

General Catalogue



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MISSION

Puccioni produces solutions for plant nutrition, helping farmers to optimize the harvests.

Puccioni promotes programs of research and development oriented to innovation, improving the efficiency of plants and reducing the losses of elements in the soil. Puccioni offers for its customers a wide service, promoting the responsible use of products and sharing information, in order to protect the environment and to achieve the best results from product application.

VALUES ES

Puccioni put people in the middle: each role contributes to the growth of the group in a professional and responsible way. The team spirit is a pillar, a necessary value to reach the targets.

The group aims to achieve concrete results, satisfying customers through an efficient technical support .

Puccioni considers export vocation as a wealth, both in terms of market expansion and experience enrichment.



THE COMPANY

Puccioni was founded in 1888 as a manufacturer of fertilizers, and for over 120 years confirmed its successful industrial vocation.

During this period, the company has developed a great experience, who has enabled it to respond to the increasing needs of technical and commercial issues.

The constant efforts for the development and for the improvement of its professional competence, allowed Puccioni to stand at the top of the market for quality, production capacity, logistic expertise and range of products.

Plants

Puccioni has a production system studied for the creation of a wide range of products, which differ for chemical structure, physical characteristics and application.

Production occurs thanks to the presence of:

- Cellar KULMHAN for the production of superphosphate through the reaction between phosphate rock and sulfuric acid.
- Plant for the production of granular fertilizers (both mineral and organomineral)
- Plant for the production of microgranular for local application
- Plant for the production of water-soluble
- Plant for the production of bio-stimulants and trace elements
- Plant for the production of GEL form products

The production site is composed of two units:

- VASTO 1, an area of 110.000 square meters of which 35.000 are covered. It includes the production facilities of superphosphate, granular and microgranular; there are four packing systems for packaging and palletizing, which capacity is 400 kg / hour.
- VASTO 2, an area of 18,000 square meters of which 16,000 are covered. It is the production unit for special products; includes the facilities for the production of water-soluble NPK and special products (bio-stimulants, microelements, foliar fertilizers and gel products).









UNI EN ISO 9001

Puccioni produces under the certification of system management quality UNI EN ISO 9001:2000.

Puccioni products quality s confirmed also by the certification of the Institute for the Control and Quality of Fertilizers.

Puccioni has great respect for the environment,

reducing emissions and avoiding pollution.

UNI EN ISO 14001.

Puccioni uses the environnemental system management UNI EN ISO 14001. The ISO 14001 allows Puccioni to formulate an environmental policy, set targets and keep regulatory compliance.



QUALITY TRADEMARK ASSOFERTILIZZANTI

The brand QUALITY ASSOFERTILIZZANTI is a trademark of quality products that certifies:

- Units of fertilizers listed on the label are those actually contained
- The concentration and the composition of individual nutrients listed on the label are the real ones
- The effectiveness of fertilizers is as expected.

ASSOFERTILIZZANTI is the main national association of fertilizer sector in Italy, and the use of its trademark is allowed to companies who are able to guarantee the quality of the products.

RESPONSIBLE CARE ENVIRONMENT



PuccioniS.p.A. joined the voluntary program "Responsible Care".

"Responsible Care" promotes the sustainable development of chemical industry, according to the values and behaviors oriented to the

safety, health and environment.

PUCCIONI IN THE WORLD



Puccioni is present in Italy and in foreign markets, where it operates directly or through local distributors.



PUCCIONI FOR SOCIAL COMMITMENT

Partnership with "Progetto Vita"

Puccioni is partner of "Progetto Vita", a non-profit organization for products packaging.

Progetto Vita is an association founded in October 1992 by some volunteers, motivated by the desire to support and encourage the important action against addiction and abuse of substances that create dependence.

The collaboration with Progetto Vita is to support and promote social activities, a way to encourage associations that helps people to be reintegrated into society. Progetto Vita is in charge of Puccioni's special products packaging.

Puccioni considers this partnership as an important and a strong expression of how is possible to operate mutually.

Green energy

Puccioni S.p.A. has launched an 873 kWh photovoltaic plant.

Panels system is located on the roof of the complex VASTO 2. It is able to produce an average of more than one million kWh per year and will save the emission of nearly 760,000 kg of CO2, equal to save 125 wooded hectares (almost 175 football fields).

The presence of the system provides 30% of Puccioni energy need.



GEL





J-Feed

NEW GEL FORMULATIONS TO INCREASE THE EFFICIENCY OF PLANT NUTRITION

- Suitable for foliar and drip application systems;
- · Improve and increase absorption of nutrients;
- Reduce losses of nutrients (nutritional increase in energy);
- Presence of 4 different forms of nitrogen (nitrate, ammonia, urea, organic) with progressive release;
- Practical use: the nutrient are solubilized with higher concentration of liquid formulations.



J-FEED is an innovative line of nutritional products in GEL form designed to improve the absorption of nutrients by crops. The products of this line are suitable both for foliar and drip applications. The formulations of the line J-FEED contain selected organic substances, which are important for the production of the "Gel" matrix as well as to give a high agricultural value to the products. The innovative range of J-FEED can be used for both foliar and drip applications.

For DRIP IRRIGATION: The organic matrix has important physical and chemical properties that allow to protect nutrients reducing losses by leaching, denitrification, volatilization of ammonia, insolubilization of phosphorus and at the same time favors a high and efficient root absorption. The gel matrix acts in the soil as a "sponge" that absorbs and retains a greater amount of nutrients and water: in this way, the products J-FEED increase the cationic exchange capacity (CEC) and water capacity of the soil.

For foliar application: J-FEED was studied in order to optimize the foliar nutrition under two aspects: nutritional and application efficiency.

Nutritional efficiency: the products are made by high purity raw materials with a good solubility, this increases foliar absorption via stomata and through the leaf surface. All J-FEED formulations are characterized by the presence of selected organic substances that allow easy overcoming of environmental stresses and promote an important bio-stimulating action on crops.

Application efficiency: the particular gel formulation increases the leaf wetness acting as "natural surfactants" (increase the exchange surface between the leaf surface and the nutrient solution), on the other part they act as "sticker agents" (to allow a greater amount of solution to adhere on the leaf avoiding drift).

All formulations **J-FEED** are characterized by the presence of amino acids, proteins, humic acids and polysaccharides. The Gel matrix is possible thanks to the purity and quality of the organic matrix. From a practical point of view-application the gel formulation is able to combine the advantages of liquid formulations (easy of use) together with a higher concentration of nutrients compared to liquid products themselves.



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COMPOSITION (%)

	J-FEEI	D N40	J-FEED B	ALANCE	J-FEED	NITRO	J-FEED	PHOS	J-FEED C	QUALITY
	W/w	W/v	W/w	W/v	W/w	W/v	W/w	W/v	W/w	W/v
Nitrogen (N) total	30	40	15	22	23	32	8	12	5	8
Nitrogen (N) organic	1	1,4	1	1,4	1	1,4	1	1,5	1	1,5
Nitrogen (N) nitric	7	9,5	3,2	4,8	5	7				
Nitrogen (N) ammoniacal	7	9,5	3,2	4,8	5	7	1	1,5		
Nitrogen (N) ureic	15	19,6	7,6	11	12	16,6	6	9	4	6,5
(P2O5) soluble in water			15	22	8	11	24	34	15	23
(K ₂ O) soluble in water			15	22	8	11	8	12	30	45
(C) organic biological origin	3	4,1	3	4,3	3	4,2	3	4,5	3	4,5
(Zn) soluble in water	1	1,35								

PHYSICAL PROPERTIES

	J-FEED N40	J-FEED BALANCE	J-FEED NITRO	J-FEED PHOS	J-FEED QUALITY
Formulation	Gel	Gel	Gel	Gel	Gel
pH (1 % in solution 20°C)	5,7	6,9	7	2,5	6,6
E.C. mS/cm (soluzion 1‰ a 20° C)	0,8	0,7	0,75	0,50	0,82
Color	Blue	Dark green	Dark green	Dark green	Dark green
Density (g/cm³ a 20 °C)	1,35	1,44	1,35	1,4	1,56

DIRECTION FOR USE: DRIP IRRIGATION APPLICATIONS

	J-FEED N40	J-FEED BALANCE	J-FEED NITRO	J-FEED PHOS	J-FEED QUALITY
Fruit Crops (pome fruits, stone fruits, citrus, grapes, kiwi, strawberry, etc.)	15-30 l/ha	15-30 l/ha	15-30 l/ha	15-30 l/ha	15-30 l/ha
Horticultural crops and flower (tomato, pepper, eggplant, melon, water melon, zucchini, etc.)	2-3 l/1000 m²	2-3 l/1000 m²	2-3 l/1000 m²	2-3 l/1000 m ²	2-3 l/1000 m ²

FOLIAR APPLICATIO

	J-FEED N40	J-FEED BALANCE	J-FEED NITRO	J-FEED PHOS	J-FEED QUALITY
Fruit Crops (pome fruits, stone fruits, citrus, grapes, kiwi, strawberry, etc.)	2,5 l/ha	2,5 l/ha	2,5 l/ha	2,5 l/ha	2,5 l/ha
Horticultural crops and flower (tomato, pepper, eggplant, melon, water melon, zucchini, etc.)	200-250 ml/hl	200-250 ml/hl	200-250 ml/hl	200-250 ml/hl	200-250 ml/hl
Industrial crops and cereals (potato, processing tomato, mais, grain, sugar beet, rape, soy, etc.)	2,5 l/ha	2,5 l/ha	2,5 I/ha	2,5 l/ha	2,5 l/ha

Bottle of 1 Lt Can of 8 Lt BOX 20 unit PALLET 600 Lt 512 Lt

J-Fence







- Natural stimulation of endogenous plant defenses.
- Promotes greater vitality of the plant.
- Nutritional action with an improved tolerance against biotic stress.



J-FENCE is an innovative biostimulant gel for induction, through the action of nutrition, of the resistance of the plants. J-FENCE contains micronutrients (all completely soluble and in ionic form) participating in complex metabolic pathways within the plants leading to the synthesis of substances involved in endogenous mechanisms of resistance against biotic factors. J-FENCE is therefore able to provide micro-nutrients which play the important role of catalysts of induced endogenous resistance mechanisms better known as SAR. The gel formulation helps to keep the particles in suspension for longer time and make the use more convenient and simple.

COMPOSITION (%)

	W/w	W/v
Copper (Cu) soluble in water	12,5	20
Manganese (Mn) soluble in water	0,5	1
Zinc (Zn) soluble in water	0,5	1

PHYSICAL PROPERTIES

Formulation	Gel
pH (1 % in solution 20°C)	5,5
E.C. mS/cm (soluzion 1‰ a 20° C)	0,58
Color	Azure
Density (g/cm³ a 20 °C)	1,6

DIRECTION FOR USE: FOLIAR APPLICATION

Crops	Rate	Timing
Table and Wine grapes	1,0 - 2,0 l/ha	
Citrus	1,0 - 2,0 l/ha	
Olive	1,0 - 2,0 l/ha	
Apple tree	100 - 200 ml/hl	
Tomato	80 - 150 ml/hl	Applications every 7-10 days during periods of increased
Pepper	50 - 100 ml/hl	need
Zucchini	80 - 150 ml/hl	
Melon	50 - 100 ml/hl	
Artichokes	100 - 150 ml/hl	
Brassicacee	80 - 150 ml/hl	
Salad crops	50 - 100 ml/hl	

PACKAGING

	Bottle of 1 Lt	Can of 8 Lt
ВОХ	20 unit	
PALLET	600 Lt	512 Lt

J-Feed Fe Eddha



[o-o] EDDHA E DTPA chelated IRON in GEL formula for drip irrigation

- Improved iron absorption through the root system
- Synergic action between DTPA and EDDHA [o-o]
- Improved bio-availability of iron for the plant
- Allowed in organic farming
- Iron is solubilized in the product
- Dust free chelated product



J-Feed Fe EDDHA is an innovative and effective gel formula for drip irrigation made with a specific mixture between **EDDHA** and **DTPA** chelated iron in a matrix of fulvic acids.

The mixture between iron chelate **EDDHA** and **DTPA** is produced in order to take advantage of the synergic effect between the two chelating agents and provide iron with a greater bio-availability and in constant way during the time. **J-DRIP Fe EDDHA** is characterized by the use of purified fulvic acids (fraction biologically more active in stimulating root absorption compared to humic acids) that convey and enhance the absorption of iron at root level. Fulvic acids in fact play an important role in stimulating the active absorption of the root through the activation of specific channels present on the roots that preferentially absorb iron. **J-DRIP Fe EDDHA** finally presents easy use thanks to the GEL formulation: it dissolves easily in water and makes no powder.

COMPOSITION (%)

	W/w	W/v
Iron (Fe) soluble in water	5	6
Total Chelated Iron (Fe)	5	6
Iron chelated DTPA	2,5	2,9
Iron chelated [o-o] EDDHA	2	2,3
Fulvic Acid	4	4,8

PHYSICAL PROPERTIES

Formulation	Gel
pH (1 % in solution 20°C)	9,2
E.C. mS/cm (soluzion 1‰ a 20° C)	0,9
Color	Black
Density (g/cm³ a 20 °C)	1,15

DIRECTION FOR USE: DRIP IRRIGATION

Crops	Rate	Time
Grapes (table and wine)	10-20 l/ha for application	Two applications: at the beginning and full flowering
Citrus	10-20 l/ha for application	Two applications: at the beginning of flowering, post-fruit setting
Pear Tree	15-20 l/ha for application	Two applications: in pre-flowering and after fruit setting
Kiwi	10-20 l/ha for application	Two applications: pre-flowering and post fruit setting
Peach tree	10-20 l/ha for application	petal fall
Strawberry	1-1,5 l/1000 m2 for application	post transplanting
Tomato, pepper, eggplant, melon, water melon, zucchini, cucumber, etc	0,5-1 l/1000 m2 for application	Applications in post bloom every 20 days
Flower crops	0,5-1,5 l/1000 mq for application	Applications every 15 days post transplanting
Pots Plant	5-10 ml/plant	localized operations
Fruit Crops	20-80 ml/plant	localized operations

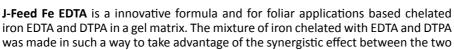


J-Feed Fe edta 🧖



EDTA AND DTPA CHELATE IRON IN GEL FORMULA FOR FOLIAR APPLICATIONS

- Synergic action between chelated DTPA and EDTA iron
- Improved efficiency of foliar absorption of iron;
- · Improved leaf wetness and reduced drift
- Allowed in Organic farming





chelating agents. J-FEED Fe EDTA contains organic substance selected which improves the absorption of iron at leaf level and at the same time reduces the risk of phytotoxicity foliar that might occur as a result of application of pure chelates. J-feed Fe EDTA a product that is applied with regularity is able to prevent or treat iron deficiencies that may cause significant losses to the qualitative and quantitative production. The iron is in fact an essential element to maintain a high efficiency of photosynthesis; deficiencies of iron, which is showed with leaf yellowing, are due to low presence of chlorophyll in the leaves which is the "site" where photosynthesis takes place with production of organic compounds which later will be used for the metabolic activities of the plant and for the production of fruits. J-FEED Fe EDTA finally presents easily usage, because thanks to the GEL formulation easily dissolves and makes no dust.

COMPOSITION (%)

	W/w	W/v
Iron (Fe) soluble in water	6	8,5
Iron (Fe) chelate DTPA	3	4,25
Iron (Fe) chelate EDTA	3	4,25
is stable in the range of pH 3-6,5;		
Iron DTPA is stable in the range of p	H 4-7,5	

PHYSICAL PROPERTIES

Formulation	Gel
pH (1 % in solution 20°C)	3,1
E.C. mS/cm (soluzion 1‰ a 20° C)	0,16
Color	Black
Density (g/cm³ a 20 °C)	1,4

RATE AND DIRECTIONS FOR USE: DRIP IRRIGATION

Crops	Rate	Timing
Grapes (table grapes and wine grapes)	1-2 l/ha	After fruit setting
Citrus	1-2 l/ha	After fruit setting
Pear Tree	1-2 l/ha	After fruit setting
Kiwi	1-2 l/ha	Before flowering and after fruit setting
Peach Tree	1 l/ha	Petal Fall
Strawberry	100-150 ml/hl	After fruit setting
Tomato, pepper, eggplant, melon, water melon, zucchini, cucumber, etc	100-150 ml/hl	Treatments in post bloom every 20 days
Flower crops	100 ml/hl	Treatments in post-transplant every 15 days
Ornamentals	100 ml/hl	Treatments every 15 – 20 days

PACKAGING

	Βοπιε οτ 1 Lt	lank of 8 L
BOX	20 unit	2 tanks
PALLET	600 Lt	480 Lt

BIOSTIMULANTS







BIOSTIMULANT BASED ON AMINO ACIDS AND PLANT EXTRACTS

- · Improved yield and quality of the crops
- Anti-stress activity
- Carrier effect



The range of BASIC consists of a line of natural biostimulants produced from vegetal matrix and suited for foliar applications with important content of amino acids and plant extracts. The extraction process used is the enzymatic hydrolysis which allows to obtain a greater amount of amino acids in the L-form (left handed) instead of D-form (right handed). The shape of left-handed amino acids produce greater effectiveness and speed of action. The use of vegetable matrix as raw material allows to have a complete aminogram with a mix of amino acids own of vegetable kingdom and precisely with the presence of important amino acids such as tryptophan, methionine, proline, glycine, etc. ..

COMPOSITION (%)

	BASIC	BASIC POWER
Nitrogen (N) organic	5,0	7,6
Organic Carbon (C) from biological origin	15,0	21,0
Total amino acids	31,0	42,6
Free amino acids	5,5	15,0
Iron (Fe) soluble in water		1,2
Manganese (Mn) soluble		0,6
Zinc (Zn) soluble in water		0,7

PHYSICAL PROPERTIES

	BASIC	BASIC POWER
Formulation	Liquid	Liquid
pH (1 % in solution 20°C)	6	6
E.C. mS/cm (soluzion 1‰ a 20° C)	0,4	0,4
Color	Green	Green
Density (g/cm³ a 20 °C)	1,14	1,15

DIRECTION FOR USE

	Fruit Crops (stone fruits, apple, pear, kiwi, grapes, olive, citrus)	Open field vegetables (processing tomato, brassicacee, potato, leafy vegetables etc.)	Greenhouse crops	Flower crops	Extensive crops (cereals, mais, soybean, sunflower, rapeseed, sugar beet)
BASIC	2,5-3,5 l/ha Every 10 – 15 days	2,5-3 I/ha actions in combination with pesticides	200-250 ml/hl Every 10 – 15 days	150-250 ml/hl Every 10 – 15 days	1-2 l/ha
BASIC POWER	2-3 I/ha Every 10 – 15 davs	2-2,5 l/ha	200-250 ml/hl	150-250 ml/hl	1-2 l/ha

Instruction: the mixture with copper-based products it is possible on grape, olive, tomato, potato and artichoke. On the other crops make preliminary tests on small areas before extending the treatment to the entire cultivated area. In the herbicide treatment for monocots, where products are already being used with adjuvant effect associated to the active substances, make preliminary tests on small areas before extending the use of the product on the entire cultivated area.

Bottle of 1 Lt Can of 5 Lt Can of 25 Lt BOX 20 unit 4 unit PALLET 600 Lt 600 Lt 800 Lt



SEAWEED EXTRACTS FROM SARGASSUM AND ASCOPHYLLUM

- Increased photosynthetic activity in the plants
- Faster stresses recovery
- Stimulate systemic acquired resistance (SAR)



ASCOT is a natural bio-stimulant containing brown seaweed extracts of the genus Ascophyllum nodosum (rich in growth promoters and polysaccharides), and Sargassum spp (particularly rich in amino acids and polysaccharides). ASCOT is characterized by the presence of natural components such as growth promoters and natural hormones (auxins, gibberellins, cytokinins) which have a powerful stimulating action on the metabolism and physiology of plants. Seaweed extracts are obtained by cold extraction process that allows to transfer in the product all those compounds able of exerting positive effects on plants.

COMPOSITION (%)

Nitrogen (N) organic	1
Organic Carbon (C) from biological origin	10,5

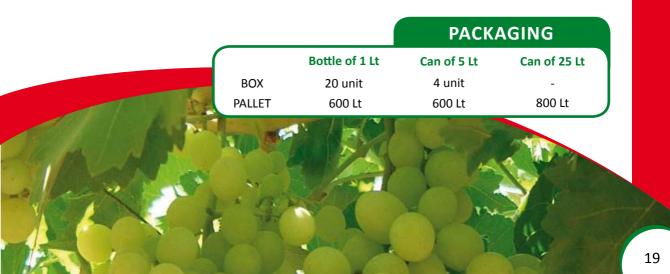
ASCOT conteins: Mannitol, laminarin, alginic acid, amino acids, vitamins, natural growth hormones (auxins, gibberellins and cytokinins)

PHYSICAL PROPERTIES

Formulation	Liquida
pH (1 % in solution 20°C)	6,5
E.C. mS/cm (soluzion 1‰ a 20° C)	0,33
Color	Nero
Density (g/cm³ a 20 °C)	1,1

RATE AND DIRECTIONS FOR USE: FOLIAR APPLICATION

Crops	Rate	Timing
Drupaceous	3-4 l/ha	2-3 treatments every 7-10 days after fruit setting
Fruit Crops	3-4 l/ha	2-3 treatments every 7-10 days after fruit setting.
Table and Wine grapes	3-4 l/ha	1 treatment when cluster are 7-10 cm long 2-3 treatments during berries enlargement
Vegetable crops in greenhouses	300 ml/hl	Treatments every 7-10 days at the beginning of fruit setting
Open field crops	2 l/ha	Treatments mixed with pesticide
Flower crops	300 ml/hl	Treatments every 7-10 days during vegetative development





BIOSTIMULANT FOR ROOT DEVELOPMENT AND PLANT GROWTH

- Improves root activity and its expansion
- Improves soil structure in the rizosphere
- . Contributes to an optimal microbic activity in the soil
- Improves the availability of nutritive elements in the soil



NEXTRA is a biostimulant made by selected organic vegetal material. **NEXTRA** contains purified humic acids, polysaccharides, amino acids, vitamins, microelements and organic acids. **NEXTRA** has a stimulating action on the plant, promoting root expansion and activity, increasing the quantity of nutrients absorbed by root system. **NEXTRA** has a good activity on the soil-plant system, improving chemical physical characteristics of rizosphere (soil portion in contact with the roots) like: soil structure, water retention, Cation-exchange capacity (CEC), nutrients availability. **NEXTRA**, thanks to the presence of polysaccharides, promotes in the soil the presence of a rich and balanced microorganism acrtivity, who carry out an important role for the mineralization of organic substances and the vitality of the soil: soils with low levels of microorganism activity have low fertility and the plants are more prone to attacks of pathogens. Regularly used, with water soluble fertilizer, Nextra promotes a balanced growth of the crops and allows to obtain more qualitative yields. **NEXTRA** added to root application iron chelates, improves the speed and the root absorption of the iron itself.

COMPOSITION (%)

Nitrogen (N) total	3,5
Of which (N) organic	1,4
(N) ureico	2,1
Potassium oxide (K2O) water soluble	7
Organic carbon (C) of biological origin	7,5
Iron (Fe) chelated EDDHA water soluble	0,5
Manganese (Mn) chelated EDTA water soluble	0,5
Zinc (Zn) chelated EDTA water soluble	0,5
Amino acids (on dry substance)	9,5
Humic acids (on dry substance)	2,8
Polysaccharide (on dry substance)	4,5
Vitamins (on dry substance)	0,3

PHYSICAL PROPERTIES

Formulation	Liquida
pH (1 % in solution at 20°C)	6,2
Electrical conductibility ms (solution 1‰ at 20° C)	0,22
Colour	Nero
Density (g/cm³ a 20 °C)	1,15



DIRECTION FOR USE: FERTIGATION

Crops	Rate	Timing
Vegetables and flowers in green house	1,5-2 I/1000 m²	Treatments each 10-15 days together with water soluble
Vegetables on open field	15-20 l/ha	Mixed with water soluble
Fruit crops	15-20 l/ha	Mixed with water soluble
Table grape	15-20 l/ha	Treatment with water soluble in pre-flowering, berries enlargement and changing of color
Strawberry	1,5-2 l 1000 m²	Treatments with water soluble each 10-15 days starting 10 days after transplanting
Localized application	300-500 ml/hl	Preparing the solution in a tank and use the quantity of water in localized way, abundantly wetting the root system. The quantity of solution to use, changes depending on the dimension and the distribution of roots system.

Warning: the product, has to come into contact with the root system. In sandy soils, use the dose of 0,5-1 $I/1000 \text{ m}^2$ using the product during each fertirigation. In the soilless crops, NEXTRA can't be mixed in usual containers (tank A and B) because of the presence of organic substance, is inclined to precipitate. The product can be distributed in another container (tank C) or distributed before, during the phase in which are prepared new concentrated solutions.

		PACKAGING	
	Bottle of 1 Lt	Can of 5 Lt	Can of 25 Lt
BOX	20 unit	4 unit	-
PALLET	600 Lt	600 Lt	800 Lt





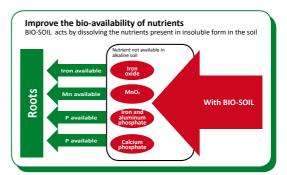
ACTIVATOR OF SOIL FERTILITY - WITH COMPLEX PH-ASE 1

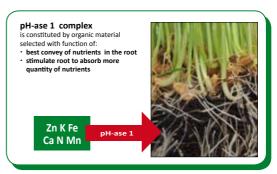
- · Improved availability of nutrients in the soil
- · Root nutrient absorption improved
- · Compatible with all irrigation systems



Thanks to the presence of the complex pH-ase 1, **BIO-SOIL** is an activator of soil fertility.

- pH-ase 1 complex is able to:
- 1. INCREASE THE **AVAILABILITY** MICRONUTRIENTS: BIO-SOIL is able to low pH around the root and in this way it solubilizes micronutrients which are always available for the plant.
- 2. STIMULATE THE ROOT ABSORPTION: BIO-**SOIL** contains the complex pH-ase 1, that comes from organics matrix. pH-ase 1 complex is an important component which promotes and supports the radical absorption. (activation of proton pumps H +) at the root level.





COMPOSITION (%)

1	Nitrogen (N) total	4
	Nitrogen (N) ureic	2
	Nitrogen (N) ammoniacal	2
	(P ₂ O ₅) soluble in water	30

PHYSICAL PROPERTIES

Formulation	Liquid
pH (1 % in solution)	1,3
Electrical conductivity mS/cm (solution 1‰ at 20° C)	0,6
Colour	Bordeaux
Solubility (g/100 g in water at 20 °C)	1,3

DIRECTIONS FOR USE: DRIP IRRIGATION

Crops with DRIP IRRIGATION system: 1-2 I/1000 m².

To acidify 10% by weight of water soluble used in drip irrigation.

PACKAGING Can of 5 Lt Can of 25 Lt BOX 4 unit 600 Lt 800 Lt **PALLET** 22



BIOSTIMULANT FOR RIPENING

- Concentrates and uniforms fruit ripening
- · Accelerates the processes of fruit ripening
- Favors color anticipation and sugar accumulation



BRIXER is a product based of natural substances, studied to enhance and to uniform the fruit ripening. **BRIXER** is also used to stimulate an anticipation of ripening of fruits, to obtain early productions better remunerated from the market (cherries, melons, watermelons, tomatoes, peaches etc..)

BRIXER contains: Methionine: forerunner of the ETILENE, ripening hormone. Polysaccharides and vegetal extracts: optimize physiologic processes, involved in fruit ripening, with an improvement of color and fruit taste.

COMPOSITION (%)

3,5 1,6
1,6
1
1,9
8,5
8
11,5
1,5
10
0,2

PHYSICAL PROPERTIES

Formulation	Liquida
pH (1 % in solution at 20°C)	9,1
Electrical conductibility ms (solution 1% at 20° C)	0,25
Colour	Rosso
Density (g/cm³ a 20 °C)	1,33

DIRECTION FOR USE: FOLIAR APPLICATION

Crops	Rate	Timing
Industrial tomato	3 l/ha	2 treatments every 7-10 days starting from 20 days before of the harvest. Use together with FLEXIL QUALITY, with a dose of 3 kg/ha
Woody crops	3-4 l/ha	2 treatments: 30 days and 15 days before of the harvest.
Grapevine	3 l/ha	2 treatments: 20 days and 10 days before of the harvest. Use together with FLEXIL QUALITY with a dose of 3 kg/ha
table grape	3 l/ha	2 treatments: 20 days and 10 days before of the harvest. Use together with FLEXIL QUALITY with a dose of 3 kg/ha
Horticultural crops	300 ml/hl	2 treatments: 20 days and 10 days before the harvest. Use together with BASIC with the dose of 200 ml/hl

PA		/ /		INI	
PA	U	V	U	UΝ	U

	Bottle of 1 Lt	Can of 5 Lt	Can of 25 Lt
BOX	20 unit	4 unit	-
PALLET	600 Lt	600 Lt	800 Lt

MICRONUTRIENTS









- Prevent and cure micronutrient deficiencies
- Good weeding action
- · Reduced risk of phytotoxicity
- Efficient foliar absorption of micronutrients
- Complexing Natural agent (LSA)



QUIX TOTAL is formula based on micro nutrients that combine the easiness of the application (liquid formulations) with high agronomic efficiency. The trace elements present in QUIX TOTAL is complexed with LSA (Ammonium lignosulphonate). The LSA is a natural complexing agent of vegetal origin: the affinity to plant tissues increases the absorption of micronutrients and reduces the risk of phytotoxicity on leaves. QUIX TOTAL have a good miscibility and compatibility with the most common products used for foliar treatments. Regularly applied through foliar, QUIX TOTAL is able to prevent or cure micronutrient deficiencies such as iron, zinc, manganese, copper, boron and molybdenum producing an increase of metabolic efficiency of the plant with positive results on the production of crops.

COMPOSITION (%)

	QUIX TOTAL
Boron (B)	0,6
Copper (Cu)	0,4
Iron (Fe)	4
Manganese (Mn)	2
Molybdenum (Mo)	0,2
Zinc (Zn EDTA)	1

PHYSICAL PROPERTIES

	QUIX TOTAL
Formulation	Liquid
pH (1 % in solution 20°C)	4
E.C. mS/cm (soluzion 1‰ a 20° C)	0,51
Color	Black
Density (g/cm³ a 20 °C)	1,3

DIRECTION FOR USE: FOLIAR APPLICATION

Fruit crops

(stone fruits, citrus, grapes, kiwi, strawberries, etc.)

Horticultural crops

(tomato, pepper, eggplant, melon, cucumber, zucchini, etc.)

150-250 ml/hl Post transplanting

Industrial crops and cereals

(potato, industrial tomato, corn, wheat sugar beet, oil seed rape, soybean, etc.)

> 1 l/ha Vegetative growth

QUIX TOTAL

2-2,5 l/ha Vegetative growth

PACKAGING

	Bottle of 1 Lt	Can of 5 Lt	Can of 25 Lt
BOX	20 unit	4 unit	
PALLET	600 Lt	600 Lt	800 Lt



CALCIUM AND CALCIUM/MAGNESIUM COMPLEXED WITH LSA WITH AN HIGHER NUTRITIONAL EFFICIENCY

- Prevents and cures calcium and magnesium deficiencies
- Dual possibility of application: foliar and drip irrigation
- Efficient foliar absorption with reduced risk of phytotoxicity
- Complexing natural agent (LSA)



QUIX Ca e QUIX Mac are formulas based on calcium (Ca QUIX) and calcium magnesium (QUIX Mac) that combine the easiness of the application (liquid formulations) with an high agronomic efficiency. Calcium and Magnesium are complexed with LSA (Ammonium lignosulphonate). The LSA is a complexing agent of natural vegetable origin: the affinity to plant tissues increases the absorption of mesoelementi and reduces the risk of phytotoxicity for foliar application. Used in drip irrigation the LSA protects nutrients reducing insolubilization phenomena related to calcium and magnesium. QUIX Ca e QUIX Mac and have a good miscibility and compatibility. Regularly applied through foliar or drip irrigation , the QUIX allow the prevention and treatment of calcium and magnesium deficiencies such as bitter pit of apple trees, cherry cracking, nectarines cracking, blossom-end rot of tomato, leafy vegetables tip burn.

COMPOSITION (%)

	QUIX Ca	QUIX Mac
Calcium Oxide (CaO)	15	6
Magnesium Oxide (MgO)		7
Boron (B)	0,2	

PHYSICAL PROPERTIES

	QUIX Ca	QUIX Mac
Formulation	Liquid	Liquid
pH (1 % in solution 20°C)	5,3	4,2
E.C. mS/cm (soluzion 1‰ a 20° C)	0,65	0,64
Color	Black	Black
Density (g/cm³ a 20 °C)	1,5	1,36

DIRECTIONS FOR USE: FOLIAR APPLICATION

	Fruit crops	Vegetables	Industrial crops
QUIX Ca	250- 350 ml/hl	200-300 ml/hl	2 l/ha
QUIX Mac	200-350 ml/hl	200-300 ml/hl	2 l/ha

DRIP IRRIGATIONE

	Fruit crops	Vegetables	
QUIX Ca	25-50 l/ha	2-3,5 l/ha	
QUIX Mac	200-350 ml/hl	200-300 ml/hl	

PACKAGING

	Bottle of 1 Lt	Can of 5 Lt	Can of 25 Lt
BOX	20 unit	4 unit	-
PALLET	600 Lt	600 Lt	800 Lt

lu Micro Mix





CHELATES MICRONUTRIENTS WITH AN HIGHER FOLIAR ABSORPTION EFFICIENCY

- Cure and prevent micronutrients deficiencies
- Iron DTPA chelated
- Copper, manganese and zinc EDTA chelated
- Powder formula with high concentration of microelements



SOLO MICRO MIX is a powder formulation containing a mixture of chelated micronutrients . The iron is chelated with DTPA instead of EDTA in consideration of the fact that the DTPA ensures greater stability (the range of stability of DTPA iron is 1.5 to 7.5 while that of EDTA is 1.5 to 6.5). SOLU MICRO MIX is designed to provide micro-nutrients for foliar application in order to prevent or cure quickly and efficiently micronutrient deficiencies that can compromise the quality and quantity of production . Applied regularly SOLU MICRO MIX is able to make all the trace elements that need to adjust the production cycle of crops through the common foliar applications . SOLU MICRO MIX can be mixed with the most common products used as foliar, thanks to its special formulation does not give any problem of insolubilization or precipitation.

COMPOSITION (%)

Boron (B) soluble in water	1
Water soluble Copper (Cu) EDTA chelated	0,5
Water soluble Iron (Fe) DTPA chelated	6
Water soluble Manganese (Mn) EDTA chelated	2,8
Water soluble Molybdenum (Mo)	0,02
Water soluble Zinc (Zn) EDTA chelated	3,5

PHYSICAL PROPERTIES

Formulation	Polvere
pH (1 % in solution 20°C)	3,8
E.C. mS/cm (soluzion 1‰ a 20° C)	0,33
Color	Pale green
Density (g/cm³ a 20 °C)	0,6
Solubility (g/100 g di acqua a 20 °C)	30

RATE AND DIRECTIONS FOR USE: FOLIAR APPLICATION

Crops	Preventive treatment	Timing
Grape	80-100 g/hl	Post fruit setting
Olive	100 g/hl	Post fruit setting
Apple trees and pear trees	80-100 g/hl	Post fruit setting
Stone fruits	50-75 g/hl	Post fruit setting
Citrus	100 g/hl	Pre-flowering e post- fruit etting
Vegetables	50-75 g/hl	Post flowering
Extensive crops (Sugar beet, carrot, sunflower, potato)	0,5 kg/ha	Post emergency

DRIP IRRIGATION

CROP	Preventive treatment	Curative treatment	
Fruit crops	4-6 kg/ha	10-15 kg/ha	
Vegetables	0,5 kg/1000 m ²	1 kg/1000 m ²	
Floriculture crops	0,5 kg/1000 m ²	1 kg/1000 m ²	

PACKAGING Bag of 1 kg 20 unit **BOX PALLET** 600 Kg 28

FOLIAR FERTILIZERS





FOLIAR FERTILIZERS LINE WITH AN HIGHER ABSORPTION EFFICIENCY

- Nitrogen, phosphorus and potassium directly to the leaves
- High foliar absorption thanks to the presence of natural surfactants
- Micronutrients chelated EDTA
- · Good miscibility and high solubility.
- · High purity of raw materials used



FLEXIL line has been designed to integrate nutrition of crops through the leaves. **FLEXIL** formulas have been adapted to the different stages of crop growth (vegetative growth, flowering and fruit set, fruit growth, maturation). Used along the crop cycle, **FLEXIL** represent an additional nutritional support that can integrate and optimize plant metabolism and to improve the activity and production. **FLEXIL** are applied directly on the leaves and, thanks to the presence of natural surfactants, facilitate the absorption of nutrients by reducing the formation of residues of salts on the leaf surface after the evaporation of sprayed solution. **FLEXIL** have an excellent solubility and can be mixed with the most common products used in agriculture in order to reduce the costs of the application.

COMPOSITION (%)

Flexil	Flexil N	Flexil P	Flexil Quality	Flexil LQ
20	35	10	7	10
5,6	3,0		7	
4	1,5	7		
10,4	30,5	3		10
20	5,0	50,0	6	6
20	7	10	44	8
	2	2	2	
0,01	0,01	0,01	0,01	0,05
0,002	0,002	0,002	0,002	
0,02	0,02	0,02	0,02	0,2
0,01	0,01	0,01	0,01	
0,001	0,001	0,001	0,001	0,005
0,004	0,004	0,004	0,004	
	20 5,6 4 10,4 20 20 0,01 0,002 0,02 0,01 0,001	20 35 5,6 3,0 4 1,5 10,4 30,5 20 5,0 20 7 2 0,01 0,01 0,002 0,002 0,02 0,02 0,01 0,01 0,001 0,001	20 35 10 5,6 3,0 4 1,5 7 10,4 30,5 3 20 5,0 50,0 20 7 10 2 2 0,01 0,01 0,01 0,002 0,002 0,002 0,02 0,02 0,02 0,01 0,01 0,01 0,001 0,01 0,01 0,001 0,001 0,001	Hexii N Hexii P Quality

PHYSICAL PROPERTIES

	Flexil	Flexil N	Flexil P	Flexil Quality	Flexil LQ
Formulation	Crystalline powder				
pH (1 % in solution 20°C)	6,2	6,5	6	6,5	4,4
E.C. mS/cm (solution 1‰ a 20° C)	1,09	1,23	1,05	1,32	0,18
Color	Green	Bleu	Orange	Pale red	Yellow
Density (g/cm³ a 20°C)	30	35	30	25	

RATE AND DIRECTIONS FOR USE: FOLIAR APPLICATION

	Fruit crops	Vegetables	Floriculture
Flexil	250-350 g/hl	250-300 g/hl	150-250 g/hl
Flexil N	250-350 g/hl	250-300 g/hl	150-250 g/hl
Flexil P	250-350 g/hl	250-300 g/hl	150-250 g/hl
Flexil Quality	250-350 g/hl	250-300 g/hl	150-250 g/hl
Flexil LQ	250-400 ml/hl	200-300 ml/hl	200-300 ml/hl





IMPROVE L'EFFICIENCY OF PESTICIDES AND NUTRITIONAL LEAF TREATMENTS

- Improve l'efficiency of pesticides treatments
- Improve leaf absorption



BIO-LEAF is a special product particularly indicated for improvement of foliar treatment efficacy. In fact for the foliar treatment, the quality of water can be crucial. Many active ingredients of pesticides are sensitive to the water pH, in presence of high pH are subject to alkaline hydrolysis.

The alkaline hydrolysis is an irreversible chemical process regarding active ingredients, in which the OH (hydroxyl ion) break the bonds of pesticide molecules and form compounds without pesticide activity.

The ideal pH of pesticide solution is between 6 and 7. **BIO-LEAF** LOWERS THE pH solution. Lowering the pH solution, **BIO-LEAF** contributes to increase the absorption of nutrients at foliar level

COMPOSITION (%)

4
2
2
30

PHYSICAL PROPERTIES

Formulation	Liquid
pH (1 % in solution)	2,1
C.E. mS/cm (solution 1‰ at 18° C)	0,85
Color	Yellow
Density (g/cm³ at 20 °C)	1,2

DIRECTIONS FOR USE

With foliar fertilizer and pesticides add 20- 50 ml/hl of BIO-LEAF With Glifosate add 50-100 ml OF BIO-LEAF











ORGANIC NITROGEN FERTILIZER

- Organic nitrogen available for the plants
- Quick activity
- Carrier activity
- Usable in organic farming



AZOTOR is an organic fertilizer based on proteins and amino acids. The formulation allows for a wide use in various range of application. It's packed with all the necessary substances to a balanced supply of organic nitrogen. AZOTOR is suitable for foliar treatment and drip irrigation system and is miscible with most common products for nutrition and crop protection. Azotor presents bio-stimulating properties on the metabolic processes of the plant.

COMPOSITION (%)

Nitrogen (N) total	8
Organic carbon (C) from biological origin	15,5

PHYSICAL PROPERTIES

Formulation	Liquid
pH (1 % in solution 20°C)	6,5
E.C. mS/cm (soluzion 1‰ a 20° C)	0,40
Color	Brown
Density (g/cm³ a 20 °C)	1,1

RATE AND DIRECTIONS FOR USE: FOLIAR APPLICATION

Crops	Rate	Period	
Fruits	250-350 ml/hl	Every 15-20 days from bud opening	
Vegetables	200-300 ml/hl	Every 15-20 days from radical liberation	
Industrials	2-5 l/ha	With the post-emergence weed control	

DRIP IRRIGATION

Crops	Rate	Period
All kind of crops	50-75 l/ha	Beginning of vegetative growth, flowering and fruits setting



WATER SOLUBLES





CRYSTALLINE WATER SOLUBLE FERTILIZERS WITH HIGH PURITY AND SOLUBILITY

- High purity and solubility
- Low in chloride, sodium and carbonate
- · Compatible with all assay systems
- They form stable solutions in time



NUTRISOL is a line of water soluble fertilizer produced in order to supply the best nutrient ratio for all irrigated crops according the specific growth stages. **NUTRISOL** are made with chelated EDTA micronutrients, with balanced nutrient content. **NUTRISOL** is particularly recommended for all crops that have a drip irrigation system. The chelated micronutrients complete nutritional needs of plant and the constant use prevent deficiencies. **NUTRISOL** formulas are characterized by low-pH, once in solution, promoting the assimilation of nutrients by root system.

COMPOSITION (%)*

	20.20.20	23.5.8 + 2 MgO	13.40.13	15.5.30 + 2 MgO	14.8.21 + 8 CaO+ 2 MgO	30.10.10	7.14.21 + 2 + MgO + 4 CaO	10.50.10	15.15.15
Nitrogen (N) total	20	23	13	15	14	30	7	10,0	15
Nitrogen (N) nitric	5	2	3		11	2			
Nitrogen (N) ammoniacal	4	1	8	1		2	5,5	10,0	3
Nitrogen (N) ureic	11	20	2	14	3	26	1,5		12
(P ₂ O ₅) soluble in water	20	5	40	5	8	10	14	50,0	15
(K ₂ O) soluble in water	20	8	13	30	21	10	21	10,0	15
(MgO) soluble in water		2		2	2		2		
Calcium Oxide (CaO)					8		4		
Boron (B)	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
Copper (Cu) EDTA	0,006	0,006	0,006	0,006	0,006	0,006	0,006	0,006	0,006
Iron (Fe) EDTA	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
Manganese (Mn) EDTA	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03
Molybdenum (Mo)	0,004	0,004	0,004	0,004	0,004	0,004	0,004	0,004	0,004
Zinc (Zn) EDTA	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01

*all the declared elements are soluble in water

PHYSICAL PROPERTIES

	20.20.20	23.5.8 + 2 MgO	13.40.13	15.5.30 + 2 MgO	14.8.21 + 8 CaO+ 2 MgO	30.10.10	7.14.21 + 4 + MgO + 2 CaO + TE	10.50.10	15.15.15 + 6 MgO
Formulation	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder	Crystalline powder
pH (1 % in solution)	4,5	4,7	4,5	4,5	2,1	4,7	2,6	3,8	3,2
Electrical conductivity mS/cm (solution 1‰ at 20° C)	1,1	0,53	1,06	1,52	1,51	0,552	1,12	1,14	0,96
Colour	Green	Blue	Orange	Red	Yellow	Blue	Yellow	Orange	Green
Solubility (g/100 g in water at 20 °C)	20	10	15	15	25	10	20	20	10

DIRECTIONS FOR USE: DRIP IRRIGATION

0,5-1,5 kg/1000 mq every day.

We suggest to use a final solution with a concentration of 1 ‰



MICROGRANULAR FERTILIZER





MICROGRANULAR FERTILIZER WITH STARTER EFFECT FOR LOCALIZED USE AT SOWING

- Starter effect: uniform growth
- Its contains 3% of Humic acids
- · It is distributed with the seed during sowing
- The application is: effective, practical, economical



ROCKET is a NP compound fertilizer specially designed to produce a marked starter effect on sowed or transplanted crops. This effect is particularly evident when the product is applied by the microgranulator, at the same time of sowing or transplanting. **ROCKET** is a very easy to apply, the dimension of granules is between 0.5 and 1.2mm diameter, dust free, which is suitable for spreading through micro-granulator machineries.

The high content of Phosphorus and the presence of Zinc, allow **ROCKET** to help the fast development of the roots system, stimulating strongly the starting development of the crops.

ROCKET promote a quick germination and an active crop nutrition in order to have a better plant development and a better root system formation.

Zinc mainly contributes in intensifying such effects on crops sensitive to its deficiency (maize, sugar beet, rice, tomato, onion), even in low fertility conditions.

The dimension of the granules (that develop a surface 5 time greater when they come in contact with the soil respect to traditional granules), assures the right and total use of nutrients by crops.

COMPOSITION (%)

Nitrogen (N) total	12
Nitrogen (N) ammoniacal	12
Phosphorus pentoxide (P ₂ O ₅) soluble in neutral ammonium citrate	42
Phosphorus pentoxide (P ₂ O ₅) soluble in water	38
Zinc (Zn) soluble in water	2
Humic acids	3

PHYSICAL PROPERTIES

Formulation	Microgranuls
Granulometry	0,5-1,2 mm
Colour	Black
Density (g/cm3 at 20 °C)	0,98

RATE AND DIRECTIONS FOR USE: Localized along seeding drills/transplanting

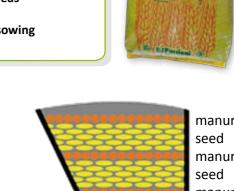
Crop	Rate	Period
Corn, soybean, sunflower	20-30 kg/ha	Localized along seeding drills
Cereals	30-40 kg/ha	Localized along seedind drills
Processing tomatoes and vegetables	25-40 kg/ha	Localized along seeding drills/ transplanting
Sugar beet	20-30 kg/ha	Localized along seeding drills
Greenhouse	4-8 g/m2	Localized along transplanting/ seeding drills
With peat	3-5 kg/m3	In mixture



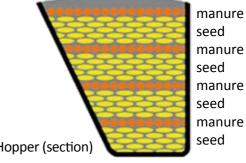


MICROGRANULAR FERTILIZER WITH STARTER EFFECT FOR LOCALIZED USE AT SOWING

- · Starter effect: uniform growth/reduction failed areas
- Its contains 3% of Humic acids
- · It is distributed with or near the seed during the sowing
- Effective, practical, economical



GRANOSTART is a microgranular fertilizer with controlled reduced granulometry specially designed for the localized fertilizer application in order to determine a marked starter effect on cereals and fodder crops. The high phosphorus content in synergy with zinc and nitrogen, promotes the rapid development of the root system. The fertilized crop shows a greater vegetative growth and accelerated maturation. Localized on the row. Thanks to the controlled granulometry, the product can be placed together with the seed in the hopper of the seeder. We suggest to have the use Granostart alternate with seed in layers: start with a layer of seed and and with a fertilizer Granostart can be deployed with traditional or not



end with a fertilizer. Granostart can be deployed with traditional or pneumatic seeder.

COMPOSITION (%)

Nitrogen (N) total	12
Nitrogen (N) ammoniacal	12
Phosphorus pentoxide (P2O5) soluble in neutral ammonium citrate	42
Phosphorus pentoxide (P ₂ O ₅) soluble in water	38
Zinc (Zn) soluble in water	2
Humic acids	3

PHYSICAL PROPERTIES

Formulation	Microgranuls
Granulometry	1,2-2 mm
Colour	Black
Density (g/cm3 at 20 °C)	0,98

RATE AND DIRECTIONS FOR USE: Localized along seeding drills/transplanting

Crop	Rate	Timing
Wheat, Barley, Other cereals, Fodder crops	40-50 kg/ha	Directly into the sowing hopper, together with seeds.

On wheat and barley can be useful to anticipate the coverage of nitrogen in few days compared to the usual practice.



GRANDLAR NPK WITH SLOW RELEASE NTROGEN





GRANULAR FERTILIZER NPK WITH SLOW RELEASE NITROGEN

- Slow release nitrogen (from Urea formaldehyde): 90-120 days nutritional time
- Phosphorus 90% soluble in water;
- Potassium sulphate
- · Calcium, magnesium and sulfur soluble
- Presence of boron and zinc



SMARTFERT is an innovative granular NPK fertilizer which contains slow release nitrogen, highly soluble phosphorus, potassium from sulphate, magnesium, sulphur and micronutrients.

The nitrogen it will be released within 90-120 days following the real plant needs. This mechanism assures a limited amount of salinity in proximity of the roots, which improves development of plants. Moreover, the loss of nitrogen due to leaching and volatilization is considerably reduced.

SMARTEFERT is a very effective fertilizer able to respect nutritive needs of crops.

It is recommended on all crops, (grapevine and table grape, fruit trees, citrus fruit, vegetables, processed crops) so as to obtain quality productions. **SMARTFERT** can be also used in garden, lawns and green areas where the product is able to control vegetative growth.

COMPOSITION (%)

COMPOSITION (70)	
Nitrogen (N) total	12
Nitrogen (N) nitric	1,5
Nitrogen (N) ammoniacal	5,5
Nitrogen (N) from ureaformaldehyde	5
Nitrogen (N) from ureaformaldehyde only soluble in hot water	1,7
Nitrogen (N) from ureaformaldehyde soluble in cold water	2
Phosphorus pentoxide (P_2O_5) soluble in neutral ammonium citrate	6
Phosphorus pentoxide (P ₂ O ₅) soluble in water	5
Potassium dioxide (K ₂ O) soluble in water (from sulphate	15
Calcium oxide (CaO) soluble in water	4
Magnesium oxide (MgO) soluble in water	2
Sulphur (SO ₃) soluble in water	30
Bor (B) soluble in water	0,01
Zinc (Zn) soluble in water	0,01

PHYSICAL PROPERTIES

Formulation	Granular
Granulometry	2-4 mm (85%)
Colour	Red
рН	5

RATE AND DIRECTIONS FOR USE: COVERAGE

Crop	Rate	Period
Grapevine, fruit trees, kiwi	400-600 kg/ha	End of winter or beginning of vegetative growth
Table grape, olives, hazelnut, strawberry	600-700 kg/ha	End of winter or beginning of vegetative growth
Citrus	400-600 kg/ha	Beginning of vegetative growth
Tomato, potato, cucurbits, other vegetables	500-800 kg/ha	Pre-sowing or pre-transplanting
Turf	20-40 g/m2	Top dressing



PROTECTED-PHOSPHORUS FERTILIZER



ra – Phas

PROTECTED PHOSPHORUS TECHNOLOGY GRANULAR **FERTILIZER**

- Increase phosphate nutritional efficiency (70-90% of absorbed phosphorus);
- Reduction of the unit of phosphorus applied for the crop;
- Improved availability of phosphorus day by day for the plants;
- Reduction of phosphorus immobilization within the soil



PRO-PHOS is a phosphorus based mineral fertilizer characterized by presence of polymeric-compound that avoid phosphorus insolubilization of phosphorus once in the soil that reduce the availability of phosphorus for plants. Plants absorb phosphor dissolved in the soil solution preferentially in the ionic form H₂PO₄- o HPO₄--. Into the soil the phosphorus ions may reduce their availability because of absorption and fixation into insoluble compound. According to numerous studies on the availability of phosphorus in the soil, only 25% of the phosphorus that is distributed is commonly and really available for plants. The remaining part is absorbed by soil colloids or is fixed by the ions Ca,+, Fe,+, Al,+. PRO-PHOS technology is able to increase the amount of phosphorus available for the plants by reducing the reactions with cations (Ca,+; Mg,+; Fe,+; Al,+) that limit phosphorus availability. PRO-PHOS fertilized plants has a greater availability of phosphorus with an equal distribution of phosphatic units compared to traditional fertilizers. PRO-PHOS also contains calcium, sulphur, boron and zinc able to provide important nutrients for the crop development.

COMPOSITION (%)

PRO-PHOS
23
10
13
0,01
0,01

PHYSICAL PROPERTIES

	PRO-PHOS
Formulation	Granular
рН	5
Granulometry	1-4 mm (85%)
Colour	Grey

PACKAGING

RATE AND DIRECTIONS FOR USE:

Crop	Rate (Kg/ha)	Timing
Extensive crops	200-300	Pre-sowing or pre-transplant
Fruit crops	200-300	End of winter- starting of vegetative growth
Vegetables	200-300	Pre-transplanting or pre-sowing

Bag of 25 Kg Big bag of 600 Kg **PALLET** 1800 Kg

SPECIAL COMPOUND



Goldenfert

NPK GRANULAR COMPOUND

- · High nutritional efficiency
- Low pH
- Meso and micro nutrients inside



GOLDENFERT is a mineral granular NPK fertilizers containing meso and micro elements. **GOLDENFERT** is characterized by its particular formulation of components which makes it a fertilizer with an intense nutritional performances. **GOLDENFERT** has been made to satisfy the nutritive needs of crops which need balanced amounts of phosphorus, nitrogen and potassium. The further enrichment of meso and micro nutrients assure a balanced nutrition of the plants, preventing damages from deficiencies. Goldenfert is particularly indicated for fruit trees, vegetables, flowers and processed crops.

COMPOSITION (%)

	MAX	PREMIUM
Nitrogen (N) total	10	10
Nitrogen (N) ammoniacal	9	8
Nitrogen (N) ureic	1	2
Phosphorus pentoxide (P ₂ O ₅)	5	10
Potassium Oxide (K ₂ O)	10	15
Magnesium Oxide (MgO)	2	2
Sulphuric Anhydride (SO ₃)	29	15
Calcium Oxide (CaO)	7	2
Boron (B)		0,01
Iron (Fe)	0,5	
Zinc (Zn)		0,01

PHYSICAL PROPERTIES

	MAX	PREMIUM
Formulation	Granular	Granular
рН	5	5
Colour	Blue	Blue

RATE AND DIRECTIONS FOR USE:

Crop	Rate (kg/ha)	Timing
Extensive crops	500-700	Pre-sowing or pre-transplanting
Fruit crops	1.000-1.200	End of winter or starting of vegetative growth
Vegetables (tomato, potato, cucurbits etc)	500 - 800	Pre-sowing or pre-transplanting
Citrus	500-800	Starting of vegetative growth
Nursery	1.000-1.400	Top dressing

PACKAGING Bag of 25 Kg Big bag of 600 Kg PALLET 1800 Kg

SPECIAL NITROGEN FERTILIZER





GRANULAR NITROGEN ORGANO-MINERAL FERTILIZER WITH PROGRESSIVE NITROGEN RELEASE

- NFORCE complex: reduce nitrogen losses and promote a progressive nitrogen release
- In one application: nitrogen nutrition for 90-120 days
- Contain sulfur (important for protein synthesis)
- Soluble humates inside



N-FORCE 40 is an innovative organo-mineral nitrogen based fertilizer with **NFORCE** complex inside. NFORCE complex is composed by sulphur and soluble humates that operate a good protection for nitrogen contributing effectively to reduce nitrogen losses after nitrogen based fertilizer application.

NFORCE 40 represents the true alternative to common nitrogen fertilizers. The nitrogen is present in four different forms (ammoniacal, ureic, organic, urea formaldehyde) in order to follow the nutritional demands of crops and minimize the losses of nitrogen (ammonia volatilization; nitrogen leaching; nitrogen denitrification). The combination of nitrogen with humic acids exalts the efficacy of the nutritive process and the productive results of cultivation, by ensuring in the meantime, environmental and economic benefits. The use of **N-FORCE** increases the assimilation capability of root system, by improving the effectiveness of nitrogen fertilization. Humic acids also act as transporters of nutritive elements inside the plant.

N-FORCE:

- satisfies the nitrogen demand of all the cultures;
- stimulates, through the nitrogen action, the protein synthesis by improving the global quality of production;
- reduces the vegetables nitrates build-up;
- reduces the nitrogen placer mining in the soil which becomes suitable for low environmental impact fertilizations.

COMPOSITION (%)

Nitrogen (N) total	30
Nitrogen (N) organic	1
Nitrogen (N) ammoniacal	3
Nitrogen (N) ureic	24
Nitrogen (N) from urea formaldehyde	2
Sulphuric Anhydride (SO ₃) soluble in water	10
Organic carbon (C)	7,5

PHYSICAL PROPERTIES

Formulation	Granular	
Granulometry	1-4 mm (85%)	
Color	Grey	
Density (g/cm³ a 20 °C)	0,9	
рН	7	

RATE AND DIRECTIONS FOR USE:

Crop	Rate (kg/ha)	Timing
Wheat, barley, other cereals	200-300	Top dressing
Maize, sorghum, sunflower	200-350	Top dressing
Vegetables	250-400	Top dressing
Potato	250- 300	Top dressing
Fruit trees	200-250	Top dressing

PACKAGING

PALLET 1800 Kg

SPECIAL ORGANO MINERAL Purion 1888





SPECIAL GRANULAR NP ORGANO-MINERAL WITH AFS TECHNOLOGY (ACTIVATORS OF SOIL FERTILITY)

- **AFS COMPLEX**
- Biostimulant activity
- · Improves nutrients absorption by stimulating root activity
- Improves soil structure
- · Increase the water content in the soil
- Stimulates soil microbial activity



The MATRIX line is a line of granular products consisting of a mineral component and an organic component obtained by the selection of organic matrices with high agronomic effectiveness (AFS). The component called AFS (Activators of soil fertility) in fact is constituted by a series of organic compounds capable of improving the soil fertility and the assimilation of nutrients by plants. The abbreviation AFS in fact means that in the product are:

organic components	Effects on soil	Effects on plants
HUMIC AND FULVIC ACID	 Improve the soil structure and water retention Improve the cation exchange capacity (property of the soil to retain nutrients). Protection and increased availability of phosphorus (phospho-humates) and nitrogen 	Increase the absorption of nutrients at the root level Increase nutrients availability for plants (phosphorus, trace elements, potassium)
POLYSACCHARIDE COMPLEX	 Stimulates soil microbial activity by promoting a constant transformation and mineralization of organic matter 	 Short-chain polysaccharides are absorbed by the plant and represent a source of readily available energy.
PROTEIC COMPLEX	- Slow-release nitrogen source. It stimulates the activity of the microbial flora.	 The molecules of low molecular weight are readily absorbed by the plant and used in the physiological processes.

COMPOSITION (%)

Nitrogen (N) total	7
Nitrogen (N) ammoniacal	4
Nitrogen (N) ureic	2
Nitrogen (N) organic	1
(P ₂ O ₅) total	17
Calcium Oxide (CaO) soluble in water	8
Sulphuric Anhydride (SO ₃) soluble in water	16
Iron (Fe) total	0,5
(C) Organic	7,5

PHYSICAL PROPERTIES

Granular	
1-4 mm (85%)	
Black	
1,1	
5,5	

DIRECTIONS FOR USE

Сгор	Rate (kg/ha)
Open field vegetable crops	400-600
Extensive crops	300-500
Fruit crops	400-600
Cereals	400-600
Meadows	

PACKAGING

Bag of 25 Kg Big bag of 600 Kg **PALLET** 1800 Kg



SPECIAL GRANULAR NPK ORGANO-MINERAL WITH AFS TECHNOLOGY (ACTIVATORS OF SOIL FERTILITY)

- · Improves the absorption of nutrients by stimulating root activity
- Improve soil structure
- Increase water content of the soil
- Stimulates soil microbial activity



The **MATRIX** line is a line of granular products

consisting of a mineral component and an organic component obtained by the selection of organic matrices with high agronomic effectiveness (AFS). The presence of selected organic matter gives the **MATRIX** important stimulant properties. The component called AFS (Activators of soil fertility) in fact is constituted by a series of organic compounds capable of improving the soil fertility and the assimilation of nutrients by plants. With the abbreviation AFS in fact means that in the product are:

organic components	Effects on soil	Effects on plants	
HUMIC AND FULVIC ACID	 Improve the soil structure and water retention Improve the cation exchange capacity (property of the soil to retain nutrients). Protection and increased availability of phosphorus (phospho-humates) and nitrogen 	- Increase the absorption of nutrients at the root level - Increase nutrients availability for plants (phosphorus, trace elements, potassium)	
POLYSACCHARIDE COMPLEX	 Stimulates soil microbial activity by promoting a constant transformation and mineralization of organic matter 	- Short-chain polysaccharides are absorbed by the plant and represent a source of readily available energy.	
PROTEIC COMPLEX	- Slow-release nitrogen source. It stimulates the activity of the microbial flora.	 The molecules of low molecular weight are readily absorbed by the plant and used in the physiological processes. 	

COMPOSITION (%)

	MATRIX TOP
Nitrogen (N) total	7
Nitrogen (NH ₄ +)	6
Nitrogen (N) organic	1
(P ₂ O ₅) total	10
(K ₂ O) water soluble	15
Calcium Oxide (CaO) soluble in water	5
Sulphuric Anhydride (SO ₃) soluble in water	22
(C) Organic	7,5

PHYSICAL PROPERTIES

	MATRIX TOP	
Formulation	Granular	
pH (1 % in solution)	5	
Granulometry	1-4 mm (85%)	
Colour	Black	

DIRECTIONS FOR USE

Colture	Open field vegetable crops	Industrial crops	Fruit tree
MATRIX TOP	500-700 kg/ha	700-1000 kg/ha	400-700 kg/ha

PACKAGING

PALLET 1800 Kg

ORGANO-MINERAL



Fruttoro

GRANULAR ORGANO-MINERAL FERTILIZER WITH MESOELEMENTS

- Acid pH
- Improved absorption of nutrient elements
- · Reduced losses of nutrients
- Stimulate soil microbial activity



FRUTTORO is a range of organo-mineral fertilizers. FRUTTORO range contains 3 different nitrogen forms allows a gradual and progressive release of the nitrogen;

- Absence of nitric nitrogen, subject to losses by leaching into the soil
- · phosphorus derived from superphosphate;
- mesoelements inside: sulphur and calcium (sometimes magnesium), complete the different formulations giving a more efficient crop nutrition. The sulphur is in fact a key element involved in the synthesis of sulfur amino acids. The calcium instead, improve the consistency and quality of crops;
- organic matter: the presence of organic substance protects the nutritive elements, stimulate microbial flora in the soil, improve chemical-physical characteristics of the (water and nutrients retention); improve the conditions in case of salinity soils or sodium soil salinity
- acid pH: improves nutrient availability within the soil and it stimulate root absorption.

COMPOSITION (%)

	QUALITY	LUXOR	MISTOR	MAGIC
Nitrogen (N) total	7	8	8	12
Nitrogen (N) ammoniacal	6	7	7	10
Nitrogen (N) ureic				1
Nitrogen (N) organic	1	1	1	1
(P ₂ O ₅) total	15	5	14	6
Potassium Oxide (K ₂ O)	20	10	6	5
Calcium Oxide (CaO)	3	7	8	8
Sulphuric Anhydride (SO ₃)	13	23	27	32
Magnesium Oxide (MgO)		2		
Iron (Fe)		0,5		0,5
Organic carbon (C)	7,5	7,5	7,5	7,5

PHYSICAL PROPERTIES

	QUALITY	LUXOR	MISTOR	MAGIC
Formulation	Granular	Granular	Granular	Granular
pH (1 % in solution)	5	5	5	5
Granulometry	1-4 mm (85%)	1-4 mm (85%)	1-4 mm (85%)	1-4 mm (85%)
Colour	Red	Gray	Gray	Gray

RATE AND DIRECTIONS FOR USE:

Crop	Open field vegetable crops	Extensive crops	Fruit tree
QUALITY	600-800 kg/ha	500-700 kg/ha	500-700 kg/ha
LUXOR	700-900 kg/ha	700-900 kg/ha	600-800 kg/ha
MISTOR	700-900 kg/ha	700-900 kg/ha	600-800 kg/ha
MAGIC	600-800 kg/ha	700-900 kg/ha	600-800 kg/ha

PACKAGING Bag of 25 Kg PALLET 1800 Kg Big bag of 600 Kg PALLET 1800 Kg

Triofert

UNIVERSAL GRANULAR ORGANO-MINERAL FERTILIZER

- Ideal to give balaced nutrition to all crops
- Acid pH
- It containst both macro and mesoelements (nitrogen, phosphorus, potassium, sulfur, calcium)



TRIOFERT is a balanced organo-mineral NPK fertilizer ideal in satisfying the nutritional needs of many crops. The presence of organic and ammoniacal nitrogen realize a constant and progressive release of the element, so respecting the times of plant growth. The presence of phospho-potassium elements feed the plant from the early stages in the development. The set of nutrients is enriched by calcium, sulphur and iron, to stimulate the processes of protein synthesis, of the formulation of vitamins and enzymes and the photosynthetic activity.

COMPOSITION (%)

	TRIOFERT
Nitrogen (N) total	7
Nitrogen (N) ammoniacal	6
Nitrogen (N) organic	1
(P ₂ O ₅)	7
Potassium Oxide (K ₂ O)	7
Calcium Oxide (CaO)	10
Sulphuric Anhydride (SO ₃)	28
Magnesium Oxide (MgO)	2
Iron (Fe) soluble in water	0,5
Organic carbon (C)	7,5

PHYSICAL PROPERTIES

	TRIOFERT
Formulation	Granular
pH (1 % in solution)	6
Granulometry	1-4 mm (85%)
Colour	Gray

RATE AND DIRECTIONS FOR USE:

Crop	Rate (kg/ha)	Timing
tomato, pepper, eggplant	1000-1200	Pre-sowing o pre-transplanting
Vegetables	600-700	Pre-sowing o pre-transplanting
Olive	600-1000	Starting of vegetative growth
Fruit crops	700- 1000	Starting of vegetative growth

PALLET 1800 Kg PALLET 53

STRAIGHT CHILD



SUPERPHOS

PSSP & GSSP

- 90 % of water soluble phosphorus
- Acid pH
- Presence of calcium and e sulphur



The **SSP** represents our tradition for our company that has been producing SSP since 1888. We have a strong and long expertise in production SSP, made from the most prestigious form of phosphorus. **SUPERPHOS** has:

high contents of sulphur and pH acidity make it particularly suitable for alkaline soil where the availability of phosphorus is critical.

COMPOSITION (%)

	POWDER	GRANULAR
Phosphorus pentoxide (P,O,) soluble in neutral ammonium citrate and water	17	18
Phosphorus pentoxide (P ₂ O ₅) soluble in water	15,81	16,7
Water-soluble calcium oxide (CaO)	22	22
Water-soluble sulphur trioxide (SO ₃)	25	25

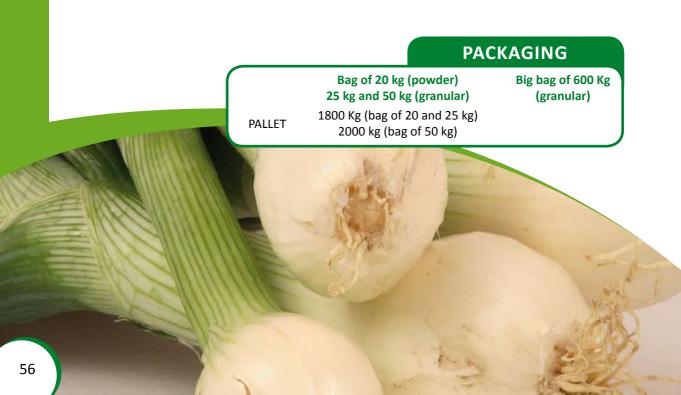
PHYSICAL PROPERTIES

	POWDER	GRANULAR
Formulation	Powder	Granular
pH (1 % in solution)	3,5	4,5
Granulometry		1-4 mm (85%)
Colour	Gray	Gray

RATE AND DIRECTIONS FOR USE:

Crop Rate (kg/ha)

According to crop's need 400-700 kg/ha



CARDENING -





PRODUCTS FOR PROFESSINAL HOBBYIST

- 2 formulates to meet all crops needs
- Formulates containing all main nutrients
- Presence of calcium and e sulphur



WEEKEND is a range of product suitable for lawns, also for those subject to intense use, ornamental plants, horticultural and fruitage. **WEEKEND** is an innovative NPK granular fertilizer, containing release nitrogen, highly soluble phosphorus, potassium sulphate, magnesium, zinc and micro-nutrients. The potassium makes lawns more withstanding when walked on and used intensively. In fruit trees and vegetables the use of **WEEKEND** accelerates and optimizes ripening, inducing sweeter, more intensified colored and crunchy pulps of fruit production. Each granular contains all the nutritive elements plants need. Therefore even when the distribution is not perfectly uniform it guarantees a correct nutrition of the plants. **WEEKEND** Rosso is characterized by the presence of slow-release nitrogen, able to make itself available progressively, according to the crop's need.

COMPOSITION (%)

	RED	BLUE
Nitrogen (N) total	12	10
Nitrogen (N) ammoniacal	5,5	8
Nitrogen (N) nitric	1,5	
Nitrogen (N) ureic		2
Nitrogen (N) ureaformaldehyde	5	
(P ₂ O ₅)	6	10
Potassium Oxide (K ₂ O)	15	15
Calcium Oxide (CaO)	4	2
Sulphuric Anhydride (SO ₃)	30	32
Magnesium Oxide (MgO)	2	2
Boron (B)	0,01	0,01
Zinc (Zn)	0,01	0,01

PHYSICAL PROPERTIES

	RED	BLUE
Formulation	Granular	Granular
pH (1 % in solution)	5	5
Granulometry	1-4 mm (85%)	1-4 mm (85%)
Colour	Red	Blue

RATE AND DIRECTIONS FOR USE:

Сгор	Rate (kg/ha)
Lawn	20-40 g/mq
Vegetables crops	30-50 g/mq
Fruit crops	20-40 g/mq

PACKAGING

Bag of 20 kg (powder) 25 kg and 50 kg (granular) Big bag of 600 Kg (granular)

PALLET

1800 Kg (bag of 20 and 25 kg) 2000 kg (bag of 50 kg)

ZOOTECHNICS ...

STALLASANA

AN EXCELLENT SOLUTION TO IMPROVE FARM HYGIENE AND TO INCREASE AGRONOMICAL PROPERTIES OF LITTER

- Ideal solution to improve the hygiene on animal houses and to improve agronomical properties of litter
- Reduces emissions of ammonia
- · Reduces microbic charge in the barn

STALLASANA is distributed on the bedding at least twice a week and assures

- · Drier bedding;
- Notable decreases in the manifestation of acute mastitis and lameness;
- Improvement in environmental conditions due to the almost total disappearance of bad smells. The fumes from ammonia which are released from the substrate, are stopped by the high pH level in the product (pH 3,5). The use of Stallasana does not present any side effect for animals as concern for respiratory and integumentary system and for extremity of limbs. Stallasana enriches litter with phosphorus, sulphur and calcium and it promotes a balanced fermentation of the organic material.

PHYSICAL PROPERTIES

	STALLASANA
Formulation	Powder
pH (1 % in solution)	3,5
Colour	Gray



DOSAGES AND DIRECTIONS FOR USE:

Crop	Rate (kg/ha)	Timing
Cattle	0,5-1 kg/m²	Uniformly distribute the product on
Pig	0,5-1 kg/m ²	the bedstead.
Sheep	0,4-0,8 kg/m ²	1-3 application/week according to the type of breeding and
Birds	0,3-0,6 kg/m ²	to the litter condition.



IN	otes



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