calcium (CaO)	0,6
Potassium (K_2O)	4,0
Phosphorus (P_2O_5)	0,65

HIGH QUALITY

Benefits of Spur Power

- **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**

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 amino 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.

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

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

sonar agro

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

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.

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

sonar agro

NEW
IMPORTED FROM SPAIN

ZOOM AMYN

Liquid fertilizer of high concentration of Fulvic Acid and Amino Acids

soil foliar

Composition	%w/v
Total Fulvic Acid	22,0
Free Amino Acids	16,5
Total Polysaccharides	8,0
pH: 5 – 6	
Density: 1,27 g/cc	

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	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	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.

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

sonar agro

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

ZOOM fulvic

- **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**

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.

Soil application

Crops	Season	Annual 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

IMPORTED FROM EU

sonar agro

ZOOM mix

Fulvic Acids.
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	

Benefits of Fulvic Acids

- Increase the microbiological activity in the soil
- Improve the activity and take up of soil nutrients
- Improve 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
- Permeate cellular membranes helping assimilation
- Enhance flowering and fructification

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 them 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 are better assimilated, increasing mobilization and participation of metabolic processes.

Soil 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 int oseveral 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
Open field vegetalbes	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, and at fertilizer application
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/m^3 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 dosage: Increasing of soil fertility and fertilizer utilisation. 3-4 Kg/Ha or 1 Kg/m^3 during preparation of substrates

1 Kg 5 Kg 20 Kg

sonar agro

ZOOM SOLID

Humic Acids.
Biostimulant

seed soil foliar

Composition

	%w/w
Total Humic Acid	80,0
Humic Acids	65,0
Fulvic Acids	15,0
Potassium (K_2O)	7,0

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

EC FERTILIZER

1Kg 5Kg 10Kg 25Kg 500Kg

IMPORTED FROM EU

sonar agro

Coppers

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		

Systemic

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

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

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.

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 applicationd 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

Cautions

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.

EC FERTILIZER
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	

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 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	

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**

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. **Shake well before use. Do not freeze.**

EC FERTILIZER

sonar agro

NEW
IMPORTED FROM SPAIN

Copper T

Biofungicide – Bactericide
Cu Deficiency Corrector

foliar

Composition	%w/v
Copper (Cu)	25,0
Copper (Sulfate)	30,0
Copper (Oxychloride)	20,0
Copper (Hydroxide)	10,0

Density: 1,4
pH: 7-8

Characteristics

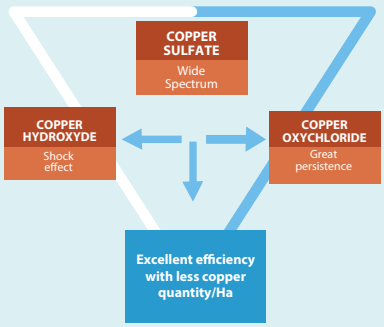
COPPER T is a wide spectrum bactericide fungicide and preventive control, before the establishment of the disease. Copper interferes with various processes of cellular activity in fungi and bacteria: it prevents the germination of spores, interferes with the impermeability of the membrane, blocks respiration processes and inhibits the synthesis of key proteins.

Actions

- Wide spectrum of crops and diseases.
- Preventive effect against bacteria and fungi (sporicide).
- Accelerates lignification of branches, improves wound healing.

Benefits

- Excellent dispersion
- Perfect synergy
- Low risk of emergence of resistance



CROPS ACTIONS	KEY DISEASES CONTROLLED	DOSES	APP Nº	SECURITY INTERVAL DAYS
Almond	Leaf Curl, Shot-hole and Monilia	3-3,5 L/ha	1	14
Artichoke	Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	7
Aromatic herbs	Mildew	2-2,8 L/ha	4	21
Aubergine	Alternaria, Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	10 (fresh air) 3 (greenhouse)
Broccoli, Cauliflower	Alternaria, Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	14
Citrus	Phytophthora, Bacteriosis and Tomopsis	3-3,4 L/ha	2	14
Cucurbits	Alternaria, Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	3
Fruit Tree Pip	Bacteriosis Scab	2-2,5 L/ha (pre-flowering) 1-1,5 L/ha (post-flowering)	4	NA (pre-flowering) 21(post-flowering)
Garlic, Onion, Shallot	Bacteriosis and Mildew	2-2,8 L/ha	4	3
Hazel, Pistachio, Walnut	Bacteriosis	3-3,5 L/ha	1	NA
Kiwi	Bacteriosis	2-2,6 L/ha	1	NA
Leaf vegetable	Mildew	2-2,8 L/ha	4	7
Olive	Peacock Spot and Tuberculosis	2-2,9 L/ha	3	14
Peppers	Alternaria, Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	7
Strawberry	Mildew and Anthracnose	2-2,8 L/ha	4	3
Stone fruit trees	Leaf Curl, Bacteriosis, Shot-hole, Monilia, and Scab	3-3,5 L/ha	1	NA (pre-flowering) 21(post-flowering)
Sugar Beet	Pseudomonas	2-2,8 L/ha	4	
Tomato	Alternaria, Anthracnose, Bacteriosis, and Mildew	2-2,8 L/ha	4	10 (fresh air) 3 (greenhouse)
Vine	Bacteriosis Mildew	2-2,3 L/ha 1,25-2,3 L/ha	1	21

EC FERTILIZER

sonar agro

Crops

Citric Mn Zn

Manganese and Zinc. Special for Citrus

foliar

Composition	%w/v
Total Zinc (Zn)	13,5
Total Manganese (Mn)	13,5
Total Nitrogen (N)	6
Density: 1,65	
pH (10% solution): 6	

Yield + Quality

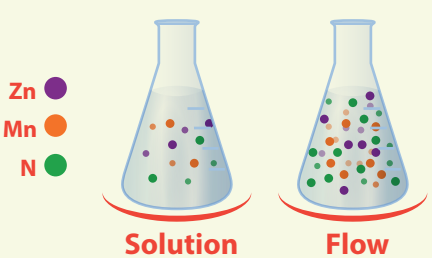
Benefits of Citric Mn Zn

Increases the size of leaves, shoots and fruits

Enhance content in vitamin C

Improves quality (Increases 'TSS' content of the fruit)

Increases yield. A higher number of fruit per tree



Characteristics

Citric Mn Zn is a highly concentrated emulsion (Flow) of Zinc and Manganese salts and it's chloride free and fully water soluble. A combined application of Zn and Mn is more effective than single sprays on their own.

The main roles of **Zinc** are as a cofactor of enzymes and involvement in the production of growth regulators responsible for internode elongation and chloroplast development. Low zinc levels reduce the fruit number per tree and, to a lesser extent, fruit size, resulting in decreased yields.Zinc deficiency symptoms in citrus first appear as chlorotic leaf spots (*mottle leaf*) and/or white interveinal areas with green veins. **Manganese** is involved with photosynthesis, efficient use of N, protein metabolism and enzyme activation. Manganese deficiency is usually seen on young leaves as a mottled yellowing of the leaf. Manganese deficiency is usually seen on young leaves as a mottled yellowing of the leaf.

Application

Foliar: 300-500 cc / hl.

Make 2-4 applications during the crop cycle, according to needs and development.

Citrus, application should be performed after the onset of the new shoots of spring and summer when the shoots reach 2/3 of its development.

DILUTION : Recommended water rate is 500-1500 L per hectare. Always shake the container before opening.

The spray tank should be filled with half of the required amount of water. Measure the required amount of Citric Mn Zn and add to the tank maintaining constant agitation. Add remaining water and Spray.

Citric Mn Zn should be stored in frost free conditions with optimum storage range between 5-40ºC. In situations of prolonged storage there may be slightly settling of the nutrient particles. This is reversible on shaking.

1L 5L

EC FERTILIZER

sonar agro

NEW
IMPORTED FROM SPAIN

Pistachio
sonar

soil

foliar

Special for pistachio

Composition	%w/w
Magnesium (MgO)	2,0
Copper (Cu)	2,0
Zinc (Zn)	1,0
Sulfur (SO_3)	7,4

Characteristics

Micronutrients complexed with Gluconic acid in liquid formulation indicated to prevent deficiences in pistachio crops.

Pistachio Sonar has been developed for preventive and curative application on foliar spray or fertirrigation Its use is suggested as supplement to a regular, balanced fertilizer program to enhance yields and improve quality. applications.

Foliar application of **Pistachio Sonar** may be particularly beneficial during periods of peak nutrient demand, for crops grown on soils having poor nutrient availability or to crops suffering from a weakened root system.

Application

FOLIAR APPLICATION	DOSE
Foliar	200-400 cc/100L H_2O
Separate applica ons	7-14 days.

SOIL APPLICATION	DOSE
Fertelity Maintenance	2-5 L/ha
Mild deficiencies	4-9 L/ha
Serious deficiencies	8-20 L/ha

Actively growing plants with young leaves absorb foliarly applied most efficiently. Immediate post-irrigation or post-rainfall application will enhance foliar uptake. Throught coverage and wetting are needed for optimum foliar spray results. Application should be separated at minimum of 7-14 days. Avoid Foliar applications when plants are under moisture stress. AVOID foliar application to deciduous tree crops during bloom. Use up to 2 L of in a minimum of 200 L of water per hectare.

Shake, stif, or swirl contents before using. Always add to the spray tank before adding pesticides. Pistachio Sonar is compatible with insecticides and acaricides normally under use. In case of doubt, a previous test is advisible. Pistachio Sonar is not recommended to be mixed with highly alkaline products. Soil applications are recommended with nitrogen fertilizer solutions.

SHAKE WELL BEFORE USE

EC fertilizer

1L 5L 20L 200L

IMPORTED FROM EU

sonar agro

PROFOL

All agricultural crops

foliar

Composition

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

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	3		Repeat as necessary every 10-14 days.
Fruit Tree	Once new 3 leaf 80% open			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.
Potatos	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.

EC FERTILIZER

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 of Rice Spur

- **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**
- **Better stress resistance**

Foliar application

Crops	Spray application	N° applications	Applications & 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.

1L 5L 20L 200L

sonar agro

SONAR COTTON

Special for Cotton

foliar

Composition %w/w

Total Nitrogen	5
Copper (Cu) Organic Complex	2
Manganese (Mn) Organic Complex	2
Zinc (Zn) Organic Complex	1

Special for Cotton

systemic

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 (eg shoots, fruits, etc.) in the early stages of cultivation.

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.

INCREASES

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

QUALITY

Increases micronaire index in fiber by 25%

HEALTH

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

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

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

Foliar Application

1st 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

1L 5L 20L 200L

sonar agro

VINE ONE

Special for Vine

soil foliar

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

Benefits of VINE ONE

Promotes Fruit Set

Increases Yield and Sugar

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.

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

VINE ONE can be applied to all crops just before soil preparation or when planting. It is also possible use it with no problems as a surface fertilizer (Coverage).

1Kg 5Kg 20Kg

EC FERTILIZER

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

Benefits of VINE TWO

Promotes Fruit Set

Increases Yield and Sugar

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...

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)

Cautions

VINE TWO 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 VINE TWO and apply the mixture immediately after the preparation.

1Kg 5Kg 20Kg

EC FERTILIZER

sonar agro

Wandel mn

Special for Potato Tubers and Roots

foliar

Composition

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

Wandel mn

Improves the development of taproot crops

Increases number, size and quality of potato tubers

Recommended for crops with high manganese demand

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.

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, Wandel mn stimulates the development and elongation of taproots.

Foliar Application

Crops	Time of Application	Number of Applications	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	2,5 - 3 L/Ha
Fruit trees	At pre-flowering and fruit enlargement	3-4 applications every 7-10 days	2,5 - 3 L/Ha

EC FERTILIZER

sonar agro

Field Crops

NEW
IMPORTED FROM SPAIN

XCropSpur

Special for Field Crops

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

Benefits of XCropSpur

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

Characteristics

XCropSpur 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.

Thanks to the product formulation micronutrients and amino acids are uptaken quickly and used throughout the entire plants.

Foliar application

Crops	Application timing	L/Ha x 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 treatmets.	1-1,5	Improves vegetative development specially on cool springs
Pastures (Lucerne, Clover)	Apply 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 effects
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.	1,5	Increases production of root and sugar.

EC FERTILIZER

IMPORTED FROM UE

sonar agro

NEW IMPORTED FROM SPAIN

XMap Plus

Special for Field Crops

Phosphorus and Nitrogen Fertilizer

soil foliar

Composition	%w/v
Total Nitrogen (N)	10
Ammoniacal Nitorgen ($N\text{-}NH_4$)	10
Phosphorus Pentoxide (P_2O_5)	61

Density: 1,4

pH (solution 10%): 1-2

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

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

XMap 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.

XMap 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.

EC FERTILIZER

IMPORTED FROM UE

1L 5L 20L 200L

sonar agro

XMicro

Special for Field Crops

Manganese, Zinc and Copper Fertilizer with Aminoacids

foliar

Composition

	%w/v
Manganese (Mn)	15,0
Zinc (Zn)	14,0
Copper (Cu)	6,0
Free Aminoacids	3,0
Density	1,56
pH	6-7

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

XMicro Is a formulation of probiotic micronutrients and a stable source of copper, manganese and zinc to ensure maximum assimilation.

XMicro complexed with Aminoacids ensures efficient and effective uptake of zinc, manganese and copper to optimize micronutrients nutrition of the plant that can help suppress certain external and internal plant stresses. It is a highly concentrated micronutrients solution designed to improve plant nutrition and vigor. **XMicro** is compatible with plant growth regulators, pesticides and other liquid fertilizers

Benefits of XMicro

- Increases the levels of Copper Manganese and Zinc
- Increase the vigor of crops
- Decreases disease risk
- Contains essential nutrients for the formation of chlorophyll, enzymes and proteins

Influence of micronutrients on plants

Manganese	· Predominant in metabolism of organic acids · Activates the reduction of nitrite and hydroxilamine to ammonia · Role in important enzymes involved in respiration
Zinc	· Formation of growth hormones (auxin) · Seed and grain formation · Promotes maturity · Protein synthesis
Copper	· Major function in photosynthesis · Major function in reproductive stage · Indirect role in chlorophyll production · Increases sugar content · Intensifies colour · Improves flavor in fruits and vegetables

YIELD, QUALITY AND PROTEIN CONTENT

Application

Crops	L/Ha	Problem/Target	Details
CEREALS	1-1,5 1-1,5 0,5-2	Shocking, yield, N-efficiency N-efficiency, photosynthesis performance, winter hardness Seeddressing with nutrient for improved youth development	In the spring from the start of vegetation In the autumn from 3-leaf stage Seed treatment
POTATOES	1-2	Shell quality, resistance	1-2 times from start of series
SOYA	1-1,5	Photosynthetic performance, resistance, winter hardness	1-2 times from 6-leaf stage
CORN	2	Yield, photosynthesis performance, resistance	From 4-leaf stage
RAPE	1 1	Yield, photosynthesis performance, resistance, winter hardness Yield, photosynthesis performance, resistance, winter hardness	1-2 times in spring from start of vegetation to early flowering In the autumn from 4-leaf stage
SUNFLOWER	1	Yield, photosynthesis resistance	From 4-leaf stage
SUGAR BEET	1	Yield, photosynthesis resistance	1-2 times from 6-leaf stage

XMicro is miscible with the usual plant protection agents. However a mixture test is advisable. For mixtures with leaf fertilizers or plant protection products, fill the syringe to 2/3 with water and add the products individually, add XMicro as the last component. Immediately apply with constant stirring.

XMicro 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.

1L 5L 20L 200L

SHAKE WELL BEFORE USE

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.

ADVANTAGES OF XN21

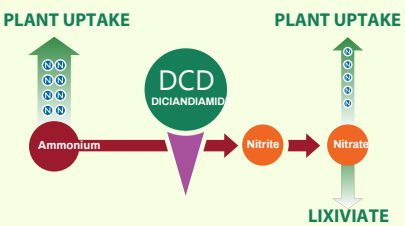
Promotes growth and vegetative development and increased production.

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	Dose	Use
Cereals	1-2 L/Ha 200-300 l/Ha	Spray 1-2 times from tillering to the last stage of leef formation
Rape	1-2 L/Ha 200-300 l/Ha	Spray 1-2 times from the stem elongation stage before flowering
Sugar Cane	2 L/Ha 200-300 l/Ha	Spray 1-2 times from the leaf to the row capping step
Corn	3-5 L/Ha 200-300 l/Ha	Spray 1-3 times at leaves at stage 4-8 for 10-14 days
Vegetables	5 L/Ha 200-300 l/Ha	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

EC FERTILIZER

sonar agro

XSilic

Special for Field Crops

Silicon and Calcium Magnesium Fertilizer

foliar

Yield and Quality

Composition

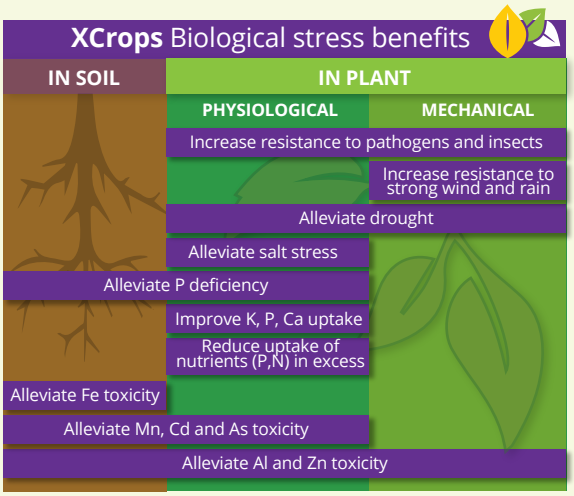
	%w/w
Silicon (SiO_2)	18
Calcium (CaO)	13,5
Magnesium (MgO)	5,5
Density	1,3
pH	5-6

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 0,5 L/Ha
MAIZE	**1:** 2-6 leaves unfolded (BBCH 12-16). Optimal time is 4 leaves unfolded. **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)	
RYE	**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)	
WHEAT 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.

SHAKE WELL BEFORE USE

sonar agro

NEW
IMPORTED FROM SPAIN

XSilicFe

Biostimulant – Inmunity activator
Special for Field Crops

Inmunity activator-biostimulant

Soil foliar

Composition	%w/v
Silicon (SiO_2)	17,5%
Iron (Fe)	3%

CHARACTERISTICS:

XSilicFe activates natural immune systems of plants and stimulates their growth and development. It contains silicon which is easily absorbed by plants, strengthening cell walls and stimulating numerous vital processes in the plant.

XSilicFe as an immunity stimulant is one of the main elements of the strategy to support the natural resistance of plants STRESS CONTROL SYSTEM.

- DESIGNED FOR EXTENSIVE CROPS
- PREVENTIVE / CURATIVE ACTION
- OPTIMAL MISCIBILITY
- LOW COST OF TREATMENT(0.5L/HA)

INCREASED PLANT TOLERANCE TO ADVERSE GROWING CONDITIONS (E.G. DROUGHT AND OTHER ABIOTIC STRESSES).

LIMITED INFLUENCE OF BIOTIC STRESS CAUSED BY PATHOGENS AND/OR PEST ATTACK.

STIMULATED ROOT GROWTH IN YOUNG PLANTS.

IMPROVED CROP YIELD, QUALITY AND STORAGE PARAMETERS.

FOLIAR APPLICATION

CROPS	TREATMENTS	WATER VOLUME
Cereals	2 - 4	200 - 300
Trees	2 - 4	500 - 1000
Horticultural	2 - 4	400 - 600

Dosage: 0,5 l/ha

SOIL APPLICATION

Irrigate the plants 3-6 times in the vegetative period with a 0.1% product solution (100ml of product in 100 liters of water).

LEAF FERTILIZATION:

Apply at critical times for plant growth and development every 10-14 days. To increase the resistance of plants to periodic water shortages - perform at least one treatment before the expected period of water shortage, and then 2-3 treatments every 5-7 days.

EC FERTILIZER

IMPORTED FROM UE

sonar agro

Flowering-Fruit Maturing

NEW
IMPORTED FROM SPAIN

MADUR

Biostimulant for Maturation Stage

Soil foliar

Composition

	%w/w
Total Nitrogen (N)	3,0
Potassium (K_2O)	5,0
Calcium (CaO)	5,0
Magnessium (MgO)	2,0
Polysaccharides	25,0
Uronic Acid	2,0

Characteristics

COMBINATION OF FULVIC ACID AND AMINO ACID

ORGANIC AND NATURAL PRODUCT

NATURAL BRIX ENHANCER

INCREASES SYNTHESIS OF SUGAR

MADUR is a product specially designed to improve the uniformity, coloration, consistency and maturation of the fruit.

MADUR incorporates an organic molecular polymer of high weight, which confers more elasticity, hydration and firmness to the skin of the fruits. The contribution of calcium (Ca) and magnesium (Mg), give Madur the ability to reduce the permeability of cell membranes and the absorption of water, helping to increase the firmness of the fruit and, therefore, extend its useful life.

The MADUR balanced formulation, designed with an organic matrix rich in polysaccharides, macro and microelements, key elements in the process of fruit setting and ripening, has been achieved because of a careful selection of various components, prepared in an optimal balance. The result is a product with the highest quality and efficiency.

- **IMPROVES NATURALLY FRUIT COLOR**
- **INCREASES FRUIT CONTENT OF SUGAR**
- **IMPROVES FRUITING AND PROLONG SELF LIFE**
- **IMPROVES THE CALIBRE AND FIRMNESS OF THE FRUIT**
- **ADVANCES THE FRUIT RIPENING**

Foliar Application

CROPS	DOSES
Fruit crops (table grapes, wine, apple, pear, peach, nectarine, apricot, cherry, kiwi, etc.)	ml 400-450/hl make 2-3 close treatments (7 days) beginning from veraison
Citrus fruits, oil and table Olive	ml 400-450/hl make 2-3 close treatments (7 days) beginning from veraison
Vegetable and industrial crops in full field (industrial and table tomatoes, pepper, eggplant, strawberry, watermelon, melon, Borlotti beans, sugar been, etc.)	ml 400-450/hl make 2-3 close treatments (7 days) beginning from veraison
Greenhouse vegetable crops	ml 300-400/hl make two treatments on each fruiting stage from mid enlarged fruits
Flowering plants, ornamentals and cut flowers	ml 200-300/hl

Soil Application

CROPS	DOSES
All crops	It 0,8-1,0/1000m2 by half enlarged fruit. We recommend the mixture with chelapotash 4kg/1000m2

IMPORTED FROM UE

1L 5L 20L

sonar agro

sonar Zn-B

Zinc and Boron Corrector

soil foliar

Composition

	%w/w
Zinc (Zn)	15
Boron (B)	9

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 Zn-B 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 e xceed 1% concentration
	4 Kg/Ha	On Reserve phase. Autumn application. Do not exceed 2% concentr ation
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. 1º with well-rooted plants and developed leav es - after: intervals 15 days
		In general 1-2 applications on well-developed leaves. Do not ex ceed 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

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

1Kg 20Kg 1000 Kg

EC FERTILIZER

sonar agro

Spur Set

Flowering and fruit setting inducer

soil foliar

Composition

	%w/w
Total Nitrogen (N)	6,00
Phosphorus (P_2O_5)	7,00
L-aminoacids	3,00
Boron (B)	4,50
Molybdenum (Mo)	4,50

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 It 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

sonar agro

Gluco Range

NEW IMPORTED FROM SPAIN

sonar Gluco

soil foliar

sonar Gluco-Ca

COMPOSITION	%w/v
Calcium (CaO) Water soluble	6, 15
pH 9-10	
Density: 1,2	

soil foliar

COMPLEXED ORGANIC CALCIUM 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

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-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+Zn

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

foliar

COMPLEXED ORGANIC MANGANESE AND ZINC CORRECTOR

SYSTEMIC

GLUCCO 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 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 as the last componen. Apply immediately stiring constantly.

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW IMPORTED FROM SPAIN

sonar Gluco-Ca

COMPLEXED ORGANIC CALCIUM CORRECTOR

soil foliar

COMPOSITION	%w/v
Calcium (CaO) Water soluble	6. 15

Density: 1.2
pH: 9-10

SYSTEMIC

GLUCCO 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.

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

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)	

SYSTEMIC

GLUCCO 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 APPLICA-

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.

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW IMPORTED FROM SPAIN

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)

SYSTEMIC

GLUCCO 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

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW IMPORTED FROM SPAIN

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)	

SYSTEMIC

GLUCCO 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?

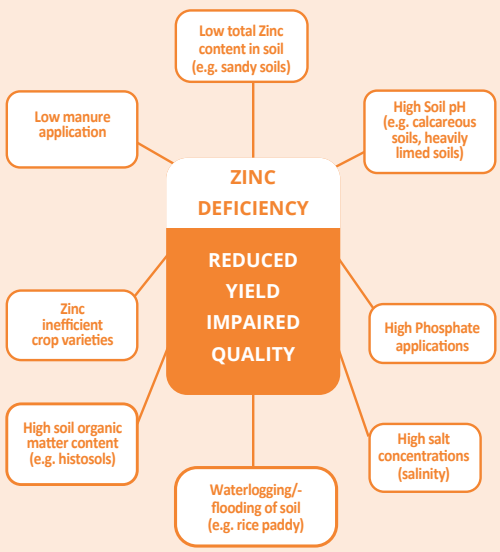
SONAR Gluco Zn is a key contituent of many enzymes and proteins. It plays an important role in a wide range of processes, such as growth hormone production and internode elongation.
Zinc deficiency is probably the most commons micronutrient deficiency in crops worldwide, resulting in substantial losses 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.

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

sonar agro

NEW
IMPORTED FROM SPAIN

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)

SYSTEMIC

GLUCCO 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

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L

sonar agro

Macronutrients

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 22-22-22+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

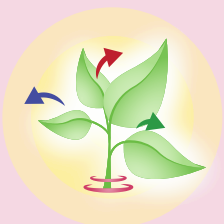
Improves fruit sugar content and promotes fruit development and size

- ***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

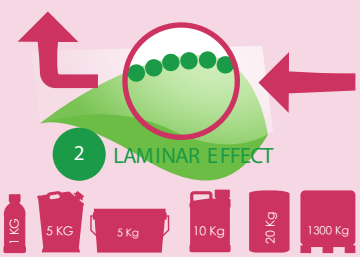
COMPLEX DENSO is a formulated nutritional product and not just a simple mixture of raw materials, as are most of NPK fertilizers in powder form.

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



COMPLEX DENSO

NPK Fertilizer with trace elements. Gel formulation

soil foliar

Composition	%w/v
Total nitrogen (N)	22,0
Phosphorus (P_2O_5)	22,0
Potassium (K_2O)	22,0
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 22-22-22+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**	**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.

EC FERTILIZER

IMPORTED FROM EU

sonar agro

COMPLEX DENSO

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

1L 5L 10L 20L 1000L

Allowed in ecological agriculture. Regl. CE 834/2007 y 889/2008

EC FERTILIZER

IMPORTED FROM EU

sonar agro

COMPLEX DENSO

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.

EC FERTILIZER

IMPORTED FROM EU

sonar agro

COMPLEX DENSO

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

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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**

It is recommended to shake before use.

EC FERTILIZER

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	

Neutral pH

Quality Crops

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

1L 5L 20L 200L

EC FERTILIZER

sonar agro

PaintK

Potassium fertilizer

soil foliar

Composition

	%w/v
Potassium (K_2O)	50
Nitrogen (N)	3
EDTA	1

Density: 1,5@18°C
pH: 12

PaintK increases:

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

Characteristics

PaintK 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.

PaintK 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.

Application

Crops	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
Tropical fruits	2-4 treatments during the crop's life cycle

foliar dosage: 200-500 cc/100L

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

Cautions

PaintK recommended water raite is 500-1500 L/Ha. Always shake the container before opening.

1L 5L 10L 20L 1000L

EC FERTILIZER

sonar agro

Paint K express

Potassium fertilizer

soil foliar

Composition

	%w/w
Potassium (K_2O)	50
Total Nitrogen (N)	3
Magnesium (MgO)	1
Chelating Agent EDTA	5

Paint K express increases:

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

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.

Characteristics

Paint K express 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.

Why use Paint K express?

Paint K express an important rol in the production, transport and reserve of sugars into the plant.

Application

Crops	Dosage
Vineyard	2-4 applications separated by 10-15 days starting from the nouasion stage and during ripening
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

foliar dosage: 3-4 Kg/Ha
Optimal concentration: 300g/hl-400g/hl
Maximum concentration 1000g/hl
On young and fragile foliage max. 500g/hl

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

1Kg 5Kg 10Kg 20Kg

EC FERTILIZER

sonar agro

sonarCa forte

Calcium, Boron and Aminoacids

soil foliar

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

Yield and Quality Crops

sonarCaforte

- **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 spot in carrots**
- **Bitter pit, cork spot, cracking, internal brownspot, and water core in apples**
- **Hypocotyl necrosis in beans and other legumes**
- **Meristem death or distortion of new growth from meristems in many plants (cupped leaves)**
- **Cracking in mango, cherry and plum**

Characteristics

sonarCaforte is a Calcium deficiency corrector that is applied 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 temperature, etc...).

Calcium from sonarCaforte is quickly uptaken and translocated 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.

sonarCaforte prevents and corrects:

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

Application

Crops	
Horticulture	Tomato, Pepper, Cucurbitis, Lettuce, Strawberry, Celery, Cabbage, Broccoli, etc
Fruitcrops	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: Fruit/Vine crops	Apply 5-10 ml/L or 5-10 L/Ha
SOIL: Drip or localized irrigation	Apply 15-30 L/Ha

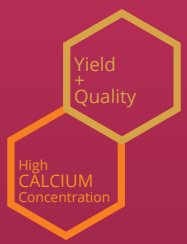
sonar Ca Mg Aa

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

EC FERTILIZER

FLOW

sonar agro

NEW
IMPORTED FROM SPAIN

sonar Ca PLUS

Calcium and Magnesium

soil foliar

Composition	%w/v
Calcium (CaO)	15,0
Magnesium (Mg)	2,0
Silicon (SiO3)	1
Boron (B)	0,5

GLUCCO G LIFE

ORGANIC COMPLEX

sonar Ca PLUS is a liquid solution of calcium enriched with Mangnesium, Boron and Silicon.

sonar Ca PLUS is a completely chelated foliar fertilizer using complexes derived from natural plant sources: Gluconic acid. It is designed to address calcium (Ca) and magnesium (Mg) deficiencies that often occur at the same time.

It decreases the incidence of physiological disorders: Bitter pit in apple trees, Cork in pear, black bat in grapes, apical necrosis in tomatoes, peppers, cucumbers, watermelons and melons; stained cavities in carrots, black heart in celery, tip burn in lettuce, internal burning (tip) in cabbage, internal necrosis in cabbages of Brussels and in potato tuber necrosis.

Characteristics

sonar Ca PLUS is suitable for all crops, especially for fruit, vegetables and ornamental. Use at times of high demand for calcium especially in the formation and maturation of the fruit is encouraged.

Calcium is involved in cell growth and multiplication as well as in regulating the pH in the root system. Also influences nitrogen uptake mechanisms and translocation of carbohydrates and proteins within the plant.

Magnesium is predominant in metabolism of organic acids. Role in important enzymes involved in respiration and enzyme synthesis. Direct influence on sunlight conversion in chloroplast.

Silicon promotes resistance to disease and pest, uptake of nutrients and enhances resistance to environmental stress and quality of fruit.

Application

FOLIAR

Fruit and citrus	150-300 cc/100l, 2-3 applications
Horticultural	150-300 cc/100l, first half of the cycle
Ornamental and flowers	150-250 cc/100l

FERTIRRIGATION

Fruit and citrus	6-12 l/ha between 3 and 4 applications
Horticultural	4-9 l/ha between 3 and 4 applications
Ornamental and flowers	2-8 l/ha during the first half of the cycle

EC FERTILIZER

IMPORTED FROM UE

1L 5L 20L 1000 L

sonar agro

sonar Mg Flow

Magnesium corrector

foliar

Composition	%w/v
Magnesium (Mg)	30
Density at 20ºC: 1,4 g/cc	
pH: 9-10	

High Magnesium Concentration

sonar Mg Flow benefits:

- Prevents chlorosis since it stimulates the production of chlorophyll, xanthophyll and carotene
- Improved the formation and movement of sugars, standardizing the maturity
- Avoids the premature loss of leaves
- Improves the absorption and transport of phosphorus
- Help the nitrogen metabolism of avoiding excesses of ammonium in the tissues
- High penetration
- Wide coverage

Characteristics

sonar Mg Flow its a concentrated magnesium fertilizer as suspension with 30% magnesium.
For the preventive and curative treatment of magnesium deficiencies in agricultural and horticultural crops.

Magnesium is the powerhouse behind photosynthesis in plants. Without magnesium, chlorophyll cannot capture sun energy that is needed for photosynthesis to occur. In short, magnesium is required to give leaves their green color. Magnesium in plants is located in the enzymes, in the heart of the chlorophyll molecule. Magnesium is also used by plants for the metabolism of carbohydrates and in the cell membrane stabilization.

Application

Crops	L/Ha	L/100L	Details
Rice and Winter cereals	2 - 4	1 - 2	From leaf development until beginning of flowering
Maize	2 - 4	1 - 2	4-5 leaf stage
Sugar Beet	2 - 4	1 - 2	1 application at 4-6 leaf stage onwards
Oilseed rape	3 - 4	1,5 - 2	1-2 application from 4-6 leaf stage onwards
Horticultural crops	2 - 4	1 - 2	1 application at 4-6 leaf stage
Potato, tomato field crops, mellon, water mellon	3 - 4	1 - 2	2-3 application during vegetative growth
Grapevine	2 - 4	1 - 2	Application at sprouting, visible bunch and fruit setting
Apple and pear trees	2 - 4	0.2 - 0,4	1-2 application after petals fallen
Fruit trees	2 - 4	0,2 - 0,4	Application fruit setting
Kiwi trees	3 - 4	0,6 - 0,8	Application at leaf development, pre-flowering, fruit development

Cautions

For preventive treatment the smaller rates are sufficient. If plants show slight deficiency symptoms, the higher rates should be applied in 3-4 week intervals till the deficiency is cured. Plants suffering from a severe deficiency are weakened and should be treated repeatedly with the lower rate at 2 week intervals.

This fertilizer is miscible with virtually all common plant protection agents; it is not miscible with strongly alkaline products or with mineral oils. A simple compatibility test with the intended mixing partners is recommended before practical use.

EC FERTILIZER 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	

sonar NK60

- 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

Characteristics

sonar NK60 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.

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 NK60 should be stored in frost free conditions with optimum storage range between 5-40°C.

sonar NK60 is a non-hazardous and not flammable foliar fertilizer.

Always shake the container before opening.

EC FERTILIZER

sonar agro

sonarS

Sulfur fertilizer

soil foliar

Composition

	%w/v
Nitrogen (N)	16
Sulfur (SO_3) water soluble	85
Density: 1,3 g/cc 18ºC	
pH: 8	

Clear Solution

sonarS

- Sulfur deficiencies corrector
- Fungicide action (Powdery Mildew and Oidium)
- Improves availability of iron and manganese
- Increased speed of action of pesticides
- Increased content of aminoacids and proteins

Characteristics

Sulfur is a key element for plant growth and development being a important constituent of enzymes and amino acids involved in photosyntesis and protein formation.

sonarS is a liquid fertilizer based on Nitrogen and Sulfur, wich is at high concentration.

sonarS is used as Sulfur source in the prevention of this deficiency. Arable crops including sugar beet, brassicas, cereals and certain fruit crops will benefit from sulphur applications. Crops will respond immediately to the applications and it will be rapidly absorbed by the plant.

In the combination with herbicide (Glyphosate, Oxyfluorfen, MCPA, Paraquat,...) acts as an enhancer, increasing their speed of action.

Application

Crops	L/Ha	ml/100L	Details
Most agricultural and horticultural crops oilseed rape, grass, cereals, sugar beet, brassicas and potatoes			
Foliar			
Cereals	10	3000	Apply in autumn sufficient cover, up to 1st node stage
Grassland	10	3000	Apply in spring, 1st pray after first cut and 2nd spray after 2nd cut
Oilseed rape	5	1500	Maintenance application early in spray during maximum growth, before stem extension
	10	3000	Deficiency
Olive	5	1500	Application before flowering
Potatoes	5	1500	Apply when crop meets in row where deficiency confirmed
Sugar Beet	5-10	1500-3000	Apply from 4 leaf stage
Fertirrigation			
Green house	30-50		
Open field	50-70		

EC FERTILIZER

sonar agro

Micronutrients

Kalbor

Boron and Calcium Corrector

soil foliar

Composition

	%w/w
Boron (B)	15
Calcium (CaO)	7

Quality and Post-Harvest Life

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.

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

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.

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 provided for the spraying is always useful. Don't mix with fertilizers containing phosphate or sulfa - te. 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.

1 Kg | 5 Kg | 20 Kg

EC FERTILIZER

sonar agro

NEW
IMPORTED FROM SPAIN

kelat Fe 10

Iron EDTA Chelate Liquid

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

1L 5L 20L

EC FERTILIZER
IMPORTED FROM UE

sonar agro

NEW IMPORTED FROM SPAIN

Kelat FMZ

Iron, Manganese and Zinc Corrector

soil foliar

Composition	%w/w
Iron (Fe) Soluble	4,5
Iron (Fe) EDDHA	4,5
Manganese (Mn) EDTA	1,5
Zinc (Zn) EDTA	0,5
Humic Acids	6,0

Characteristics

The action of the 3 chelated micronutrients in Kelat FMZ and the addition of Humic Acid makes a great synergy that gives an optimal photosynthetic efficiency and an improvement of the plants metabolism. With Kelat FMZ you can get important improvements in the results, if you compare it with the use of each micronutrient separately. Kelat FMZ is a solution that uifies the benefits of biostimulants and nutrition. It has a positive influence in the root environment and the yield increase.

Kelat FMZ includes 3 essential micronutrients that take part directly in the synthesis of the chlorophyll. Fe prevents and corrects iron chlorosis and /or deficiencies or unbalance. This action is strengthened by the presence of Mn and Zn, micronutrients that are necessary for the chrlorophyll formation.

Kelat FMZ has specific chelated agents for every micronutrient, porviding a stronger union, total chelating, great stability and persitence in every soil, including alkaline agricultural soils

Actions

- Assimable micronutrients
- Chlorophyll synthesis inductor
- Vegetal Growth Stimulant
- Yield increased

Application

SOIL APPLICATION			
Citrus, fruit trees, olive trees and other woody crops	Young trees. Start of production. Trees in the middle of their production	10-25 g/tree 25-50 g /tree 50-120 g/tree	Distribute in 2-3 applications through the year. First application at the beginning of spring. Repeat each 30-40 days. Third application at sprouting in summer
Vine and bush	5-25 g/tree		Apply according to the development of the tree and distribute it through the year
Nursery	2-5 g/m^2		Divide this dose in 4-6 applications through the year.
Rose bush	50 g/m^2		Irrigate with the recommended dose, repeating application each 10-12 days.
Vegetables and ornamental herbaceous	2-4 kg/ha per application through the irrigation water		Apply 3 - 4 times per crop cycle, starting the application since transplanting or at the beginning of the vegetative actiity
FERTIRRIGATION			
General dosage	1kg each 10 000L of irrigation		Repeat according to the necessities of the crop.

EC FERTILIZER

IMPORTED FROM UE

1Kg 5Kg

sonar agro

Kelat MIX micro

Multiple deficiencies corrector

soil foliar

Composition

	%w/w
Iron EDTA (Fe)	7,5
Manganese EDTA (Mn)	3,5
Zinc EDTA (Zn)	0,7
Copper EDTA (Cu)	0,3
Boron (B)	0,65
Molybdenum (Mo)	0,3
pH (1% water)	4,5

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		
		Applied when symptoms appear
General dose	1 - 1,5 Kg/Ha or 100 - 150 g/100L	At 10-15 day intervals, beginning when the foliage is enough
Horticultural	3x75 - 100 g/hl of water (3x0,5 - 1 Kg/Ha)	First bloom
Fruit trees, vines, citrus and olive trees	100 g/100 L of water (1 Kg/Ha)	After fruit set
Field crops, industrial crops	100 g/100 L of water (1 - 1,5Kg/Ha)	During the crop cycle
Potatoes and vegetables Bulb	1 Kg/Ha	At 7/10 days intervals, starting at 10 cm of growth. Apply in a minimum of 500 L / Ha water
	4x1 Kg/Ha	
Ornamental		2-4 applications with intervals of 7-10 days at the beginning of the growing season
	75 - 150 g/hl of water (0,5 - 1,5 Kg/Ha)	

EC FERTILIZER

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

sonar agro

NEW
IMPORTED FROM SPAIN

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.

EC FERTILIZER

IMPORTED FROM UE

1L 5L 20L

sonar agro

sonar BORON

Boron Deficiency Corrector

soil foliar

COMPOSITION	% w/v
Boron (B)	15,0
Nitrogen (N)	7,8
Density: 1,35-1,4 at 18ºC pH (10% solution): 8-9	

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 desease 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	

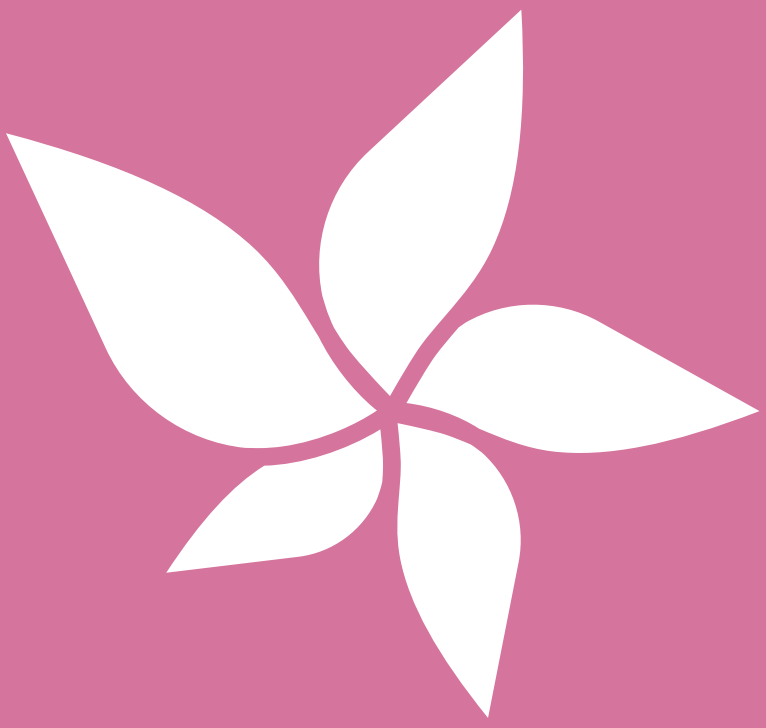
Vegetable crops				
Leaf vegetables	3	Development of harvestable vegetative plant parts.	0.5	300-500
Legumes (bean, pea)	3	Leaf development. Development of side shoots and the main shoot. Inflorescence emergence and flowering.	0.5-1 1 0.5	
Root vegetables (carrot, celery, beet)	2-5	Leaf development. 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

* s/w – spring/winter

1L 5L 20L 200L 1000L

EC FERTILIZER

sonar agro



pH Corrector

NEW IMPORTED FROM SPAIN

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:

- 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.

In case of hard water, increase the doses by 20%
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 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

EC FERTILIZER

IMPORTED FROM EU

1L 5L 20L 200L

SHAKE WELL BEFORE USE

sonar agro

Plant Denfense Inductor

Excellent

Plant defense inductor

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

Phosphopeptides

Characteristics

Excellent aactives 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** offer a great generic response, increasing the tolerance of the plant against the abiotic stress (hydric, temperature, etc.).

With phosphopeptides

Proven 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).

sonar Phos Al

Plant defense inductor

soil foliar

Composition

	%w/w
Phosphorus (P_2O_5)	21,4
Aluminium (Al)	4,2
Density: 1,32 g/cc	
pH: 2 -3	

systemic

Characteristics

Its fungal activity is twofold:

- On the one hand, it is involved in activating natural plant defense systems. The phosphite ion causes changes in the cell wall of the Oomycete, resulting fractions that act as external elicitors, triggering all the process of activation of defenses.
- The phosphite ion exerts a direct effect on fungal metabolism. This ion competes with phosphorus in different metabolic pathways catalyzed by various enzymes fosforilatives. In this way, the processes involved in energy transfer of the fungus suffer a considerable delay and may even be blocked.

sonar Phos Al is a liquid fertilizer suitable for the treatment of citrus, fruit and vegetables, which stimulates growth and improves the quality of the fruit.

The phosphite ion is a relatively simple compound but of great importance in plant health: it has a fungicidal effect against the type of Oomycete fungi and it's also an excellent nutrient.

The richness in phosphorous and Aluminium promotes migration of sugar to the fruit

Fertilizer rich in phosphorus and Aluminium which promotes flowering and the roots of plants and corrects deficiencies thereof.

Excellent preventive and curative activity against

- Citrus Gummosis
- Root rot and neck in fruit
- Peronospora of grape
- Mildew of onions and garlic
- Phytophthora

Application

Crop	Foliar application	Soil application
Avocado, citrus, orchards, gardens, ornamental plants and potatoes	300 - 400 cc/hl, 2 applications	10 - 20 L/ha, in consecutive irrigations; at the end of irrigation
Strawberries and vegetables	250 - 350 cc/hl	5 - 10 L/Ha
Olive and vine	200 - 400 cc/hl	10 cc/m^2

Wound desinfectants

Apply with a brush in the wound area in a broth concentration of 500 - 800 cc/L broth.

sonar agro

sonar PhosCu

Plant defense inductor

soil foliar

Composition

	%w/w
Phosphorus (P_2O_5)	25
Copper (Cu)	6
Density: 1,4 g/cc	

Characteristics

sonar PhosCu provides the proper amount of high energy phosphorus and copper, obtaining:

- Best flowering and fruiting
- Greater weight and fruit size
- Increase in fruit quality
- Protection against pathogens

sonar PhosCu is a plant defense inductor and copper deficiency corrector enriched with phosphorus in the form of phosphite ion. The combined application of copper and phosphite ion allows on a single application to prevent copper deficiency at the same time strengthens the plant against the presence of parasitic fungi. Besides its high phosphorus content makes it an ideal complement for fertilization in flowering time or transplantation .

Increases the resistance of plants to environmental, nutritional and/or pathological critical situations.

Application

Crop	Foliar application	Soil application
Avocado, citrus, orchards, gardens, ornamental plants and potatoes	300 - 400 cc/hl, 2 applications	7 - 20 L/ha, in consecutive irrigations; at the end of irrigation
Strawberries and vegetables	250 - 350 cc/hl	6-9 L/Ha
Olive and vine	200 - 400 cc/hl	10 cc/m^2

Injury disinfectant

Brushing in the injury area broth at a concentration of 500-700 cc / l.

Before preparing the final mixture, a compatibility test has to be done.

Do NOT mix directly with acid products of strong reaction, neither emulsifiable product or a product with alkaline reaction.

sonar agro

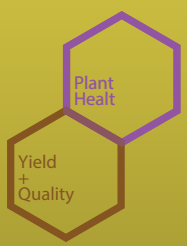
sonar Phos Mn Zn

Plant defense inductor

soil foliar

Composition

	%w/w
Phosphorus (P_2O_5)	14,5
Zinc (Zn)	5
Manganese (Mn)	3
Density at 20ºC: 1,3 g/cc	
pH: 2 - 3	



Mode of Action

The perfect balance that sonar Phos Mn Zn makes is that it stimulates self-defense mechanisms (phytoalexins), giving the plants a strengthening in trunk, neck and root on any type of horticultural, fruit cultivation, citrus or floriculture.

It has an excellent solubility which allows an immediate incorporation to the sap flow of the plant through the roots, stems, leaves, etc. Foliar and root applications are recommended and fertigation, while the addition of adjuvants is not necessary.

Characteristics

sonar Phos Mn Zn is a soluble liquid that has in its formulation phosphites of manganese (Mn) and zinc (Zn), used as contribution of these elements and in the correction of shortcomings, due to deficiencies or imbalances in the assimilation of them by the plants in all vegetable crops.

sonar Phos Mn Zn is manufactured under strict quality standards by SONAR - Spain, ensuring his composition as well as its effect on all crops.

Application

Crop	NºApp.	Timings	Rate L/Ha
Cereals	2 - 3	1º as a soil application with starter fertilizer, 2º 14-21 days after emergence 3ºas required at 14-21 day intervals	3 - 4
Sugar beet	2 - 3	1º as a soil application with starter fertilizer, 2º 4-6 leaf stage, 3º 8-12 leaf stage	3 - 4
Oilseed rape	2 - 3	1º as a soil application with starter fertilizer, 2º 4-6 leaf stage, 3º stem extension	3
Brassicas	2 - 3	1º as a soil application with starter fertilizer, 2º 4-6 leaf stage, 3º repeat at 10-14 days intervals is required	2 - 3
Potatoes	2 - 3	As required from tissue analysis. Repeat at 10-14 days interval	2 - 3
Root crops	3	As required from tissue analysis. Repeat at 10-14 days interval	2 - 3
Legumes	2	1º Early flowering, 2º early pod set	2 - 4
Top fruit	2 - 3	1º pink bud (from known deficiency only), 2º petal fall/early set, 3º if necessary after 10-14 days	2 - 3
Stone fruit	n/a	As required from tissue analysis. Repeat at 10-14 days interval	1 - 2
Ornamentals	n/a	As required from tissue analysis. Repeat at 10-14 days interval	1 - 2

Cautions

Do not mix with oils, copper compounds or alkaline reaction products. If you want to mixtures with fungicides, insecticides, organic products etc, are recommended first to test compatibility.
-In case of accidental ingestion go to a medical center.
-It is recommended to take normal precautions in application of the product, use gloves and protect your eyes
-If there is direct contact with eyes or prolonged co ntact with skin, wash the affected area with plenty of water

sonar agro

sonar Phos PK

Plant defense inductor

soil foliar

COMPOSITION	%w/w
Potassium Phosphonate	95,0
Phosphorus (P_2O_5)	57,0
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

sonar agro

PGR

NEW
IMPORTED FROM SPAIN

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

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.

sonar agro

sonar GIB

Plant Growth Regulator

foliar

Composition

	%w/v
Gibberellic acid (GA_3)	1,6
Soluble liquid (SL)	

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.

Usage instructions

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

Characteristics

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.

Growth, blooming and fruiting

Application

Crop	Doses (cc/hl)	Treatment
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

sonar agro

sonar GROWTH

Plant Growth Regulator

foliar

Composition	%w/w
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 physiological and metabolism processes of plants.

All components in sonar GROWTH are in assimilable 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.

Excelent flowering and fruit set

Application

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 of 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, beginning 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 per 100L of water to the appearance of repeating blooms 30 days.

Apple and peach: Apply 150 to 200ml per 100L 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.

sonar agro

NEW
IMPORTED FROM SPAIN

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

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.

Characteristics

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

Crop	Dose (cc/100L water)	Application
Cucurbitaceae (cucumber, zucchini, etc.)	75 - 100	Apply 10 days after full flowering
Grapevine	100	Apply along GB3 for berry growth
Kiwi	100	Apply the 1st 18 days after full flowering and 28 days after full flowering
Legumes (broad bean, green bean, pea, etc.)	75 - 100	Apply 10 days after full flowering
Pome 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

sonar agro

sonar agro

Repellent

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 Develompent

sonar ROOT

Root development

soil

Composition

	%w/w
L-free amino acids	10,0
Iron (Fe) Water soluble	2,0
Manganese (Mn) Water soluble	1,0
Zinc (Zn) Water soluble	2,0
Boron (B) Water soluble	0,2
Molybdenum (Mo) Water soluble	0,05

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 UE

sonar agro

NEW IMPORTED FROM SPAIN

sonar ROOT SOLID

Root development

soil foliar

Composition	%w/w
Nitrogen (N) Total	7,00
Phosphorus (P2O5)	35,0
Free amino acids	20,0
Rooting bio Inductor 01 (Indolbultyric acid)	1500 ppm
Rooting Bio Inductor 02 (Naphthyacetic acid)	500 ppm

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.

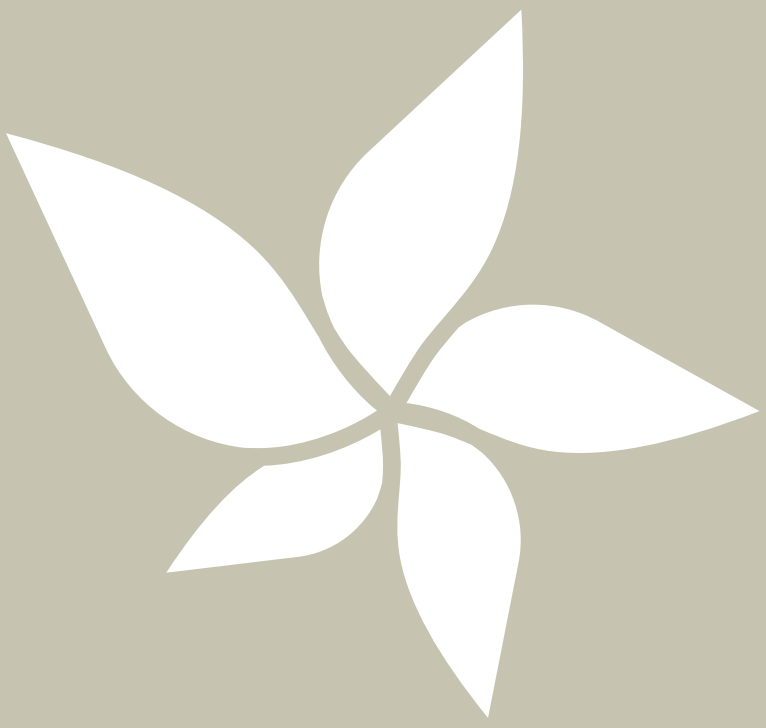
	ROOT ACTIVITY	SOIL MICROBIAL ACTIVITY	INCREASED NUTRIENT AVAILABILITY
AMINOACIDS	✓	✓	✓
ROOTING BIO 1	✓		✓
ROOTING BIO 2	✓		✓
MACROELEMENTS	✓	✓	✓

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 20°C and the high dosage at temperatures higher than 20°C
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



Salinity Corrector

POLY sal

Soil salinity corrector
Speed action

Composition

	%w/w
Polymaleic acid	33

Density: 1,1

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.

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.

With POLY sal you can achieve:

Greatest disponibility of Ca in the plant

Better relations between Ca/Mg and Ca/Na

Ionic exchange of Sodium x Ca. Ameliorative of the structure and capacity of the drainage in soils

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^3		

sonar sal

Soil salinity corrector
organic calcium complex

soil

Composition

	%w/w
Complexed Calcium oxide (CaO)	10
Water soluble Calcium (CaO)	10
Total Nitrogen (N)	4
Density: 1,4	
pH: 6,5 - 7,5	

Characteristics

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 the crops that have problems with "crust formation".

sonar sal adds to the soil water soluble calcium and organic acids, in soluble and stable form, drastically reducing the "toxic" level of complex colloidal sodium.

sonar sal reduces salinity, decreasing the levels of: electrical conductivity (EC), exchangeable sodium percentage (ESP) and Sodium Absorption Ratio (SAR/SAR).

Application

Crops	Details
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
Strawberry	Initial planting (Oct-Nov) 10-15L/Ha. From pre-flowering to fruit set (Dec-Mar) 4-5 L/Ha and week. Full production/Mar-Jun) 3-4L/Ha and week
Fruit trees	75-125L/Ha divided between three irrigations
Industrials	20-30 L / Ha divided into several irrigations from the fourth leaf
Ornamental and horticultural	40-60 L / Ha divided between 3-5 irrigations 40-60 L / Ha to 2-3 applications during the growing season
Banana	Plantation 1-1,5cc/plant. Pre-flowering-Beginning harvest 4-7L/Ha and week
Tomato	Full production 3-5L/Ha and week
Vid and grape	30-50L/Ha, 3-5 applications util the color change

Treatment is recommended at intiation of culture. (First watering) to wash the salts. Washing Dose: 25-50L/Ha.

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

sonar agro

Seaweed Biostimulant

Algae

Seaweed extract.
Biostimulant

soil foliar

COMPOSITION %w/w

Ascophylum Nodossum sp	**25,0**
Total Organic Matter	38,0
Fulvic Acids	25,0
Potassium (K_2O)	3,0
Manitol	4,0
Alginic Acid	3,5

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.

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

Shake it before use

IMPORTED FROM EU

sonar agro

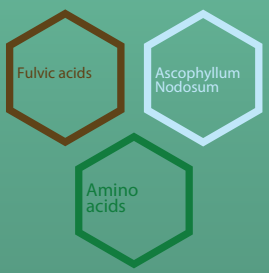
Algae amyn

Seaweed extract.
Biostimulant

soil foliar

Composition

	%w/v
Seaweed extract	20
Free aminoacids	10
Fulvic acids	15
Polysaccarides	10
Nitrogen (N)	6,0
Phosphorus (P_2O_5)	2,5
Potassium (K_2O)	4,8



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 and horticultural plants, particulary those suffering 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 flow ering 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.

1L 5L 20L

IMPORTED FROM EU

sonar agro

Algae KELP

Seaweed extract.
Biostimulant

soil foliar

Composition	%w/v
Seaweed extract (Eklonia Maxima)	30,0
Free Aminoacids	3,0

Health Yield Quality

Fruit Set

Algae KELP is a natural metabolic biostimulant and root promoter, obtained by natural extraction from seaweed **Ecklonia maxima KELP**.

Algae KELP contains a high auxin-cytokinin ratio, generating a strong stimulus to the formation of new growth points in the roots of the treated plants. These new root hairs cause, naturally, an increase of cytokinins in plants, which are synthesized in the root tips. The Endogenous cytokinins stimulates the plant's air growth and fruit size, and in turn, the application of exogenous auxins stimulates the movement of **Ca** to the fruit, Improving the firmness and post-harvesting life

CHARACTERISTICS

- **INCREASES ROOT MASS**
- **REDUCES POST-TRANSPLANT SHOCK**
- **INCREASES THE NUMBER OF FRUITS, SIZE, COLOR AND SUGAR**
- **PROMOTES WATER AND NUTRIENTS UPTAKE**
- **TOLERANCE FOR GREATER STRESS SITUATIONS : WATER, NUTRITION, SALINITY, NEMATODE ATTACK , SOIL DISEASES, ETC .**

DOSES AND APPLICATIONS

CROP	DOSES/ APPLICATIONS	1ST APPLICATION	2ND APPLICATION
Citrus	**300-500 cc/Ha**	At the beginning of sprouting	Fruit fattening
Corn, Soybeans, cereal	**150-200 cc/Ha**	Apply 20 to 25 days after emergence.	
Potato	**150-250 cc/Ha**	6 to 10 leaves of the plant, tubering starting	15 days after the 1st application
Rice	**250-300 cc/Ha**	1st application at the time of the godson, to increase grain production	
Strawberries	**300 cc/Ha**	Flowering	Flowering/ fruit fattening
Stone fruits, Table grapes	**300-400 cc/Ha**	Pre-flowering	Fruit fattening
Sugar beet, cotton and other industrial crops	**150-250 cc/Ha**	1 application in pre-flowering or in stages of 6 to 10 leaves of the plants	
Sun Flower	**300 cc/Ha**	1 application for 4-6 leafs	
Tobacco	**200 cc/Ha**	1st application at transplantation	2nd foliar application 15 days after the fist application.
Tomato (Long-Life)	**300 cc/Ha**	At the beginning of Flowering Period	When 20-30% Fruit setting. Optional 3rd Application after 2-3 weeks
Tomato (Industrial)	**400 cc/Ha**	When 20-30% of Flowers	
Pepper, cucumber, eggplant, melon, water melon	**300-400cc/Ha**	10-15% of open flowers	2-3 weeks after first application
Tropical Fruits (Banana, Pineapple)	**300-400cc/Ha**	Flowering	Fruit fattening

Do not mix with cytokinin products as this will negate the benefit of auxin stimulation. Do not tank mix with copper based fungicides. The spray tank should be filled with half of the required water. After shaking the container, measure the required amount of Algae Kelp and add to the tank whilst maintaining constant agitation. Add the remaining water to correct dilution and spray.

IMPORTED FROM UE

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

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

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

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.

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

sonar agro

sonar agro

Seed treatment

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 desecation.

Application

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**

1L 5L 20L 200 L

sonar agro

Silicon

Sonar Silic

Silicon and Potassium fertilizer

soil foliar

Composition

	%w/w
Silicon (SiO_2)	22
Potassium (K_2O)	9

Nutrition

Fungicide

Miticide

Insecticide

Characteristics

Sonar Silic specially developed silicon and potassium formulation to improve plant growth, biomass.

Keys

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

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

Application

Crops	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.

EC FERTILIZER

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

IMPORTED FROM UE

1L 5L 20L 200L

sonar agro

Sonar SilicFulvic

Silicon and Calcium fertilizer with Fulvic acids

soil foliar

Composition

	%w/w
Silicon (SiO_2)	7
Calcium oxide (CaO)	7
Fulvic acids	14,5

Nutrition

Enhance plant growth

Increases resistance to diseases

Quality

Characteristics

Sonar SilicFulvic 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.

Benefits

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 attacks.
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

Application

Crops	Rate/ha 300Lwater	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 stem symptoms are evident.
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 sufficient to intercept foliar spray. Silica treatments can reduce droopy growth and lodging.
Tomatoes/Capsicum Vines	2-3L/Ha	Apply at transplanting - trickle or foliar. Mature plants: repeat when stalk weakness is evident. 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.

sonar agro

Solar Protection

sonarsun

Solar Protection

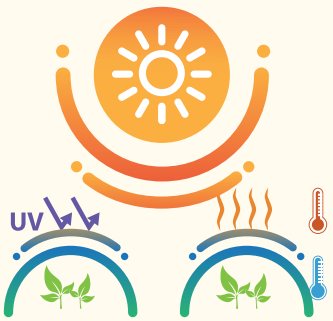
foliar

Composition	%w/w
Ca (CaO)	55,00
Mg (MgO)	0,15

Quality

Health

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.

1Kg 5Kg 20Kg

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

sonar agro

sonarsun FLOW

Solar Protection

foliar

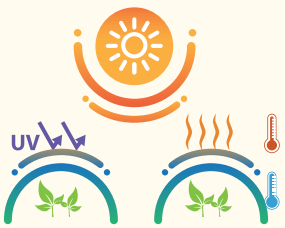
Composition

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

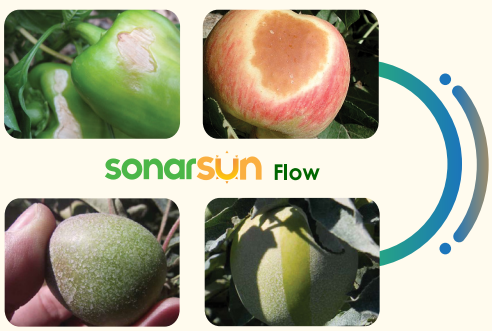
Quality

Health

QUALITY AND HEALTH IN PRE-HARVEST



SUNBURN EFFECT



APPLIED PRODUCT

Characteristics

sonarsun Flow 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 sonarsun Flow at the indicated 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

sonarsun 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

Allowed in ecological agriculture. Regl. CE 834/2007, 889/2008 and 673/2016

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