CATALOG

NUTRITION

ILSA
The green evolution

ILSA
The green evolution

THE ILSA PROPOSAL

NUTRITION CATALOG

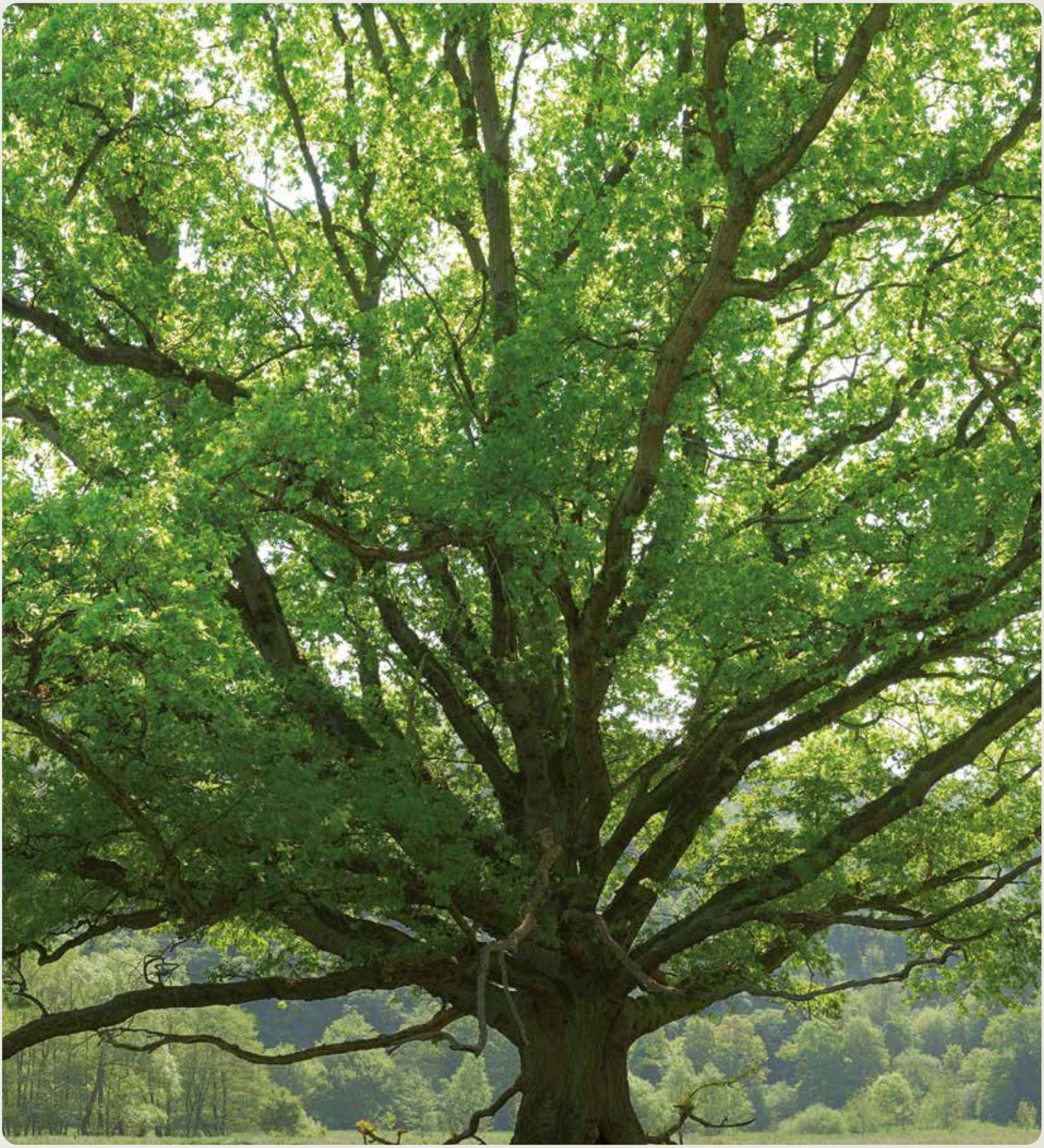
contains "intelligent" products able to modulate the release of nitrogen in sync with plant demand and in line with the new concepts of sustainable agriculture.

BIOSTIMULATION CATALOG

contains biostimulants and products with a specific action, based on molecules and natural substances able to act on plant primary and secondary metabolism, so responding to some of the plant's needs.

ILSA

What we are is due to the effort, competence and passion of many people working to a common goal:
«make ILSA a solid and credible company».
It is the result of continuous research, constant process and product innovation, respect, care and attention towards customers. Our solidity, credibility and will of continuous improvement allow us to compete worldwide and offer our customers real chances of economic and professional growth.



PRODUCTS ACCORDING TO LINES

BIOILSA

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ILSAFERT

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ILSATOP

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ILSATEC

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ILSA AGRO

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ILSACOM

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ILSALIFE

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Acidifier: it favours lowering the pH of the solution to be applied by leaf or fertigation.
Activated products: granules with a high molecular weight co-formulation produced by enzymatic hydrolysis with certified bio-stimulant activity.

PRODUCTS ALLOWED IN ORGANIC FARMING

* CALCIOCIANAMIDE: Alzchem Trostberg Gmbh Registered Trademark.
** SFEROSOL: Esseco Srl Registered Trademark.
*** SILIFORCE: Agro-Solutions B.v. Registered Trademark.

PRODUCTS IN ALPHABETICAL ORDER

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BIOILSA
ILSAFERT
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PRODUCTS ALLOWED IN ORGANIC FARMING

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A PATH FOR
DRIVEN BY PASSION

Our history

1956

THE FIRM IS BORN IN 1956

Its founder's intuition was that of seeing in hide collagen a resource to be used to obtain nitrogen organic fertilisers. It is one of the longest-lived firms in the industry and its long history proves that ILSA has always been able to stay in the market with its products and meet through innovation the needs of an increasingly demanding and specialised agriculture.

1972

IN 1972 IT BECOMES THE MOST IMPORTANT ITALIAN MAKER OF ORGANIC FERTILISERS

Thanks to the acquisition of Ico S.p.A. and Valcoa S.p.A., it consolidates its leadership among the Italian makers of organic fertilsiers. In this same period it markets the first product with its own trademark, FERTORGANICO, still in production today.

1976

IN 1976 THE STRATEGIC CHOICE OF GIVING GREAT IMPORTANCE TO RESEARCH

The first partnership is forged with the Faculty of Agronomics of the *Università Cattolica del Sacro Cuore of Piacenza*, which lays the groundwork for the entire subsequent evolution of the ILSA research. Over the time new partnerships have been forged with a lot of universities and research institutes in Italy and abroad, promoting the constant improvement of production processes and the creation of new highly effective products.

2014

IN 2014 ILSA RENEWS ITS TRADEMARK AND PRESENTS THE NEW PAY-OFF «THE GREEN EVOLUTION»

The ultimate frontier of the ILSA research generates a renewed corporate vision that is increasingly green and sustainable. With the launch of the new trademark, the new philosophy «the green evolution» is introduced: a prelude to the output of a new revolutionary range of products projecting the company into the future.

2016

IN 2016 THE SFE (SUPERCRITICAL FLUID EXTRACTION) EXTRACTION PLANT IS ACTIVATED

It is a clean process that allows extracting bioactive substances without using organic solvents and involves no heat stress. Because of its very low environmental impact, the FDA (Food and Drug Administration - U.S.) has conferred the GRAS (Generally Recognized as Safe) attribute to it. The combination between this new technology and the enzymatic hydrolysis technology has allowed the company to launch the VIRIDEM® programme, a guide to make plant-derived natural biostimulants that are efficient and can act on plant metabolism. A programme that can be summed up in a clear philosophy: «From plants for plants».

2017

IN 2017 ILSA BECAME A "LARGE COMPANY" THANKS TO THE AGREEMENT WITH BIOLCHIM SPA WHICH ACQUIRED 60% OF THE SHARE CAPITAL

The most important industrial and commercial Group at a world level in the bio-stimulant sector was established. The Group also includes the Italian company - CIFO, the Canadian company - West Coast Marine Bio Processing, producer of seaweed extracts and the Hungarian company - Matècsa, producer of peats and derivatives.

GROWTH AND COMPETENCE

1979

IN 1979 THE MOVE TO ARZIGNANO (VICENZA)

Being closer to the raw material from which AGROGEL® and GELAMIN®, the hydrolysed gelatins - one solid and the other fluid - for agricultural use, are obtained, means greater production capacity, greater chance of selecting the raw material itself, more efficient logistics and lesser environmental impact from transport.

1993

IN 1993 THE ENZYMATIC HYDROLYSIS PLANT IS ACTIVATED

The plant for the production of liquid fertilisers marks in fact the company's entry in this market and in the biotechnology sector. It confirms the company's vocation to innovation, quality and care for the environment. This plant gives birth to GELAMIN®, the fluid gelatin for agricultural use from enzymatic hydrolysis, and the plant-derived products for plant biostimulation from the VIRIDEM® programme.

2001

IN 2001 THE ILSA MEDITERRANEO S.P.A. PLANT IS INAUGURATED

The production plant located in Molfetta, in the province of Bari, is the path chosen by the company to better serve the whole area of Southern Italy and meet the growing demand for its products coming from the countries of the Mediterranean basin.

2003

SINCE 2003 QUALITY CERTIFICATIONS HAVE CONFIRMED WITH FACTS OUR OPERATIONAL PHILOSOPHY

The corporate development has always gone hand in hand with a strong sense of social responsibility; environmental protection, safety at work, product safety and transparency to the outside have always been considered as corporate priorities.

2005

IN 2005 THE C.R.A. (CORPORATE RESEARCH CENTRE) IS INAUGURATED

35+ years of close partnerships with the most important research institutes result in the creation of the C.R.A., Centro Ricerca Aziendale - Corporate Research Centre, provided with growth chambers and the most modern equipment, which confirm the company's attitude towards product and process innovation.

2007

THE PUBLICATION IN THE OFFICIAL GAZETTE OF THE HYDROLYSED GELATIN FOR AGRICULTURAL USE

Thanks to AGROGEL®, 16 March 2007 will always remain an important date in the history of ILSA: the hydrolysed gelatin for agricultural use is introduced in the law ruling the use of fertilisers in Italy.

2009

IN 2009 THE ILSA BRASIL PLANT IS ACTIVATED

In the Rio Grande Do Sul state, in an area with a strong agricultural vocation, the new plant of the subsidiary ILSA BRASIL has been started to meet the growing demand for products based on AGROGEL® and GELAMIN®.

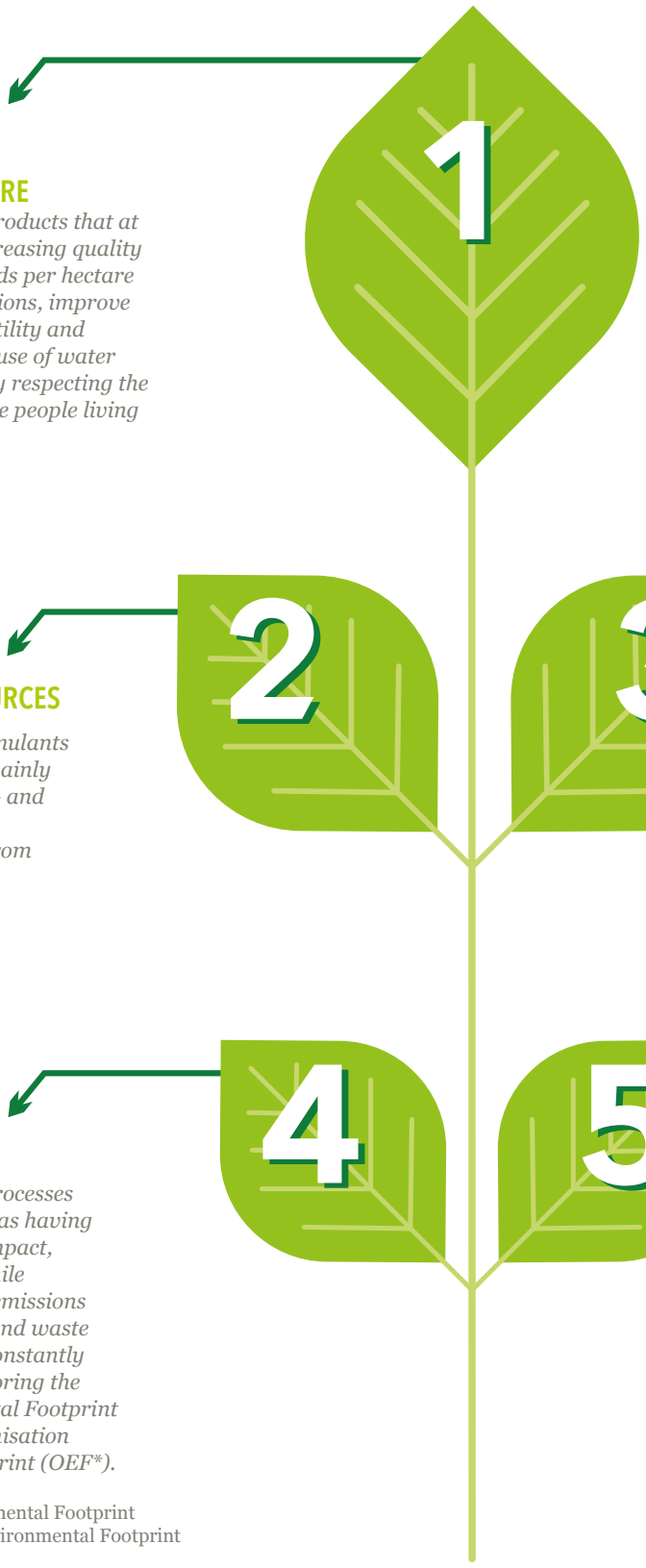
2010

IN 2010 IT LAUNCHES THE FIRST PLANT-DERIVED BIOSTIMULANTS

After seven years of research, following legal recognition and introduction of the Fabaceae hydrolysate in the category of products with a specific action on plants, the company presents to the market its first plant-derived biostimulant, ILSAC-ON, quickly followed by ILSASTIM+ and ILSAVIS+

.

ILSA MANIFESTO ON AGRICULTURAL SUSTAINABILITY



TO GIVE LESS TO PRODUCE MORE

We make efficient products that at low doses allow increasing quality and production yields per hectare even in stress situations, improve agricultural soil fertility and promote a rational use of water resources while fully respecting the environment and the people living in it.

RENEWABLE SOURCES

To make our biostimulants and fertilisers we mainly use natural animal- and plantderived raw materials coming from renewable sources.

PRODUCT INNOVATION

The C.R.A. (Corporate Research Centre) applies «white» biotechnologies that, through the use of enzymes, allow developing products obtained by transforming natural raw materials that contain bioactive substances for plants.

PROCESS INNOVATION

By using industrial processes generally recognised as having low environmental impact, we make products while drastically reducing emissions into the atmosphere and waste production. We are constantly analysing and monitoring the Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF*).*

* *PEF:* Product Environmental Footprint
* *OEF:* Organization Environmental Footprint

TRAINING AND DISCLOSURE

The correct use of products and the reduction of the environmental impact from their use also depend on good training and information activities addressed to the distribution system and to end-users.

ILSA PRODUCTION PLANTS

ILSA BRASIL
PORTAO
(Porto Alegre)

ILSA Brasil

ILSA

ILSA
ARZIGNANO
(Vicenza)

ILSA MEDITERRANEO
MOLFETTA (Bari)

ILSA MEDITERRANEO

ICON EXPLANATION

QUALITY CERTIFIED BY ASSOFERTILIZZANTI

The quality mark confered by Assofertilizzanti in agreement with ICQRF (Ispettorato Centrale della tutela della Qualità e Repressione Frodi dei prodotti agroalimentari - Central Inspectorate for Fraud Repression and Quality safeguarding of agri-food products) certifies the compliance of fertilizers with the label on the packaging and law regulations, by performing random sampling on marketed products.

ORGANIC FARMING

The "AgriCROP Biologica ILSA" logo certifies that the fertiliser can be used in organic farming.

LOW CHLORINE CONTENT

The presence of chlorine in the soil can have undesirable effects on the growth of a few root systems. Excessive amounts of chlorine can lead to salinity problems, besides being harmful to the microflora living in the circulating solutions of the soil. The "Basso Tenore di Cloro" (Low Chlorine Content) mark certifies that the fertilizer has a chlorine content below the maximum limit allowed (2%) and is no danger to crops

FOLIAR APPLICATION

Foliar Fertiliser: it highlights the products to be administered through leaves and characterised by safety of use, low molecular weight and the presence of mainly L-amino acids.

FERTIGATION

This mark highlights fertigation products characterised by purity, presence of mainly L-amino acids and easiness of use.

PLANT MATRIX

The products containing plant-derived matrices obtained, by hydrolysis and/or extraction, from yeasts, sugars, algae, fabaceae, etc.

VIRIDEM®

The "Powered by VIRIDEM®" trademark certifies that the product has been developed by following the VIRIDEM® programme aimed at developing plant-based natural biostimulants.

PEF/OEF

The mark indicate the study, realized by ILSA, of the environmental footprint organization, OEF (Organization Enviromental Footprint) and product, PEF (Product Environmental Footprint) .

COMMUNICATION

Transferring the knowledge heritage accumulated in many years of work is one of the social responsibilities of ILSA.

Services towards resellers and farmers

Agriculture is a dynamic and constantly evolving sector that requires specialised skills, also with regard to the introduction of new and increasingly sustainable production techniques.
Making those who operate in the agricultural sector aware of their role, not only in economic terms but also in social terms and regarding health and environmental protection, is one of the priorities that ILSA pursues by organising seminars, conferences and training courses intended for traders, technicians in the industry and farmers.
LSA employs an in-house technical structure that is

focused on daily spreading of, in addition to product value, agronomic, scientific and technological knowledge, with the aim of helping customers to identify the best technical solutions.
ILSA makes demonstration fields and in-field experiments, in Italy and abroad, collaborating with the R&D area. It takes care of collecting, drafting and spreading product and use information while meeting technicians, opinion leaders, resellers and farms to promote a more efficient use of its products.

BECOME A MEMBER

on

www.ilsagroup.com!

You will have exclusive access to documents such as crop dossiers, technical data sheets and more...

COMMUNICATION TOOLS

To better support its customers, ILSA has developed a series of communication tools:

Websites

www.ilsagroup.com
www.agrogel.it
www.gelamin.it

Social

Linkedin
Twitter
Youtube

Informative newsletters

Technical Good to know

Dossier

In-depth dossiers on crops and products

Report

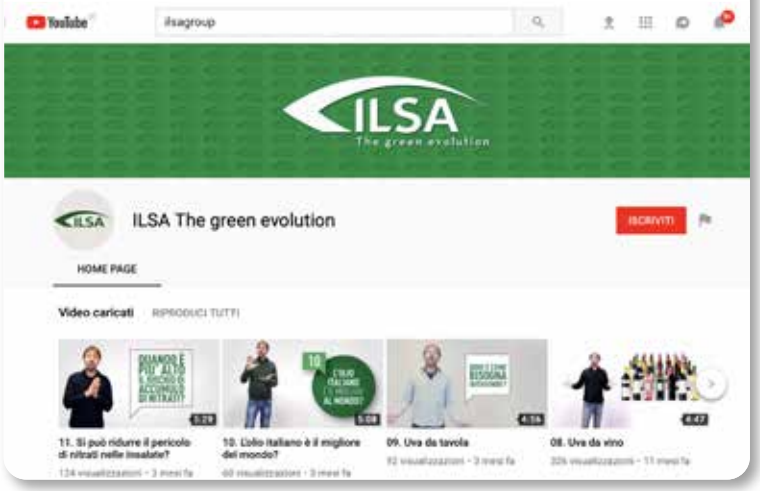
Results of in-field activity

Product information material

(technical data sheets, safety data sheets, fertilisation plans and application instructions)

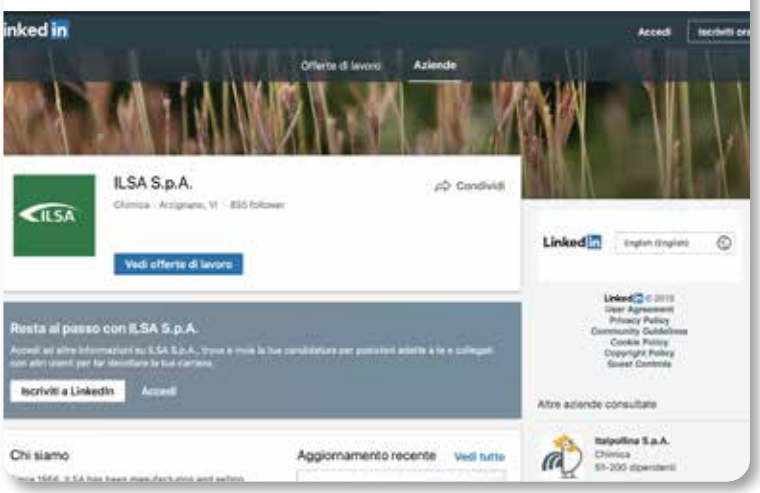
www.ilsagroup.com

Youtube Channel



www.agrogel.it

Linkedin



www.gelamin.it

Twitter

ILSA'S NEWSLETTERS

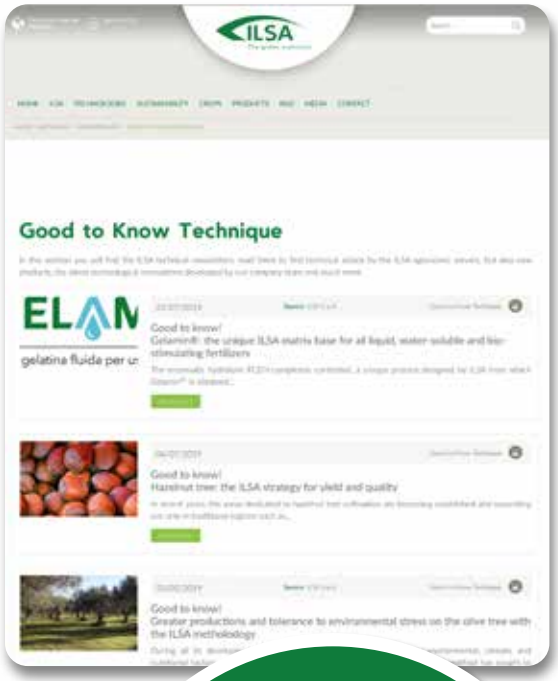
GOOD TO KNOW

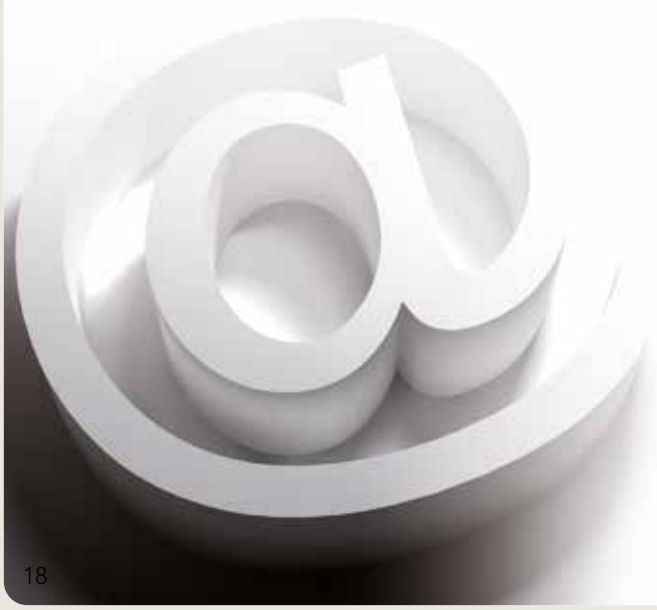
The appointment with the information

"Good to know Technique" is our periodical newsletter of information on plant nutrition, with previews, updates and technical training. "Good to know Commercial" is Ilsa's periodical newsletter of commercial information. The recipients of these two free newsletters are those interested in the dynamics of general business and the agriculture world, that is, both Ilsa's friends and people who, out of curiousity or interest, want to find out the business core of a company that in the past 50 years has been working to improve the health and yield of crops. Our wish is to give technical and commercial information (also very in-depth) in a gentle way through easy and quick reading.

We think that science has been key in our history and believe that spreading and sharing knowledge can be the only way to continue growing. Our wish is that the "Good to know" newsletters can generate a fruitful exchange of views, having in mind an agriculture capable of overcoming business and environmental sustainability challenges as well as meeting the needs of this and future generations.

You only need to register to www.ilsagroup.com to get them.



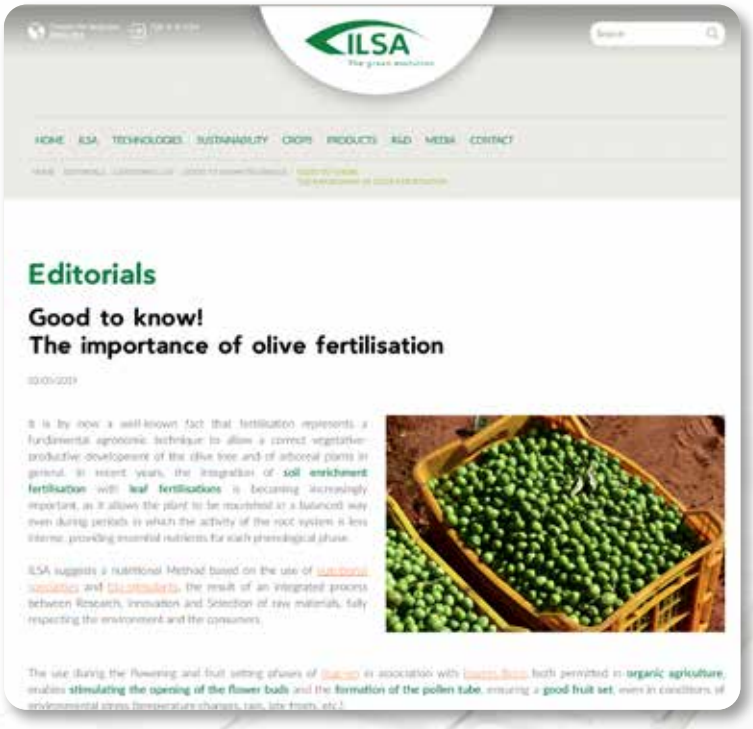


REGISTER on **www.ilsagroup.com!** You will receive the Good to Know more suitable for you!

ILSA
HOME ILSA TECHNOLOGIES SUSTAINABILITY CROPS PRODUCTS R&D MEDIA CONTACT
Editorials
Good to know!
Gelamin®: the unique ILSA matrix base for all liquid, water-soluble and bio-stimulating fertilizers
FCEH
GELAMIN
fluid gelatine for agricultural use

ILSA
HOME ILSA TECHNOLOGIES SUSTAINABILITY CROPS PRODUCTS R&D MEDIA CONTACT
Editorials
Good to know!
Hazelnut tree: the ILSA strategy for yield and quality

ILSA
HOME ILSA TECHNOLOGIES SUSTAINABILITY CROPS PRODUCTS R&D MEDIA CONTACT
Editorials
Good to know!
Greater productions and tolerance to environmental stress on the olive tree with the ILSA metholodogy


ILSA
HOME ILSA TECHNOLOGIES SUSTAINABILITY CROPS PRODUCTS R&D MEDIA CONTACT
Editorials
Good to know!
The importance of olive fertilisation

ORGANIC FERTILIZERS ARE ALL THE SAME?

From torrefied leather to the gelatin for agricultural use

The organic fertilizers deriving from leather processing have been known for almost a century; in the last few decades, they have been the most common nitrogenous organic fertilizers on the Italian market. These fertilizers are obtained through thermal treatment of the collagen contained in the hides from the tanning and footwear industry. According to the current regulations governing the production and sale of fertilizers (Legislative Decree no. 75 of April 29, 2010), there exist six types of nitrogenous organic fertilizers deriving from this raw material:

- Torrefied leather
- Leather treated with sulfuric acid
- Fur
- Hydrolized animal epithelium (legally recognized since 1989)
- Hydrolyzed fur (legally recognized since 1997)
- Hydrolyzed gelatin for agricultural use (legally recognized since 2007)

AGROGEL
gelatine for agricultural use

One can guess that, even though all these products come from the same matrix, they have totally different intrinsic characteristics and application efficiency.

Hides are made of collagen, a protein that is a very complex and resistant to microbial degradation. This kind of scleroproteins is turned into nitrogen available to plants only when undergoing a demolition process of its structure, which requires thermal treatment. Thanks to this chemical alteration, collagen is made vulnerable and welcome to enzymes and soil micro-organisms, under whose action it releases organic nitrogen assimilated by plant roots.

The product efficacy is also strongly affected by the type of treatment applied in the production process.

Today, there are five production plants worldwide - of which three in Italy - that transform hides into fertilizers by applying different technologies and industrial processes, which leads to products with different chemical charateristics and, above all, not the same agronomic effectiveness.

The following table, which summarizes the time evolution of process productions and indicates which industrial technologies are still in use at the different companies, allows one to understand that, despite being obtained by transforming the same raw material.

Not all organic fertilizers are the same!

PROCESS EVOLUTION			CHEMICAL CHARACTERISTICS AND AGRONOMIC EFFECTIVENESS	
30s	DRYING	Direct flame drying of hides at 400°: hence the term Torrefied Leather **1** plant working in India	Marketed as: Torrefied Leather On sale in India	Part of the protein is not usable Part of the protein, although torrefied, is usable by plants, but the properties of amino acids are compromise
50 - 60s	NON-CONTROLLED STATIC HYDROLYSIS	Direct flame drying of hides at 250°, giving partially hydrolized and torrefied leathers Hydrolized and torrefied leather No plant working	No longer on sale	Part of the protein is not usable Part of the protein, although torrefied, is usable by plants, but the properties of amino acids are compromised
60 - 70s	NON-CONTROLLED DYNAMIC HYDROLYSIS	Direct flame drying of hides at 250°, giving partially hydrolized and torrefied leathers Hydrolized and torrefied leather **1** plant working in Italy	Marketed as: Torrefied leather Fur Hydrolyzed fur	Part of the protein is not usable Part of the protein, although torrefied, is usable by plants, but the properties of amino acids are compromised Good production uniformity
80 - 90s	NON-CONTROLLED DYNAMIC HYDROLYSIS	Hot air drying at 100° Hydrolized leather and hides **1** plant working in Italy	Marketed as: Torrefied leather Fur Hydrolyzed fur	Good medium- and long-term availability Part of the hydrolized protein is usable by plants Part of the protein is barely usable by plants Good production uniformity
Today the FCH® process	CONTROLLED DYNAMIC HYDROLYSIS IN AUTOCLAVE: 1st stage at 100 °C for 90 minutes 2nd stage at 133 °C for 45 minutes 3rd stage at 162 °C for 5 minutes	Dehydration at 100 °C with continuous automatic control of humidity **PRODUCED ONLY BY ILSA IN ITALY AND BRAZIL**	Marketed as: **hydrolyzed Gelatin for agricultural use** AGROGEL	The whole protein is usable in the growing season of crops Nitrogen modulated release Amino acids are preserved in their characteristics, therefore keeping all their properties High production uniformity and quality High agronomic and nutritional effectiveness

The data are shown on the basis of the information in our possession

ILSA's production processes.

With "The green evolution", ILSA can count on particularly efficient production technologies for more responsible and sustainable agriculture.

These technologies are highly automated and unique of their kind because they are the only ones capable of producing modulated release solid organic fertilizers (a process called: FCH - Fully Controlled Hydrolysis) and liquid fertilizers with predetermined molecular weight in the production phase (process called: FCEH).

In recent years, the company has supplemented FCH and FCEH with the SFE (Supercritical Fluid Extraction) extraction process.

These three technologies has been used in the food, pharmaceutical and cosmetics sectors for years.

By implementing and integrating the processes of enzymatic hydrolysis and supercritical extraction, the company has created strongly characterised and efficient biostimulants.

No other company in the world owns and uses these two technologies together to create products that enhance the performance and well-being of cultivated plants.

What is meant by hydrolysis?

As the word itself implies, hydrolysis is the physio-chemical process that involves breaking of a chemical bond through the effect of water; it can be thermal, chemical, enzymatic or mixed.

FULLY
CONTROLLED
HYDROLYSIS

FULLY
CONTROLLED
ENZYMATIC
HYDROLYSIS

SUPERCRITICAL
FLUID
EXTRACTION

FCH® IN 9 STEPS

THERMO-BARIC HYDROLYSIS

FULLY CONTROLLED HYDROLYSIS

1
RAW MATERIAL: COLLAGEN

2
SELECTION AND DIVISION BY SIZE

3
STERILIZATION, STABILIZATION AND FURTHER SELECTION BY SIZE

Hydrolisis times and enzymes vary depending on the raw material and the destination of the finished product.

4
DYNAMIC ROTARY AUTOCLAVE

5
WATER VAPOR RELEASE AT CONTROLLED TEMPERATURE AND PRESSION

At 100° x 90 min. - Long-term mineralization product. Up to 8 months (*)
At 133° x 45 min. - Medium-to long-term mineralization product. Up to 5 months (*)
At 162° x 5 min. - Short-term mineralization product. Up to 40 days (*)

(*) Mineralization times verified in a control environment

6
NON-STABILIZED GELATIN

7
THE DYNAMIC STABILIZER USES VAPOR AND WORKS AT CONTROLLED TEMPERATURE AND UMIDITY

Low temperature (100°) proces to avoid product denaturation

8
AGROGEL®, AFTER APPROPRIATE EXAMINATION, IS AVAILABLE IN THREE DIFFERENT SIZES:

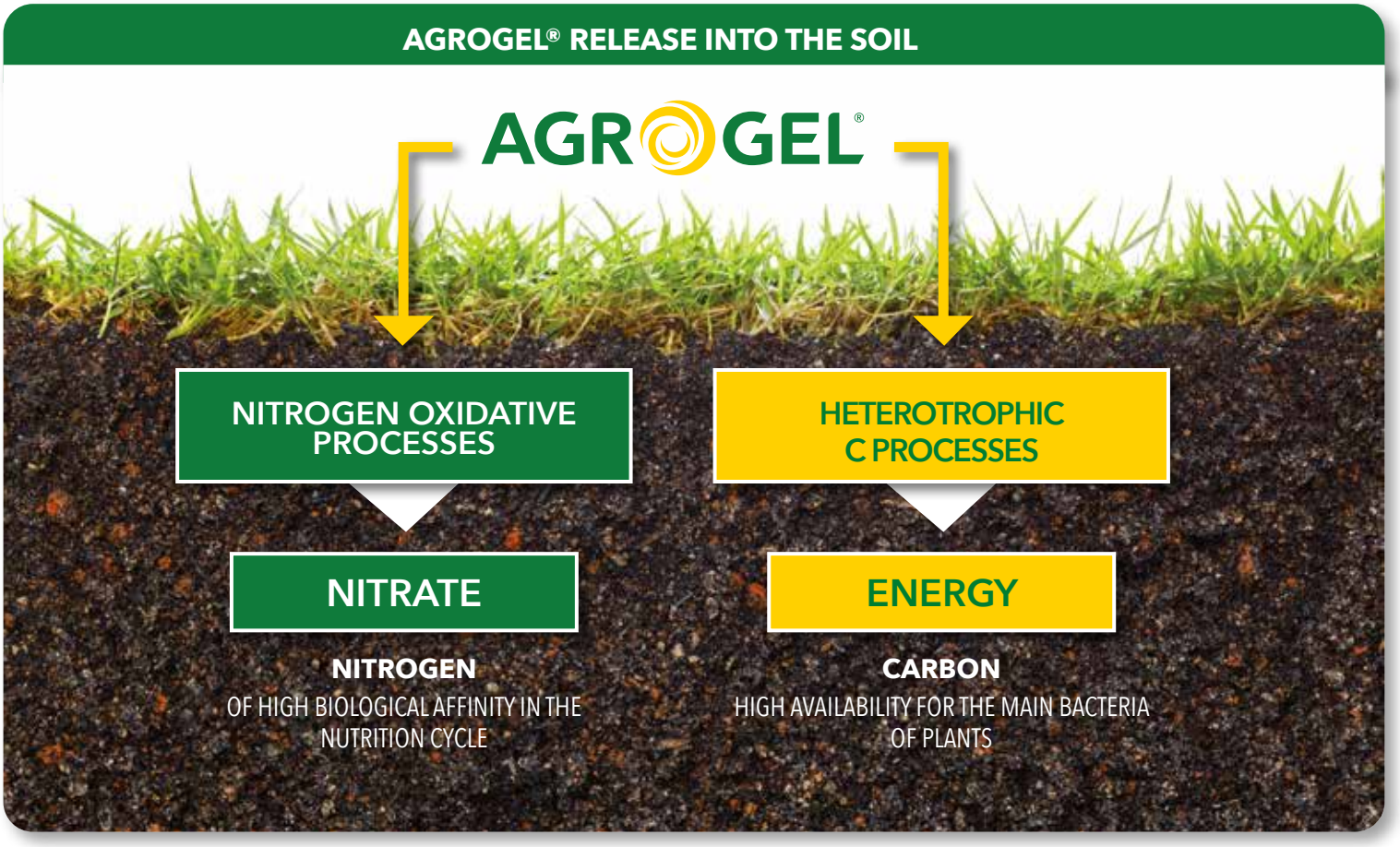
- POWDER
- MICROGRANULE
- GRANULE

9
THE PRODUCT OBBTAINED IN THIS WAY CAN BE MIXED OR REACTED WITH OTHER RAW MATERIALS ACCORDING TO SPECIFIC RECIPES.

AGROGEL®
gelatine for agricultural use

AGROGEL®, a hydrolysed gelatine for agricultural use which has the following special characteristics:

- high production efficiency since all the organic carbon it contains can be extracted and therefore the organic substance contained in it is totally bioavailable for the plant-soil system, as is also the nitrogen it contains;
- high efficiency of fertilisation since there are no losses due to run-off or volatilisation as the nitrogen is contained within the protein chains;
- improvement of the chemical-physical and microbiological characteristics of the soil thanks to the contribution of valuable organic substances;
- it reduces the number of interventions thanks to the slow natural release which allows prolonging the availability of nutrients over time.



FCEH® IN 6 STEPS

ENZYMATIC HYDROLYSIS

FCEH
FULLY CONTROLLED ENZYMATIC HYDROLYSIS

1

COLLAGEN OR TISSUE OF PLANTS DERIVED FROM FABACEAE FAMILY

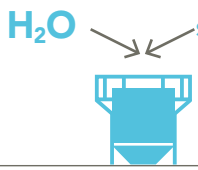
2

SELECTION AND DIVISION BY SIZE

3

STERILIZATION, STABILIZATION AND FURTHER SELECTION BY SIZE

Hydrolisis times and enzymes vary depending on the raw material and the destination of the finished product.



4

ENZIMATIC HYDROLISIS PROCESS FCEH®, FILTRATION AND DISTINCTION OF PROCESSES: RADICAL OR FOLIAR PRODUCT

Process at low temperature (60 °C) performed inside static reactors. TSR technology (TOP STIRRED REACTOR) breaks the link between amino acids according to a standardized sequence.

5

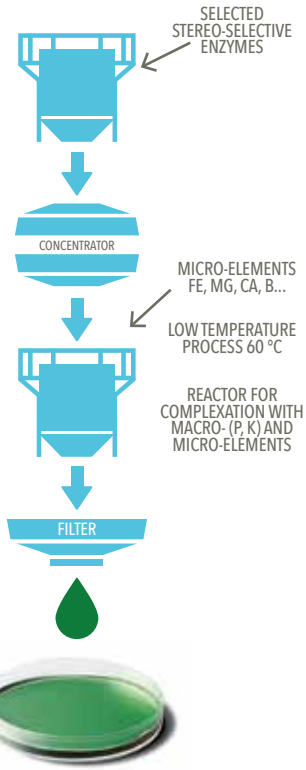
FILTRATION BY ELIMINATION OF SUSPENDED SOLIDS

6

FERTIGATOR

6

FOLIAR



GELAMIN®
fluid gelatine for agricultural use

VIRIDEM®
vegetal extracts for agricultural use

ENZYMATIC HYDROLYSIS is a production process defined as "soft" because it involves the use of proteolytic and cellulolytic enzymes which "cut" the target molecules at specific points and it takes place inside static reactors at low temperatures (50-55°C). This allows us to obtain enzymatic hydrolysates which are characterised by:

THE ADVANTAGES OF ENZYMATIC IDROLYSIS

- HIGH EFFICIENCY THANKS TO PRESERVING THE CHEMICAL AND BIOLOGICAL CHARACTERISTICS OF THE BIOACTIVE MOLECULES PRESENT IN THE RAW MATERIALS
- PRODUCTS WHICH ARE HOMOGENEOUS AND STABLE OVER TIME
- THE POSSIBILITY OF MIXING PRODUCTS WITH ANY FORMULATION DESIGNED FOR LEAF OR ROOT APPLICATION THANKS TO THE LOW SALINITY
- SUB-ACID PH WHICH PROMOTES ABSORPTION OF THE PRODUCTS WHICH ARE MIXED WITH THEM

GELAMIN® is a fluid hydrolysed gelatine, of animal origin, for agricultural use which, thanks to its special characteristics, is the essential matrix of many of all of ILSA's liquid and water-soluble fertilisers.

GELAMIN® is characterised by a high efficiency of use and:

- a high nutritional efficacy thanks to the high content of nitrogen and organic carbon, completely soluble and bio-available;
- a bio-stimulating action as it contains more than 50% of total amino acids in the form of polypeptides, peptides and free amino acids predominantly in levorotatory form, the only form used by plants;
- a rapid absorption through leaf and root thanks to the high purity and stability of the protein matrix;
- a rapid action in preventing any nutritional deficiencies thanks to the complexing action of the amino acids with macro, meso and micro elements.

The **ENZYMATIC HYDROLYSATE OF FABACEAE**, is obtained through the use of proteolytic and cellulolytic enzymes from plant tissues belonging to the Fabaceae family.

The **ENZYMATIC HYDROLYSATE OF FABACEAE** is characterised by:

- an increase in the productivity and quality of agricultural production thanks to its bio-stimulating effect, linked to the presence of a pool of organic molecules acting directly and indirectly on the primary and secondary metabolism of plants;
- a multiple action on the plant as it increases its tolerance to stress and stimulates rooting, vegetative growth, flowering, fruit setting, the final quality of the produce and the shelf-life;
- a highly efficient use and therefore a reduced dosage.

SFE® IN 5 STEPS

SUPERCRITICAL CO_2 EXTRACTION

SUPERCRITICAL FLUID EXTRACTION

1
RAW MATERIAL:
PLANTS DERIVED
FROM FABACEAE FAMILY

2
SUPERCRITICAL CO_2
EXTRACTION

3
ROUGH VEGETAL EXTRACT

4
MIXING AND
STANDARDIZATION

5
VEGETAL EXTRACT
IN SUSPENSION

VIRIDEM®

vegetal extracts for agricultural use

THE PLANT EXTRACT PROCESS: SFE®

The process called SUPERCRITICAL FLUID EXTRACTION allows extracting bioactive substances from plant matrices and is performed by using Carbon Dioxide (CO_2) as extraction fluid, in supercritical conditions.

SUPERCRITICAL FLUID EXTRACTION

The extraction of bioactive substances from plant matrices is performed by using Carbon Dioxide (CO_2) as extraction fluid, in supercritical conditions.
The solvent power of CO_2 can be regulated by increasing or diminishing pressures and/or temperatures.
By adequately modifying pressure (which can reach 1.000 bar) and temperature (never over 80 °C) conditions, such process allows creating very selective unique extractions with different levels of oils, waxes and desirable extracts.
The plant raw materials, suitably dried and ground, are introduced into the plant and Carbon Dioxide (CO_2), a gas that under specific environmental conditions (temperature of 31.1 °C and pressure of 73.8 bar) is found in a supercritical stage, is brought to the desired temperature and pressure, so starting the extraction stage.
Once the extraction is completed, the operating pressure is reduced and CO_2 loses its solvent force, releasing the substances extracted, which are available in a concentrated form.
The extracts obtained are microbiologically stable and do not need preservatives.
Differently from conventional procedures, the selectivity of the ILSA extraction process does not entail heat stress in raw materials or require using organic solvents.
Because of its very low environmental impact, the FDA (Food and Drug Administration - U.S.) has conferred the GRAS (Generally Recognized as Safe) attribute to this industrial process.

The ILSA products with a specific action can act on plant metabolism to respond to specific qualitative and quantitative needs like, for example, size increase and uniformity, stimulation of flowering, sprouting and vegetative growth, fruit set and reduction of premature fruit drop, photosynthesis and vegetative growth, plant biomass increase, rooting, internode shortening, higher Brix level, resistance to fruit cracking and rot and shelf-life increase. They increase plant tolerance to abiotic stresses and support plants even under adverse conditions such as excessive soil salinity, temperature leaps and heat and water stresses. They reduce nitrate accumulation in leaves and support plants in stress situations caused by the application of agrochemicals. Last, they can foster plant nutrition by facilitating the assimilation of macro- and micro-elements.

VIRIDEM®
PROGRAMME

ILSA has been engaged for years in a programme called VIRIDEM®, aimed at developing natural plant-based biostimulant products with a clear philosophy:
«From plants for plants.»

With VIRIDEM® «The green evolution» takes one more important step forward.

VIRIDEM®

vegetal extracts for agricultural use

VIRIDEM® is the ILSA programme that brings together the company's scientific heritage to develop its plant-derived biostimulants.
Through the VIRIDEM® programme, ILSA embraces the philosophy of creating products for plants by starting from the plants themselves.
Thanks to years of research, this work programme sums up the most advanced knowledge in molecular biology, applied microbiology, proteomics, metabolomics, physiology, chemistry and bioprocesses.
VIRIDEM® comes from the identification of bioactive substances inside different plant species, extracted with low environmental impact technologies and made available to plants in their full potential.
The result is a complete range of natural and efficient products acting on plant metabolism: specifically targeted fertilisers improving plant physiological processes and making plants stronger, more productive and responsive to environmental stresses.
VIRIDEM® also represents the ILSA proposal to create conservative agricultural techniques aiming at preserving soil functions, protecting soil to improve its adaptation to climate changes with water saving solutions, and allowing using fertilisers in a more and more efficient, sustainable and integrated manner.
VIRIDEM® is all of this: observing nature, understanding its mechanisms and extracting its essence to help it with its own tools.

The ILSA products with a specific action can act on plant metabolism to respond to specific qualitative and quantitative needs like, for example, size increase and uniformity, stimulation of flowering, sprouting and vegetative growth, fruit set and reduction of premature fruit drop, photosynthesis and vegetative growth, plant biomass increase, rooting, internode shortening, higher Brix level, resistance to fruit cracking and rot and shelf-life increase. They increase plant tolerance to abiotic stresses and support plants even under adverse conditions such as excessive soil salinity, temperature leaps and heat and water stresses. They reduce nitrate accumulation in leaves and support plants in stress situations caused by the application of agrochemicals. Last, they can foster plant nutrition by facilitating the assimilation of macro- and micro-elements.

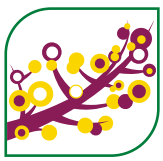
PHOTOSYNTHESIS AND VEGETATIVE DEVELOPMENT

TOLERANCE TO HEAT AND WATER STRESS

SALINITY TOLERANCE

SHELF-LIFE

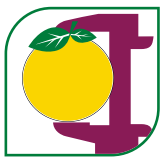
CRACKING AND ROT



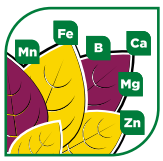
FLOWERING AND FRUIT SET

ROOTING

UNIFORMITY IN COLOUR AND RIPENING

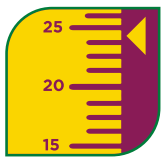


SIZE



NUTRITION AND NUTRIENT BIODISPONIBILITY

PLANT BIOMASS



DEGREES BRIX

VIRIDEM® PROGRAMME IN 12 STEPS

STUDY AND ANALYSIS

1

IDENTIFICATION OF THE PLANT MATRIX

2

IDENTIFICATION OF THE COMPOUNDS (TARGET SUBSTANCES)

3

IDENTIFICATION OF THE PHASES OF THE PHENOLOGICAL CYCLE IN WHICH THE PLANT PRODUCES MOST COMPOUNDS (TARGET SUBSTANCES)

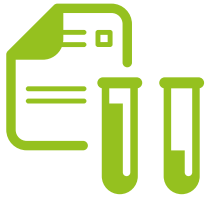
IMPLEMENTATION AND LAUNCH

12

PACKAGING AND PRODUCT LAUNCH

11

APPROVAL OF LAUNCH PLAN AND INDUSTRIAL START-UP



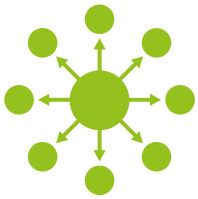
10

IDENTIFICATION OF THE EFFECTS, DOSES AND BENEFITS OF THE FINAL PRODUCT

VIRIDEM®

vegetal extracts for agricultural use

DEVELOPMENT



4

CHEMICAL-PHYSICAL CHARACTERISATION OF THE MATRIX AND SUBSTANCES

5

ADJUSTMENT OF THE PARAMETERS OF THE MOST EFFICIENT AND EFFECTIVE PRODUCTION PROCESS FOR PRESERVING THE INTEGRITY OF THE COMPOUNDS (TARGET SUBSTANCES)

TESTS AND CHECKS

6

LABORATORY TESTING AND CHARACTERISATION OF THE PROTOTYPE

7

TESTING IN GROWTH CHAMBER

8

TESTING IN A CONTROLLED ENVIRONMENT OR GREENHOUSE

9

TESTING IN THE OPEN FIELD

BIO
ILSA
BIOILSA
FERTIL
supernova
ENNEKAPPA
BIOILSA 777
export
BIOFRUTTETO KS
FERTORGANICO
ILVERDE

ORGANIC AND ORGANO-MINERAL FERTILIZERS FOR ORGANIC FARMING

BioIlsa is a full line of organic and organo-mineral fertilizers characterized by a high content of slow-release nitrogen of proteic origin. The products of this line are allowed in organic farming.

All the organic raw materials employed previously undergo thermal hydrolysis processes. The BioIlsa line products are dry, stable over the time, and do not generate unpleasant odours.

- 777 EXPORT
- BIOFRUTTETO KS
- BIOILSA
- BI.OTTO
- ENNEKAPPA
- FERTIL
- FERTIL SUPERNOVA
- FERTORGANICO
- FERTORGANICO SUPERNOVA
- GRADUAL 25 FE
- GRANOSANO EVO
- ILVERDE
- PROGRESS MICRO

777 EXPORT

NPK 7.7.7 CONTAINS AGROGEL®

BIOILSA 777 EXPORT is a pelleted **NPK** organo-mineral fertilizer able to provide a complete nutrition to vegetable, grass and tree crops.

- the balanced ratio among nitrogen, phosphorus and potassium, and the further sulphur enrichment, provide a time-released soil nutrition;
- nitrogen, exclusively in organic form, is gradually mineralized by soil microorganisms, which makes it available to crops avoiding leaching losses;
- phosphorus and potassium are blended into the organic matter: they remain bio-available in the soil to the crops for a long period.

BIOILSA 777 EXPORT contains potassium sulphate, that guarantee the higher marketable quality of product sand, at the same time, the absence of chlorine.

25 kg

500 kg

Formulation: pellet - 3.5 mm

COMPOSITION

Total Nitrogen (N)	7%	Water soluble Potassium Oxide (K_2O)	7%
of which: organic Nitrogen (N)	7%	Water soluble Sulphur Trioxide (SO_3)	5%
Total Phosphorus Pentoxide (P_2O_5)	7%	Organic Carbon (C)	25%
of which: Phosphorus Pentoxide (P_2O_5) soluble in neutral ammonium citrate and water	3.5%		

AGROGEL

ORGANIC FARMING ILSA

L.C.C. LOW CHLORINE CONTENT

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Growth recovery	Covering or underground	800-1000
Eggplant	Pre-sowing or pre-transplanting	Covering or underground	600-1000
Olive tree	Growth recovery	Covering or underground	500-1000
Potato	Pre-sowing or pre-transplanting	Covering or underground	600-1000
Tomato	Pre-sowing or pre-transplanting	Covering or underground	600-1000
Table grape	Growth recovery	Covering or underground	500-1000
Wine grape	Growth recovery	Covering or underground	500-1000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

BI.OTTO

N 8 CONTAINS ORGANIC NITROGEN

BI.OTTO is an organic nitrogen fertilizer that provides nitrogen and carbon of natural origin. Perfectly dehydrated, **BI.OTTO** is dry, odourless and stable over time. It favours the activity of microorganisms, thereby improving the biological fertility of the soil. **BI.OTTO** is distributed on soil and is particularly suitable for herbaceous and horticultural cultivations and for new fruit and vine plants. Its action is also ideal for unburied products and is distributed on the surface of the ground.

- it provides natural nitrogen and carbon essential for crops;
- it increases the microbiological fertility of the soil;
- it allows for balanced development of the crops;
- allowed in organic farming.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)	8%	Organic Carbon (C)	35%
of which: Organic Nitrogen (N)	8%	Organic Matter	60%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Post- harvest	Covering or underground	800-1000
Stone fruits	Post- harvest	Covering or underground	700-900
Apple tree, Pear tree, Actinidia	Post- harvest	Covering or underground	800-1000
Melon, Courgette, Strawberry in open field	Soil preparation	Incorporate into the soil	800-900
Olive tree	Post- harvest	Covering or underground	700-800
Tomato, Ppepper and other solanacee in open field	Soil preparation	Incorporate into the soil	800-900
Tomato, Pepper, Strawberry, Melon and other fruits vegetable in greenhouse	Soil preparation	Incorporate into the soil	80-100 kg/1000 m²
Soy bean, Oil seed rape and other brassicacee	Pre-sowing	Incorporate into the soil	600-700
Table and Wine Grape	Post- harvest	Covering or underground	800-1000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

BIOFRUTTETO KS

NPK 5.10.15 CONTAINS AGROGEL®

BIOFRUTTETO KS is an organic-mineral pellet fertilizer with high nutrient efficiency that is permitted in organic farming. Each **BIOFRUTTETO KS** pellet contains, in the right ratios, mineral elements made up of an organic **AGROGEL®** origin deriving from a controlled thermo baric hydrolysis process. This allows a modulated release of the nutritive elements over time, even in difficult soil conditions, reducing the leaching and retro gradation phenomena while making available the nutritive elements during the fruit development and ripening phases. **BIOFRUTTETO KS** can be used both in underground and enrichment fertilizations and in particular on crops in need of potassium (drupaceous, pomaceous, vines, small fruits, solanaceous, cruciferous, etc.), while providing the following benefits for farmers.

- allowed in organic farming;
- high potassium content;
- ideal for underground and enrichment fertilization;
- formulation in homogeneous pellets.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)		5%	
of which: Organic Nitrogen (N)	5%		
Total Phosphorus Pentoxide (P_2O_5)		10%	
of which: Phosphoric Anhydride (P_2O_5) soluble in 2% formic acid	5%		
Water soluble Potassium oxide (K_2O)		15%	
Water soluble Sulfur trioxide (SO_3)		13%	
Total Calcium Oxide (CaO)		13%	
Organic Carbon (C)		18%	

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Growth recovery	Covering or underground	800-1000
Stone fruits, Pome fruits, Actinidia, Small fruits	Growth recovery or post-harvest	Covering or underground	500-1000
Industrial crops	Pre-sowing	Covering or underground	500-1000
Olive tree	Growth recovery	Covering or underground	500-1000
Potato	Pre-sowing	Covering or underground	800-1000
Tomato, Pepper, Aubergine, Melon and other vegetables in open field	Pre-transplanting	Covering or underground	600-1000
Tomato, Pepper, Aubergine, Melon and other vegetables in greenhouse	Pre-transplanting	Covering or underground	60-100 kg/ 1000 m²
Table and Wine Grape	Growth recovery or post-harvest	Covering or underground	500-1000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

BIOILSA

N 11 CONTAINS ORGANIC NITROGEN

BIOILSA is an organic nitrogen fertilizer characterized by organic nitrogen naturally sloe-released. It is composed by hydrolyzed solid protein obtained by a special manufacturing process that allows a gradually release of nitrogen to the plants according the natural process of mineralization of organic matter.

BIOILSA supplies organic matter improving the microbiological fertility, enhancing the activities of microganisms in the soil.

Thanks to its composition, **BIOILSA** works in all soil types.

25 kg

500 kg

Formulation: pellet - 3.5 mm

COMPOSITION

Total Nitrogen (N)	11%	Organic Carbon (C)	40%
of which: organic Nitrogen (N)	11%	Organic matter	70%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Growth recovery and/or post-harvest	Covering or underground	400-600
Citrus	Growth recovery and/or post-harvest	Covering or underground	400-600
Stone fruits	Growth recovery and/or post-harvest	Covering or underground	400-600
Durum and Common Wheat, Corn, Barley, Rice	Pre-sowing	Covering or underground	400-500
Olive tree	Growth recovery and/or post-harvest	Covering or underground	400-500
Vegetables in open field	Pre-sowing or pre-transplanting	Incorporate into the soil	400-600
Greenhouse vegetables	Pre-sowing or pre-transplanting	Incorporate into the soil	100-150 kg/ 1000 m^2
Potato	Pre-sowing or pre-transplanting	Incorporate into the soil	400-600
Pome fruits	Growth recovery and/or post-harvest	Covering or underground	400-600
Table and Wine Grapes	Growth recovery	Covering or underground	500-600

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ENNEKAPPA

NK 7.0.21 CONTAINS AGROGEL®

ENNEKAPPA is a top quality pelleted NK organo-mineral fertilizer obtained by reacting **AGROGEL®** with potassium sulphate at 80 °C.

- the progressive release of the elements provides a balanced plant nutrition;
- the high sulphur content improves soil pH;
- it nourishes crops according to their natural requirements and, at the same time, stimulates soil fertility.

The optimal ratio among nutrients is recommended for grapevines as well as for fruit and vegetable plants.

With a single application, **ENNEKAPPA** provides a balanced nutrition, reducing costs and improving the quality.

25 kg

500 kg

Formulation: pellet - 6.0 mm

COMPOSITION

Total Nitrogen (N)		7%
of which: organic Nitrogen (N)	7%	
Water soluble Potassium Oxide (K_2O)		21%

Water soluble Sulphur Trioxide (SO_3)	18%
Organic Carbon (C)	22%
Organic matter	38%

AGROGEL

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Growth recovery	Covering or underground	500-700
Citrus	Post- harvest	Covering or underground	500-800
Corn	Pre-sowing	Incorporate into the soil	400-500
Hazelnut Tree	End of summer or vegetative recovery	Covering or underground	300-500
Table Grape	End of summer or vegetative recovery	Covering or underground	500-700
Wine Grape	End of summer or vegetative recovery	Covering or underground	500-700
Ornamental and Forest Nurseries	Soil preparation	Covering or underground	500-800

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

L.C.C. LOW CHLORINE CONTENT

FERTIL

N 12.5 **100% AGROGEL®**

FERTIL is a nitrogen organic fertilizer based on slow-release nitrogen from **AGROGEL®**.

- the organic matter is completely bioavailable;
- it improves soil conditions and allows to the plants to express their full productive potential in each situation.

The use of **FERTIL** covers, in a single application, all the nitrogen requirements of the crops.

25 kg

500 kg

Formulation: pellet - 4.5 mm

COMPOSITION

Total Nitrogen (N)	12.5%	Extractable organic Carbon (C) / Total organic Carbon (C)	95%
of which: organic Nitrogen (N)	5%	pH	5
Organic Carbon (C)	40%	Organic matter	70%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Post- harvest	Covering or underground	500-700
Gralic and Scallion	Pre-sowing or pre-transplanting	Covering or underground	600
Apricot tree, Cherry tree, Almond tree, Peach tree, Plum tree	Post- harvest	Covering or underground	500-700
Oat, Spelt, Barley	Pre-sowing	Covering or underground	400-600
Forage crops	Pre-sowing	Covering or underground	400-700
Durum and Common Wheat, Rice	Pre sowing or tillering	Covering or underground	400-600
Corn	Wedding out with application after sowing/4 to 6 leaves	Covering or underground	500-700
Olive tree	Post- harvest	Covering or underground	500-700
Leafy vegetables	Pre-sowing or pre-transplanting	Covering or underground	500-700
Potato	Pre-sowing or pre-transplanting	Covering or underground	500-800
Lawns	Pre-sowing	Covering or underground	400-500
Asparagus, Beetroot, Carrot, Cucumber/Gherkin, Onion, Watermelon, Fennel, Strawberry, Eggplant, Melon, Pepper, Tomato, Processing Tomato, Leek, Turnip, Radish,Celery, Courgette	Pre-sowing or pre-transplanting	Covering or underground	600-800
Tabel and Wine Grapes	Growth recovery	Covering or underground	600-800

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

FERTIL SUPERNOVA

N 12.5 **96% AGROGEL®**

FERTIL SUPERNOVA is a nitrogen organic fertilizer based on slow-release nitrogen from **AGROGEL®**;

- it contains complexed iron;
- it supports a vigorous plant growth;
- it helps to prevent iron deficiency.

FERTIL SUPERNOVA provides high production level and, at the same time, the small size of pellets favours localized applications.

Formulation: pellet - 3.5 mm

COMPOSITION

Total Nitrogen (N)		12.5%
of which: organic Nitrogen (N)	5%	
Organic Carbon (C)		40%
Extractable organic Carbon (C) / Total organic Carbon (C)		95%

pH	4.5
Organic matter	70%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Post- harvest	Covering or underground	500-700
Actinidia	Growth recovery	Covering or light underground	600-800
Oat, Splet, Durum and Common Wheat, Barley	Pre sowing or tillering	Covering or underground	500-700
Ornamental and F loral crops	First vegetative phases	Covering or underground	100 kg/ 1000 m²
Stone Fruits	Growth recovery	Covering or underground	600-800
Grasslands, Pasture lands	From planting or vegetative recovery	Covering or underground	400-500
Olive tree	Post- harvest	Covering or underground	500-700
Fruits Vegetables	Pre-sowing or pre-transplanting	Covering or underground	100 kg/ 1000 m²
Leafy Vegetables	Pre-sowing or pre-transplanting	Covering or underground	100 kg/ 1000 m²
Pome Fruits	Growth recovery	Covering or underground	600-800
Table and Wine Grapes	Growth recovery	Covering or underground	600-800

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

FERTORGANICO

N 11 **100% AGROGEL®**

FERTORGANICO is a nitrogen organic fertilizer based on slow-release nitrogen from **AGROGEL®**.

- it supplies, in a single application, all nitrogen requirements of the crops;
- it stimulates the activity of the soil microorganisms that regulate the nitrogen release according its natural cycles;
- nitrogen is not leached or wasted in the environment;
- it allows plants to express their full productive potential in every condition.

FERTORGANICO is particularly suitable for arboreal and herbaceous crops with a long life-cycle. It ensures a better plant health and better marketable quality.

Formulation: flake 2/5 mm

COMPOSITION

Total Nitrogen (N)		11%	pH	4.5
of which: organic Nitrogen (N)	5%		Organic matter	70%
Organic Carbon (C)		40%		
Extractable organic Carbon (C) / Total organic Carbon (C)		95%		

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Post- harvest	Covering or underground	800-1000
Citrus	Autumn-winter	Covering or underground	500-700
Apricot tree, Cherry tree, Almond tree, Peach tree, Plum tree	Autumn-winter	Covering or underground	700-1000
Strawberry	Soil preparation	Covering or underground	700-1000
Durum and Common Wheat	From pre-sowing to tillering	Covering or underground	400-700
Olive tree	Post- harvest	Covering or underground	500-700
Potato	Pre-sowing	Covering or underground	500-700
Pome fruits	Autumn-winter	Covering or underground	700-1000
Tomato	Pre-sowing or pre-transplanting	Covering or underground	500-700
Rice	From pre-sowing to tillering	Covering or underground	700-800
Table grape	Growth recovery and/or post-harvest	Covering or underground	800-1000
Wine grape	Growth recovery and/or post-harvest	Covering or underground	400-600
Garlic and Scallion, Asparagus, Onion, Watermelon, Fennel, Melon, Processing Tomato, Turnip, Radish, Courgette	Pre-sowing or pre-transplanting	Covering or underground	600-800
Other Vegetables	Soil preparation	Covering or underground	600-800

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

FERTORGANICO SUPERNOVA

N 11 **99% AGROGEL®**

FERTORGANICO SUPERNOVA is a nitrogen organic fertilizer based on slow-release nitrogen from **AGROGEL®**.

- it covers, in a single application, all the nitrogen requirements of the crops;
- it stimulates the activity of the soil microorganisms that regulate the nitrogen release according its natural cycles;
- it allows plants to express their full productive potential in every condition;
- it ensures a better fertilization process avoiding waste.

FERTORGANICO SUPERNOVA is suitable for all crops; it increases production and yield quality.

25 kg

500 kg

Formulation: flake 2/5 mm

COMPOSITION

Organic Nitrogen (N)	11%
of which: soluble organic Nitrogen (N)	5%
Organic Carbon (C)	40%

Extractable organic Carbon (C)/ Total organic Carbon (C)	95%
pH	4
Organic matter	70%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Post- harvest	Covering or underground	800-1000
Citrus	Autumn-winter	Covering or underground	500-700
Cereals	From pre-sowing to tillering	Covering or underground	400-700
Cherry tree	Autumn-winter	Covering or underground	700-1000
Stone fruits	Autumn-winter	Covering or underground	500-800
Strawberry	Soil preparation	Covering or underground	700-1000
Apple tree, Pear tree	Autumn-winter	Covering or underground	600-900
Olive tree	Autumn-winter	Covering or underground	500-800
Table Grape	Autumn-winter	Covering or underground	800-1000
Wine Grape	Autumn-winter	Covering or underground	400-600

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GRADUAL 25 Fe

N+Fe 6(5) **CONTAINS AGROGEL®**

GRADUAL 25 FE is a nitrogen organic fertilizer with high iron content (25% $FeSO_4$) and organic matter content.

- studied to satisfy crops with specific requirements;
- it prevents iron deficiency thanks to the iron complexed in the organic matter.

GRADUAL 25 FE is particularly recommended for crops in difficult soil conditions, its action promotes the regular development of plants in the different vegetative stage.

25 kg

500 kg

Formulation: pellet - 4.5 mm

COMPOSITION

Total Nitrogen (N)	6%	Water soluble Sulphur Trioxide (SO_3)	6%
of which: soluble organic Nitrogen (N)	6%	Organic Carbon (C)	27%
Total Iron (Fe)	5%	Organic matter	43%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Post-harvest	Incorporate into the soil	700-1000
Garlic and Scallion	Pre-sowing or pre-transplanting	Incorporate into the soil	500
Citrus	Late winter	Incorporate into the soil	600-800
Beetroot, Watermelon	Soil preparation	Incorporate into the soil	500-700
Artichoke	Pre-sowing or pre-transplanting	Incorporate into the soil	600-1000
Cherry tree	Autumn-winter	Incorporate into the soil	400-600
Olive tree	Autumn-winter	Incorporate into the soil	500-800
Pome Fruits	Autumn-winter	Incorporate into the soil	500-700
Celery	Soil preparation in pre-transplanting	Incorporate into the soil	500-700
Table and Wine Grape	Winter	Incorporate into the soil	500-700
Apricot tree, almond tree, Nectarine, Peach tree, Plum tree	Autumn-winter	Incorporate into the soil	500-700
Asparagus, Onion, Fennel, Eggplant, Pepper, Tomato, Turnip, Radish, Courgette	Pre-sowing or pre-transplanting	Incorporate into the soil	500-700
Carrot, Cucumber/Gherkin, Strawberry, Melon	Soil preparation	Incorporate into the soil	500-700

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GRANOSANO EVO

NP 6.16 CONTAINS AGROGEL®

GRANOSANO EVO is a pelleted **NP** organo-mineral fertilizer for the basal fertilization of cereals, especially autumnal and winter cereals, as well as of the early stages of herbaceous and horticultural crops.

- it is suitable in organic agriculture;
- thanks to the natural phosphorus complexed by the high content of organic matter, promotes the development of the root system and the growth of the seedlings.

GRANOSANO EVO promotes an optimal rooting and helps plants to better express their productive potential.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)		6%	Organic Carbon (C)	20%
of which: organic Nitrogen (N)	6%		Organic matter	37%
Total Phosphorus Pentoxide (P_2O_5)		16%		
of which: Phosphorus Pentoxide (P_2O_5) soluble in formic acid at 2%	9%			

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Other Cereals	Pre-sowing	Incorporate into the soil	300-400
Other Vegetables	Pre-sowing or pre-transplanting	Incorporate into the soil	400-700
Beetroot	Soil preparation	Incorporate into the soil	600-800
Industrial Crops	Pre-sowing	Incorporate into the soil	500-700
Forage Crops	Pre-sowing	Incorporate into the soil	500-700
Durum and Common wheat, Barley	Pre-sowing	Incorporate into the soil	300-500
Legumes	Pre-sowing	Incorporate into the soil	300-400
Corn, Grain Sorghum	Pre-sowing	Incorporate into the soil	400-600
Melon, Watermelon, Courgette, Eggplant	Pre-sowing or pre-transplanting	Incorporate into the soil	400-700
Processing Tomato, Pepper	Pre-sowing or pre-transplanting	Incorporate into the soil	400-700
Tomato, Potato	Soil preparation	Incorporate into the soil	500-800
Ornamental and Forest Nurseries	Soil preparation	Incorporate into the soil	400-700

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILVERDE

100% VEGETAL - OGM FREE

ILVERDE is a completely plant-origin fertilizer and is OGM free; the first of ILSA's solid products.

The 100% vegetable origin and its extremely high nutritional efficiency make **ILVERDE** unique in its kind. **ILVERDE**, obtained from selected raw materials deriving from the food industry, therefore with zero risks to man and the environment, is an **NPK** 3.6.12 organic-mineral fertilizer that nourishes the crops effectively throughout the entire cultivation cycle delivering organic nitrogen, phosphorus, potassium, sulfur and calcium via modulated release.

ILVERDE is particularly suitable for fruit trees and horticultural crops, because it gradually provides the imported elements both for the initial vegetative phases and for the fruit development and maturation stages. In addition to nitrogen and phosphorus, in fact, the presence of potassium, sulphur and calcium contributes both to increasing the final quality and to keeping the fruit intact longer and without rotting.

Applied in vegetative rebirth or during pre-seeding/transplanting it allows efficient and, at the same time, eco-sustainable nutrition.

- 100% vegetal origin, ogm free with zero environmental impact;
- allowed in organic farming and in other totally natural growing systems;
- it provides macro and meso elements that are essential throughout the crop cycle;
- it increases fertility and makes available other nutrients (fe, mg) that are present in the soil.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)		3%	
of which: Organic Nitrogen (N)	3%		
Total Phosphorus Pentoxide (P_2O_5)		6%	
of which: Phosphoric Anhydride (P_2O_5) soluble in 2% of formic acid	3.5%		
Water soluble Potassium oxide (K_2O)		12%	
Water soluble Sulfur trioxide (SO_3)		10%	
Total Calcium Oxide (CaO)		8%	
Organic Carbon (C)		25%	

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	From early vegetative development and/or after fruit setting	Covering or underground	700-800
Cereals	Pre-sowing	Covering or underground	800-1000
Stone Fruits	From early vegetative development and/or after fruit setting	Covering or underground	600-700
Apple tree, Pear tree, Actinidia	From early vegetative development and/or after fruit setting	Covering or underground	700-800
Melon, Courgette, Strawberry in open field	Pre-sowing/transplanting or after fruit setting	Incorporate into the soil	700-800
Olive tree	From early vegetative development and/or after fruit setting	Covering or underground	600-700
Tomato, Pepper and other solanacee in open field	Pre-sowing/transplanting or after fruit setting	Incorporate into the soil	700-800
Tomato, Pepper, Strawberry, Melon and other Fruit Vegetables in the greenhouse	Pre-sowing/transplanting or after fruit setting	Incorporate into the soil	80-100 kg/ 1000 m^2
Soy bean, Oil seed rape and other brassicacee	Pre-sowing	Covering or underground	700-900
Table Ggrape	From early vegetative development and/or after fruit setting	Covering or underground	700-900
Wine Grape	From early vegetative development and/or after fruit setting	Covering or underground	600-700

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ORGANIC FARMING ILSA

VEGETAL ORGANIC MATRIX

L.C.C. LOW CHLORINE CONTENT

PROGRESS MICRO

NPK 6.5.13 CONTAINS AGROGEL®

PROGRESS MICRO is a pelleted NPK organo-mineral fertilizer 100% organic nitrogen naturally slow-released and obtained by reacting **AGROGEL®** with potassium and meat meal at 80 °C.

- it stimulates soil fertility and supplies magnesium, sulphur and microelements in order to satisfy the requirement of plants, even the most demanding;
- all elements are released progressively and efficiently in the soil.

PROGRESS MICRO presents a nutrient ratio particularly suitable for orchards and vineyards as well as for horticultural crops with high quality requirements. A single application guarantee an high production and high quality levels.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)		6%	
of which: organic Nitrogen (N)	6%		
Total Phosphorus Pentoxide (P_2O_5)		5%	
Water soluble Potassium Oxide (K_2O)		13%	
Total Magnesium Oxide (MgO)		2%	
Water soluble Sulphur Trioxide (SO_3)		10%	
Organic Carbon (C)		18%	
Organic matter		43%	

AGROGEL

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Growth recovery	Covering or underground	600-800
Citrus	Growth recovery nad/or post-harvest	Covering or underground	800-1000
Apricot tree, Peach tree, Nectarine, Plum tree	Growth recovery	Incorporate into the soil	500-1000
Other vegetables	Pre-sowing or pre-transplanting	Covering or underground	500-800
Cherry tree	Growth recovery	Incorporate into the soil	500-800
Strawberry	Soil preparation	Covering or underground	500-800
Almond tree	Growth recovery	Covering or underground	500-1000
Melon, Watermelon	Pre-sowing or pre-transplanting	Covering or underground	500-800
Olive tree	Growth recovery	Covering or underground	500-700
Potato	Pre-sowing or pre-transplanting	Covering or underground	800-1000
Pome fruits	Growth recovery	Covering or underground	500-1000
Tomato, Pepper, Eggplant	Pre-sowing or pre-transplanting	Covering or underground	600-800
Table Grape	Growth recovery	Covering or underground	700-900
Wine Grape	Growth recovery	Covering or underground	500-800
Forage Crops	Vegetative recovery	Covering or underground	400-700

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ORGANIC FARMING ILSA

L.C.C. LOW CHLORINE CONTENT

ILSA

AGROGEL®

gelatine for agricultural use

GELAMIN®

fluid gelatine for agricultural use

VIRIDEM®

vegetal extracts for agricultural use

ILSA
The green evolution

ILSA
FERT
AZOKA
8-0-20
CONCIME ORGANO MINERALE NK
ILSA FERT
AZOSLOW NP
CONCIME ORGANO-MINERALE NP 12-20
con coformulante da idrolisi enzimatica
ILSA FERT
GENTILE
CONCIME ORGANO MINERALE NPK
ILSA FERT
AZOSLOW
N29
CONCIME ORGANO MINERALE AZOTATO
ILSA FERT

ORGANO-MINERAL FERTILIZERS WITH LOW ENVIRONMENTAL IMPACT

IlsaFert is a full line of organo-mineral fertilizers characterized by the presence of slow-release nitrogen of proteic origin.
The different formulations cover the nutritional requirements of all the crops, both when conventional cultivation techniques are used and where low environmental impact agriculture is practiced.
All the IlsaFert line fertilizers are the result of ILSA research and obtained by reacting the different mineral components with the ILSA organic matrix, AGROGEL®, deriving from the FCH® industrial process, which is exclusive to ILSA.
In particular, all formulations are characterized by high agronomic efficiency and high content of slow-release nitrogen.

AZOKA

AZOSLOW

AZOSLOW NP

ELENNE MICRO OLIVO

GENTILE

SPECIALIST KS MICRO

TEKNIFERT MICRO

AZOKA

NK 8.0.20 67% AGROGEL®

AZOKA is a pelleted NK organo-mineral fertilizer containing slow-release nitrogen; it is specific for crops in watery environments.

This product is obtained by reacting **AGROGEL®** and potassium at 85 °C.

- it is characterized by the progressive release of the elements;
- it nourishes crops with high nitrogen and potassium requirements that are available for the whole crop cycle.

AZOKA is optimal if used at sowing or in top dressing in rice, corn and other spring cereals. The use of **AZOKA** ensures high quality and better marketable yields.

25 kg

500 kg

Formulation: pellet - 6.0 mm

COMPOSITION

Total Nitrogen (N)	8%	Organic Carbon (C)	25%
of which: organic Nitrogen (N)	8%	Organic matter	43%
Water soluble Potassium Oxide (K_2O)	20%		

Other formulations based on AGROGEL®:

AZOKA NPK 10.5.20 + C 16%

AZOKA NK 14.0.20 + C 20%

AGROGEL

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Corn	Pre-sowing	Incorporated into the soil or top dressing	400-700
Rice	Pre-sowing and/or top dressing	Incorporated into the soil or top dressing	400-500
Tobacco	Pre-sowing and/or top dressing	Incorporated into the soil or top dressing	400-600

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AZOSLOW

N 29 **50% AGROGEL®**

AZOSLOW is a nitrogen organo-mineral fertilizer characterized by modulated-release nitrogen and obtained by reacting **AGROGEL®** and urea at controlled temperatures.

- it satisfies all the nitrogen requirements of the crops, thanks to its high nitrogen content, in a single application;
- nitrogen released is regulated by environmental conditions and according crop requirements;
- total absence of nitrogen losses or waste.

AZOSLOW is recommended in the early growing stages of the crop. It ensures optimal productions and allows to reduce the number of treatments on crops; it is particularly suitable for cereals and all herbaceous crops.

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)	29%	Organic Carbon (C)	18%
of which: organic Nitrogen (N)	5%	Organic matter	31%
ureic Nitrogen (N)	24%		

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	After fruit setting	Incorporate into the soil	250-500
Citrus	After fruit setting	Incorporate into the soil	250-500
Beetroot, Hemp	Sowing or transplanting	Incorporate into the soil	200-500
Other Industrial Crops	Sowing	Incorporate into the soil	200-500
Stone Fruits	After fruit setting	Incorporate into the soil	250-500
Durum Wheat	Tillering-stem elongation	Incorporate into the soil	200-300
Common Wheat, Rice	Tillering-stem elongation	Incorporate into the soil	300-400
Corn	Wedding out with application after sowing/4 to 6 leaves	Incorporate into the soil	300-500
Apple tree, Pear tree	After fruit setting	Incorporate into the soil	250-500
Olive tree	After fruit setting	Incorporate into the soil	250-500
Vegetables	First vegetative phases	Incorporate into the soil	150-300
Table and Wine Grape	After fruit setting	Incorporate into the soil	250-500

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AGROGEL

AZOSLOW NP

NP 12.20 CONTAINS AGROGEL®

AZOSLOW NP is an organic-mineral fertilizer with a balanced nitrogen and phosphorus content, highly efficient on both cereals and fruit and vegetables. The ratio between different forms of nitrogen (organic, blood urea and ammoniacal nitrogen) is also very balanced, with a short, medium and long-term availability which allows both an immediate effect and a gradual release over time. Thus, plants have nitrogen available at all stages of the crop cycle. Thanks to the presence of organic matter and sub acidic pH, phosphorus also remains available for the plants longer, delaying retrogradation phenomena.

AZOSLOW NP contains extremely high-quality organic nitrogen and carbon, thanks to the presence of hydrolysed gel for agricultural use and of a co-formulant from enzymatic hydrolysis. These two protein matrices, in particular the enzymatic hydrolysis co-formulant (high molecular weight hydrolysed protein), stimulate the initial vegetative growth and the roots in the case of herbaceous plants and optimise the flowering and setting cycles in the case of tree plants. This results in an increase in yield per hectare both of wheat, corn and other grains, and of fruits and vegetables, in greenhouses and outdoors.

25 kg

500 kg

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)	12%
of which: organic Nitrogen (N)	4%
ammoniacal Nitrogen (N)	4%
ureic Nitrogen (N)	4%

Total Phosphorus Pentoxide (P_2O_5)	20%
of which: water soluble Phosphori Anhydride (P_2O_5)	10%
Phosphoric Anhydride (P_2O_5) soluble in 2% formic acids	10%
Phosphoric Anhydride (P_2O_5) soluble in neutral ammonium citrate and water	10%
Organic Carbon (C)	15%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Stone Fruits	Growth recovery	Underground	400-500
Green Fodder	Pre-sowing	Underground	400-500
Durum and Common Wheat	Pre-sowing	Underground	300-400
Sunflower, Tobacco	Pre-sowing	Underground	400-500
Corn	Pre-sowing	Underground	400-500
Vegetables	Pre-sowing or pre-transplanting	Underground	400-500
Greenhouse Vegetables	Pre-sowing or pre-transplanting	Underground	50-70 kg/1000 m²
Pome Fruits	Growth recovery	Underground	400-500
Table and Wine Grape	Growth recovery	Underground	400-500
Oat, Spelt, Barley, Rye, Grain Sorghum	Pre-sowing	Underground	250-350

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AGROGEL

ELENNE MICRO OLIVO

12.5.5.+B+SO_3 CONTAINS AGROGEL®

ELENNE MICRO OLIVO is a pelleted NPK organo-mineral fertilizer used during springtime in orchards (olive tree, citrus, etc.) and pluriannual crops.

- **AGROGEL®, mineral elements and potassium from sulphate make all elements progressively available;**
- **it nourishes crops according to their natural requirements, without losses or waste and withhigh agronomic efficiency.**

ELENNE MICRO OLIVO may be used during the most intense stages of growth resumption of olive trees, orchards and vineyards as well as in nursery and ornamental crops. Its composition is particularly suitable for crops with high requirements; it improves the resistance against plant stress and quality of products.

25 kg

500 kg

Formulation: pellet - 4.5 mm

COMPOSITION

Total Nitrogen (N)	12%	Soluble Potassium Oxide (K_2O)	5%
of which: organic Nitrogen (N)	5%	Soluble Sulphur Trioxide (SO_3)	25%
ureic Nitrogen (N)	7%	Boron (B)	0.1%
Total Phosphorus Pentoxide (P_2O_5)	5%	Organic Carbon (C)	20%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Growth recovery	Covering or underground	800-1000
Stone Fruits	Growth recovery	Covering or underground	500-800
Strawberry	Pre-sowing or pre-transplanting	Covering or underground	500-1000
Melon, Tomato	Pre-sowing or pre-transplanting	Covering or underground	600-800
Olive tree	Growth recovery	Covering or underground	500-700
Vegetables	Pre-sowing or pre-transplanting	Covering or underground	500-700
Potato	Pre-sowing or pre-transplanting	Covering or underground	800-1000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

L.C.C. LOW CHLORINE CONTENT

GENTILE

12.5.5+Zn+SO_3 CONTIENE AGROGEL®

GENTILE is an organic mineral fertiliser to be used on high quality cultivations which require slow-release natural fertilisation.

- the targeted use of nutritive elements allows for needy cultivations to be managed in a balanced way, particularly the core;
- the presence of carbon of natural origin contributes to revitalising the ground;
- the organic matrix pincers the nutritive elements, preventing leaching;
- the modulated release of nitrogen, phosphorous and potassium means that the product can be distributed in spring or following harvesting.

GENTILE is the appropriate fertiliser for modern hazel cultivation. It can also be used in difficult situations, on sloped terrain and in rainy periods.

25 kg

500 kg

Formulation: pellet - 4.5 mm

COMPOSITION

Total Nitrogen (N)		12%	Soluble potassium oxide (K_2O)		5%
of which: Organic Nitrogen (N)	5%		Soluble Sulfur Trioxide (SO_3)		5%
Ureic Nitrogen (N)	7%		Soluble Zinc (Zn)		0.01%
Total Phosphorus Pentoxide (P_2O_5)		5%	Organic Carbon (C)		17%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	After fruit setting	At the edge of the row	500-700
Actinidia, Walnut, Pistachio, Small Fruits	After fruit setting	At the edge of the row	500-700
Stone Fruits	Soil preparation and/or post-transplanting	Scattered, bury when possible	600-800
Hazelnut	After fruit setting	At the edge of the row	500-700
	Post-harvest and/or at the beginning of spring	Locate at the base of the plant	400-600
Vegetables	Soil preparation and/or post-transplanting	Scattered, bury when possible	600-800
Pome Fruits	After fruit setting	At the edge of the row	500-700
Table and Wine Grape	Growth recovery	At the edge of the row	300-500

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AGROGEL

L.C.C. LOW CHLORINE CONTENT

SPECIALIST KS MICRO

NPK 8.5.14 **20% AGROGEL®**

SPECIALIST KS MICRO is a granulated **NPK** organo-mineral fertilizer obtained by acid reaction. Its nutrient ratio makes it suitable for crops with high nitrogen and micro-element requirements.

- its elements are available progressively in the soil with high agronomical efficiency;
- it works in the most difficult soil conditions;
- it nourishes crops according their natural requirements.

SPECIALIST KS MICRO is particularly suitable for orchards and vineyards; it stimulates soil fertility and supplies sulphur, boron, iron and zinc improving the quality of final products.

25 kg

500 kg

Formulation: granular

COMPOSITION

Total Nitrogen (N)	8%	Water soluble Sulphur Trioxide (SO_3)	20%
of which: organic Nitrogen (N)	2%	Soluble Boron (B)	0.01%
ammonium Nitrogen (N)	4.5%	Soluble Iron (Fe)	0.5%
ureic Nitrogen (N)	1.5%	Soluble Zinc (Zn)	0.01%
Total Phosphorus Pentoxide (P_2O_5)	5%	Organic Carbon (C)	7.5%
Water soluble Potassium Oxide (K_2O)	14%	Organic matter	13%
Total Magnesium Oxide (MgO)	2%		

AGROGEL

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Growth recovery	Covering or underground	500-700
Vegetables in open field	Pre-sowing or pre-transplanting	Covering or underground	600-800
Stone Fruits, Pome Fruits	Growth recovery	Covering or underground	500-800
Tangerine	Post-harvest	Covering or underground	800-1000
Potato	Pre-sowing or pre-transplanting	Covering or underground	600-800
Table Grape	Growth recovery	Covering or underground	800-1000
Wine Grape	Growth recovery	Covering or underground	500-800
Forage Crops	Vegetative recovery	Covering or underground	400-600

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

L.C.C. LOW CHLORINE CONTENT

TEKNIFERT MICRO

NPK 11.6.9 **20% AGROGEL®**

TEKNIFERT MICRO is a granular NPK organo-mineral fertilizer obtained by acid reaction.

- its particular combination among organic matter, mineral elements and potassium from sulphate, makes all elements available progressively in the soil;
- it works in the most difficult soil conditions thanks to its balanced composition.

TEKNIFERT MICRO thanks to the particularly composition, it is suitable for orchards and vineyards as well as for horticultural crops with high quality requirements.

It stimulates soil fertility and supplies sulphur and boron.

25 kg

500 kg

Formulation: granular

COMPOSITION

Total Nitrogen (N)	11%
of which: organic Nitrogen (N)	2%
ammonium Nitrogen (N)	7%
ureic Nitrogen (N)	2%
Total Phosphorus Pentoxide (P_2O_5)	6%

Water soluble Potassium Oxide (K_2O)	9%
Water soluble Sulphur Trioxide (SO_3)	25%
Soluble Boron (B)	0.01%
Organic Carbon (C)	7.5%
Organic matter	13%

AGROGEL

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Growth recovery	Covering or underground	800-1000
Vegetables in open field	Pre-sowing or pre-transplanting	Covering or underground	600-800
Stone Fruits, Pome Fruits	Growth recovery	Covering or underground	600-800
Strawberry	Soil preparation	Covering or underground	500-800
Olive tree	Autumn or growth recovery	Covering or underground	600-1000
Potato	Pre-sowing or pre-transplanting	Covering or underground	800-1000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

L.C.C. LOW CHLORINE CONTENT

AGROGEL®

gelatine for agricultural use

ILSA
The green evolution

ILSA
TOP
CEREALMAX
PlusMicro
ILSACTIVE
START
ILSAMIN
CALCIO
ILSAMIN
BORO
CLASS Fe
G-FORM
ILSAMIN
CaMg
ILSAVEGA
ILSACROP
ILSAMIN
MULTI
ILSAMIN S
ILSA DRIP
Forte
ILSACTIVE
FINALE
ILSA DRIP
Ferro

LIQUID AND WATER SOLUBLE FERTILIZERS FOR FERTIGATION AND FOLIAR APPLICATION

IlsaTop is a full line of products to be used by foliar and/or root application in order to favour healthy and abundant growth of all crops.

The FCEH industrial process, which is exclusive to ILSA, ensures high quality and product stability over the time. Particularly, low molecular weight products are suitable for foliar applications and are characterized by high availability of L-Amino acids and their rapid penetration through the foliar tissues. Higher molecular weight products are characterized by their purity and ability to meet crop nutritional requirements in the different growth stages and, above all, overcome stress situations.

IlsaTop line also includes products able to play different roles simultaneously: stimulation of plant metabolism, nutrition, energy supply, and stress treatment and prevention.

- CEREALMAX
- CEREALMAX PLUS MICRO
- CLASS FE G-FORM
- ETIXAMIN
- ETIXAMIN BIO-K
- ETIXAMIN DF
- ILSACROP
- ILSACTIVE FINALE
- ILSACTIVE START
- ILSADRIP FERRO
- ILSADRIP FORTE
- ILSAMIN BIO-K
- ILSAMIN BORO
- ILSAMIN CALCIO
- ILSAMIN CAMG
- ILSAMIN MULTI
- ILSAMIN MMZ
- ILSAMIN S
- ILSAVEGA

CEREALMAX

N 20 **23% GELAMIN®**

CEREALMAX is a foliar nitrogen fertilizer specific for cereals. It is obtained by reacting **GELAMIN®** with urea.

- it is used on crops with a double purpose: nutritional and biostimulant;
- it increases metabolic enzyme activities and nitrogen use efficiency;
- it feeds the crops and improves the protein content.

CEREALMAX is distributed in a mixture in foliar applications, improves the stay-green of crops, increases production and helps in reaching an optimal amount of protein.

It improves the productive level enhancing the quality of crops.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	20%
of which: organic Nitrogen (N)	2%
ureic Nitrogen (N)	18%
Organic Carbon (C)	6%

Total amino acids	>12.5%
Contains mainly L-form amino acids	
pH	5.7 ± 0.5
Density	1.16 ± 0.02 kg/dm^3
Conductivity	0.23 ± 0.05 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Durum wheat	At raising with the herbicide or fungicide. At blossoming/earing with fungicides	Foliar	5-10
Common wheat	At raising with the herbicide or fungicide. At blossoming/earing with fungicides	Foliar	5-10
Corn	In the post-emergence weeding	Foliar	10-15
Rice	At raising with herbicides and at panicle emergence with fungicides	Foliar	10-15

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

CEREALMAX PLUS MICRO

N 15 **23% GELAMIN®**

CEREALMAX PLUS MICRO is a fluid nitrogen fertilizer capable to improve yield and quality of cereals, especially wheat. It contains protein Nitrogen from **GELAMIN®** combined with ureic Nitrogen and chelated microelements (Fe, Zn, Mn) essential to enhance the quality of the crop. The presence of chelated microelements prevents nutritional deficiencies and favoring a balanced plant growth.

- it increases the productive level and the protein content in grains;
- it improves the "stay-green" phase;
- it is an efficient nutritional supplement because the nitrogen supplied is never in excess.

CEREALMAX PLUS MICRO is a tool to improve crop profitability, increasing the final yield (as consequence of a greater flowering) and quality (as result of a higher protein content); its specific formulation facilitates the uptake of all the nutrients available. It is miscible with other commercial formulations, so it may be applied simultaneously with the pesticides.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	15%
of which: organic Nitrogen (N)	2%
ureic Nitrogen (N)	13%
Organic Carbon (C)	5%
EDTA chelated Zinc (Zn)	0.5%
Water soluble Zinc (Zn)	0.5%

DPTA chelated iron (Fe)	0.6%
Water soluble Iron (Fe)	0.6%
EDTA chelated Manganese (Mn)	0.3%
Water soluble Manganese (Mn)	0.3%
pH	6.9 ± 0.5
Density	1.20 ± 0.02 kg/dm^3
Conductivity	0.91 ± 0.05 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Sugar Beet	In the post-emergence weeding	Foliar	10-20
Oil Seed Rape	In the post-emergence weeding	Foliar	10-20
Durum Wheat	From stem elongation to booting	Foliar	5-10
Common Wheat	From stem elongation to booting	Foliar	5-10
Sunflower	In the post-emergence weeding	Foliar	10-20
Corn	In the post-emergence weeding	Foliar	10-15
Rice	From stem elongation to booting	Foliar	5-10

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

FOLIAR FERTILIZER

CLASS FE G-FORM

N+Fe 2 (5.5) **23% GELAMIN®**

CLASS FE G-FORM is a specific GELAMIN®-based foliar fertilizer used for the prevention and treatment of iron deficiency in fruit and horticultural crops.

- the iron is complexed by specific l-amino acids that facilitate foliar absorption and transport of iron into plant tissues;
- its application is safe without environmental risks.

When applied previously or at the onset of early symptoms, foliar applications of **CLASS FE G-FORM** controls iron deficiency and stimulate production and fruit quality.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	2%
of which: soluble organic Nitrogen (N)	2%
Iron (Fe) in complexed form with amino acids	5.5%

Organic Carbon (C)	6%
Total amino acids	>12.5%
Contains mainly L-form amino acids	
pH	5.5 ± 0.5
Density	1.28 ± 0.02 kg/dm^3
Conductivity	2.00 ± 0.30 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Every 8 to 12 days in full vegetative growth, as needed	Foliar	2
Citrus	Every 10 to 12 days after flowering, as needed	Foliar	3-4
Other Stone Fruits	Every 7-10 days, in full vegetative development as needed	Foliar	2
Ornamental and Floral Crops	Every 7-10 days, during the vegetative development	Foliar	0.5-1 kg/1000 m^2
Strawberry	Every 10 to 12 days after flowering, as needed	Foliar	2.5
Apple tree	Every 12 to 14 days in full vegetative growth, as needed	Foliar	2-3
Blueberry, Raspberry and other small fruits	Every 8 to 12 days in full vegetative growth, as needed	Foliar	2
Peach tree	Every 10 to 15 days from pre-flowering to veraison, as needed	Foliar	2-3
Lawns	During the growth period	Foliar	1 kg/1000 m^2
Table and Wine Grapes	Every 8 to 12 days in full vegetative growth, as needed	Foliar	2-3
Ornamental and Forest Nurseries	Every 7 to 12 days from first phases of post-transplant	Foliar	0.5-1 kg/1000 m^2

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ETIXAMIN

N 14 **100% GELAMIN®**

ETIXAMIN is a nitrogen organic fertilizer for both fertigation and foliar application, with specific phytostimulant activity.

It is water-soluble powder with high concentration of amino acids from **GELAMIN®**.

- **it supports the activity of plant during critical conditions;**
- **it stimulates the optimal growth of root system;**
- **it improves the absorption of nutrients in the soil and mineral fertilizers that can be mixed together.**

ETIXAMIN is formulated for the growing stages of crops, when nutrient requirements and stress conditions are higher; it is an efficient phytostimulant, in fact its use in fertigation, stimulates crop growth, improves the quality of products reducing production waste.

5 kg

20 kg

Formulation: hydrosoluble powder

COMPOSITION

Total Nitrogen (N)	14%
of which: soluble organic Nitrogen (N)	14%
Organic Carbon (C)	40%

Total amino acids	90%
Contains mainly L-form amino acids	
pH	5.7 ± 0.5
Conductivity	1.60 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia, Apricot tree	Every 10-15 days from early growing stages to swollen fruits	Fertigation	10-15
Other Vegetables	1-2 applications during vegetative development	Fertigation	10-15
Artichoke	Every 8 to 10 days during growth and development of the flower heads	Fertigation	15-20
Cherry, Peach, Nectarine, Plum, Olive tree, Almond tree	Every 10-15 days before flowering to veraison	Fertigation	10-15
Floral and Ornamental Crops	1-2 applications during vegetative development	Fertigation	300 g / 100 l water
Strawberry	From post-transplanting to ripening, every 12-15 days	Fertigation	15-20
Durum and Common Wheat	Blossoming/Earing	Fertigation	15-20
Corn	1-2 applications during vegetative development	Fertigation	10-15
Forage Crops	1-2 applications during vegetative development	Fertigation	10-15
Melon, Cucumber	1-2 applications during vegetative development	Fertigation	10-15
Pepper, Tomato, Aubergine, Watermelon	Every 8-12 days from transplanting to full production stage	Fertigation	10-15
Ornamental and Forest Nurseries	2-3 applications, every 10-12 days, from 10 days after transplanting	Fertigation	300 g / 100 l water
Table and Wine Grape	Every 10-15 days before flowering to veraison	Fertigation	10-20
Courgette	Every 12 to 15 days from vegetative recovery to first harvest	Fertigation	10-15
Seeds	Bath of tanned seeds	Soaking in a solution of water and fertilizer	0.5 (kg/t of seeds) diluted in 10 litres of water

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ORGANIC FARMING ILSA

FERTIGATION

FOLIAR FERTILIZER

ETIXAMIN BIO-K

NK 9.0.18 CONTAINS GELAMIN®

ETIXAMIN BIO-K is a nitrogenous organic fertiliser with a high content of potassium. Its high solubility powder formulation allows its use both for leaf applications and in fertigation. It contains organic nitrogen in the form of amino acids, obtained through the enzymatic hydrolysis process **FCEH®**, which guarantees its complete functionality and a stimulant effect on the plant.

ETIXAMIN BIO-K has a high content in potassium which, thanks to the complexing action of the amino acids, is completely absorbed by the plant, carrying out its positive action on flowering, on the osmotic cell and anti-stress regulation of the plant. Thanks to the combined presence of potassium and sulphur, **ETIXAMIN BIO-K** promotes the ripening process of the fruits and enables increasing their final organoleptic characteristics.

ETIXAMIN BIO-K is obtained from totally natural raw materials, through a production process with low environmental impact. This also allows its use in organic farming, where it represents the first crop fertiliser with a high content of potassium complexed by amino acids obtained from enzymatic hydrolysis, with a top-of-the-range effectiveness on crops.

ETIXAMIN BIO-K is particularly suitable for vegetable crops, both greenhouse and open field, wine and table grapevines, citrus fruit trees, kiwi fruit, stone fruit and pome fruit trees.

- high content of potassium complexed by amino acids;
- amino acids from enzymatic hydrolysis with complexing and plant-stimulant action;
- reduces stresses during the crop cycle, in particular during ripening;
- stimulates regular development and ripening of fruits;
- improves the organoleptic characteristics of fruits;
- allowed in organic farming.

Formulation: water-soluble powder

COMPOSITION

Total Nitrogen (N)	9%	Organic Carbon (C)	25%
of which: organic Nitrogen (N)	9%	pH	6.0 ± 0.5
Water soluble Potassium Oxide (K_2O)	18%	Conductivity	5.50 ± 0.30 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia, Citrus	During fruit development until ripening	Fertigation	15-20
Cherry tree, Peach tree and other Pome Fruits	After fruit-set to ripening, every 15 days	Fertigation	10-15
Apple tree, Pear tree	During fruit development until ripening, every 15 days	Fertigation	10-15
Strawberry, Melon, Courgette	From early blooms to ripening, every 12-15 days	Fertigation	10-15
Tomato, Pepper, Eggplant, Potato	From early blooms to ripening, every 12-15 days	Fertigation	15-20
Olive tree	From the beginning of the olive ripening phase, every 20 days	Fertigation	15-20
Table and Wine Grape	From bunch swelling to ripening, every 15 days	Fertigation	15-20
Floral and Ornamental Crops	During the cycle, every 10 days	Fertigation	300 g / 100 l water

Foliar application: 2-3 kg / ha, for 2-3 applications every 7-10 days, to increase fruit size and ripening.

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ETIXAMIN DF

N 16 **100% GELAMIN®**

ETIXAMIN DF is a nitrogen organic fertilizer for used both in fertigation and foliar application; it is formulated as hydrosoluble microgranules.

- it contains a high concentration of protein nitrogen with biostimulating and nutritional action;
- it stimulates the development of the microbial flora of the soil probed by roots;
- it favours the development of radical biomass;
- it promotes an healthy and strong growth of crops.

ETIXAMIN DF is formulated for the growing stages of greenhouse horticultural crops when nutrient requirements are very high; it can be used in fertigation both alone and in a mixture with mineral fertilizers; it stimulates crop growth and improves the quality of products.

10 kg

20 kg

Formulation: hydrosoluble microgranules

COMPOSITION

Total Nitrogen (N)	16%
of which: soluble organic Nitrogen (N)	16%
Organic Carbon (C)	44%

Total amino acids	90%
Contains mainly L-form amino acids	
pH	5.5 ± 0.5
Conductivity	1.70 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Every 10-15 days from early growing stages to swollen fruits	Fertigation	10-15
Other Vegetables	1-2 applications during vegetative development	Fertigation	10-15
Artichoke	Every 8 to 10 days during growth and development of the flower heads	Fertigation	10-20
Cauliflower, Lettuce and other Leafy Vegetables	2-3 applications, every 10-12 days, from 10 days after transplanting	Fertigation	10-15
Stone fruits, Pome fruits, Olive tree	Every 10-15 days before flowering to veraison	Fertigation	10-20
Melon, Watermelon, Courgette, Cucumber	1-2 applications during vegetative development	Fertigation	10-15
Processing Tomato	Every 8-12 days from transplanting to full production stage	Fertigation	15-20
Tomato, Aubergine, Pepper	Every 8-12 days from transplanting to full production stage	Fertigation	10-15
Table and Wine Grape	Every 10-15 days before flowering to veraison	Fertigation	10-15
Ornamental and Forest Nurseries	1-2 applications during vegetative development	Fertigation	300 g / 100 l water
Courgette, Cucumber	Every 12 to 15 days from vegetative recovery to first harvest	Fertigation	5-15
Seeds	Bagno dei semi non conciati	Soaking in a solution of water and fertilizer	0.5 (kg/t of seeds) diluted in 10 litres of water

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSACROP

N 20 **23% GELAMIN®**

ILSACROP is a nitrogen organo-mineral fertilizer obtained by reacting **GELAMIN®** with urea. The reaction between its basal ingredients makes available the nutrients and consequently favours plant growth. The high nitrogen content and the presence of L-form amino acids and free amino acids, gives to this product also phytostimulant and nutrition properties.

- it feeds and promotes the overall balance of crops;
- post-transplanting crises are overcome faster and horticultural crops have a greater growth;
- its support to a better formation of productive buds in fruit crops;
- the rapid integration of nitrogen uptake in order to supply reserve substances.

20 kg

250 kg

1200 kg

Formulation: liquid

ILSACROP is the optimal nitrogen supplement for cereals, horticultural and fruit crops. It is very efficient because the ureic nitrogen complexed with **GELAMIN®** does not cause burns on leaves.

It can be mixed with pesticides and other nutritional supplements.

COMPOSITION

Total Nitrogen (N)	20%
of which: organic Nitrogen (N)	2%
ureic Nitrogen (N)	18%
Organic Carbon (C)	6%

Total amino acids	>12.5%
Contains mainly L-form amino acids	
pH	6.0 ± 0.5
Density	1.16 ± 0.02 kg/dm^3
Conductivity	0.21 ± 0.02 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Every 20 days from fruit formation	Foliar	15-20
Citrus	From pre-flowering to fruit formation	Foliar	15-20
Stone Fruits	Every 20 days from fruit formation	Fertigation	15-20
Durum and Common Wheat	At collect with herbicide or fungicides At blossoming/earing with fungicides	Foliar	5-10
Lettuce	In the first post-transplanting stages	Foliar	5-10
Corn	With pesticides at post-emergency	Foliar	10-15
Melon	In the first post-transplanting stages	Foliar	5-10
Olive tree	From growth recovery to pre-flowering	Foliar	15-20
Potato, Tomato	Every 10-15 days during plant growth stages	Foliar	15-20
Pome Fruits	Every 20 days from fruit formation	Fertigation	15-20
Rice	At collect with herbicide At raising with fungicides	Foliar	10-20

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ILSACTIVE FINALE

NK 5.0.15 **CONTAINS GELAMIN®**

ILSACTIVE FINALE is a **NK** organo-mineral fertigator based on Potassium complexed by **GELAMIN®**; it is specific for ripening stage.

- it improves potassium uptake;
- it regulates plant transpiration and increases sugar accumulation.

ILSACTIVE FINALE should be used in fertigation between rooting and ripening phases; it improves harvest quality and increases aromas and flavors of fruits.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	5%	Organic Carbon (C)	3%
of which: soluble organic Nitrogen (N)	1%	Total amino acids	>6%
ureic Nitrogen (N)	4%	Contains L-form amino acids	
Water soluble Potassium Oxide (K_2O)	15%	pH	7.5 ± 0.5
Water soluble Sulphur Trioxide (SO_3)	25%	Density	1.35 ± 0.05 kg/dm^3
		Conductivity	5.00 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Every 8 to 15 days from veraison to ripening	Fertigation	40-50
Apricot tree, Cherry tree, nectarine, Plum tree	Every 8 to 15 days from veraison to ripening	Fertigation	40-50
Asparagus	Every 8 to 12 days from transplant to full production phase	Fertigation	40-80
Artichoke	Every 7 to 15 days throughout the harvest period	Fertigation	40-80
Cauliflower	Every 7 to 10 days during most intense growth period	Fertigation	30-60
Watermelon	From the initial phases every 12 to 14 days	Fertigation	40-80
Floral and Ornamental Crops	Every 5 to 10 days from transplant to full vegetative development	Fertigation	40-80
Strawberry	Every 10 to 12 days after flowering, as needed	Fertigation	40-80
Eggplant	Every 7 to 15 days throughout the harvest period	Fertigation	50-80
Apple tree, Pear tree	Every 8 to 15 days from veraison to ripening	Fertigation	40-50
Melon	Every 6 to 10 days during most intense growth period Every 7 to 15 days throughout the harvest period	Fertigation	40-80
Peach tree	From the stone fruit to ripening every 7 to 10 days	Fertigation	40-50
Processing Tomato	From the stone fruit to ripening every 7 to 10 days	Fertigation	40-80
Celery	From the initial vegetative phases every 12 to 15 days	Fertigation	40
Table and Wine Grape, Olive tree	Every 8 to 15 days from veraison to ripening	Fertigation	40-50
Ornamental and Forest Nurseries	Every 7 to 12 days during the last phase	Fertigation	50-80

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

FERTIGATION

ILSACTIVE START

NP 5.15 **14% GELAMIN®**

ILSACTIVE START is a **NP** fluid fertilizer used in fertigation in the early stage of crops. Its original formulation, based on phosphorus available both readily (soluble) and progressively (polyphosphate) and **GELAMIN®**, is suitable to improve nutritional efficiency stimulating the development of seedlings and their root systems.

- it encourages germination and root development;
- it improves the availability of phosphorus;
- it allows to overcome easily any transplanting stress in horticultural crops.

ILSACTIVE START is indicated for horticultural crops in the early vegetative stages, for vines and fruit from shoot development to the fruit development, thanks to the balanced dose of protein nitrogen and phosphorus in the periods of maximum demand for plants.

5 kg
20 kg
250 kg
1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	5%
of which: soluble organic Nitrogen (N)	1%
ammonium Nitrogen (N)	4%

Total Phosphorus Pentoxide (P_2O_5)	15%
Organic Carbon (C)	3%
pH	6.0 ± 0.5
Density	1.19 ± 0.02 kg/dm^3
Conductivity	3.00 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Beetroot, Strawberry	From transplanting until the stage of intensive growth, every 10 days	Fertigation	20-40
Turnip tops, Artichoke, Savoy Cabbage, Lettuce, Spinach	From transplanting until the stage of intensive growth, every 10 days	Fertigation	20-40
Stone Fruits	From germination to fruit set, every 15 days	Fertigation	20-50
Eggplant, Pepper, Tomato	From seeding or transplanting until the stage of intensive growth, every 10 days	Fertigation	20-40
Melon, Courgette	From transplanting until the stage of intensive growth, every 10 days	Fertigation	20-50
Pome Fruits	From germination to fruit set, every 15 days	Fertigation	20-50
Arugula	From seeding or transplanting until the stage of intensive growth, every 10 days	Fertigation	20-40
Table and Wine Grapes	From germination to fruit set, every 15 days	Fertigation	20-50
Forage Crops	Autumn or vegetative recovery	Fertigation	20-50

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ILSADRIP FERRO

N+Fe 4(5) **45% GELAMIN®**

ILSADRIP FERRO is a nitrogen organic fertigator based on **GELAMIN®** complexed with divalent iron which prevents efficiently any iron deficiency.

- it is not affected by uv rays degradation and remains stable in the soil;
- it is stable regardless of the soil pH value;
- it is rapidly absorbed by the root system of plants and quickly transferred into vegetal tissues.

ILSADRIP FERRO allows to prevent iron deficiency in an efficient and economical way.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	4%
of which: soluble organic Nitrogen (N)	4%
Soluble Iron (Fe)	5%
Organic Carbon (C)	10%
Total amino acids	>25%

Contains L-form amino acids	
pH	4.0 ± 0.5
Density	1.26 ± 0.02 kg/dm^3
Conductivity	1.70 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Every 8 to 12 days in full vegetative growth, as needed	Fertigation	15-30
Citrus	Every 8 to 15 days from pre-flowering, as needed	Fertigation	20-40
Asparagus, Carrot, Tomato, Watermelon	Every 8 to 12 days from transplant to full production phase	Fertigation	15-35
Artichoke	Every 8 to 10 days during growth and development of the flower heads	Fertigation	20-40
Ornamental and Floral Crops	Every 5 to 10 days from transplant to full vegetative development	Fertigation	15-50
Stone fruits	Every 10 to 15 days from pre-flowering to veraison, as needed	Fertigation	15-30
Fennel	Every 10 to 15 days after transplant or after emergence and in full vegetative development	Fertigation	15-40
Strawberry	2 to 3 applications every 10 to 15 days during rooting and after the vegetative recovery at the end of harvest	Fertigation	20-30
Melon	Every 7 to 12 days from post-transplant to filled fruits, as needed	Fertigation	15-30
Olive tree	Every 8 to 15 days from pre-flowering, as needed	Fertigation	20-40
Pepper	Every 8 to 12 days from transplant to full production phase, as needed	Fertigation	15-35
Pome Fruits	Every 10 to 15 days from pre-flowering to veraison, as needed	Fertigation	15-30
Celery	Every 8 to 12 days from transplant to full production phase, as needed	Fertigation	15-40
Table and Wine Grapes	Every 8 to 12 days in full vegetative growth, as needed	Fertigation	15-30
Ornamental and Forest Nurseries	Every 7 to 12 days from first phases of post-transplant	Fertigation	20-50

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ORGANIC FARMING ILSA

FERTIGATION

ILSADRIP FORTE

N 9 **100% GELAMIN®**

ILSADRIP FORTE is a **GELAMIN®**-based nitrogen organic fertigator with high content of nitrogen and L-amino acids.

- it contains nitrogen from protein sources obtained by enzymatic hydrolysis, which is readily available to plants without losses due to leaching;
- it increases radical biomass and active roots enhancing the soil exploration;
- it is particularly suitable in 'difficult' environmental conditions (thermal shocks, high salinity, water deficiency or scarce light);
- it favours a greater and balanced plant growth.

ILSADRIP FORTE in fertigation allows a balanced growth of crop and improves the quality of the products while reducing production waste.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	9%	Contains L-form amino acids	
of which: soluble organic Nitrogen (N)	9%	pH	5.5 ± 0.5
Organic Carbon (C)	24.5%	Density	1.22 ± 0.02 kg/dm^3
Total amino acids	>50%	Conductivity	0.77 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia, Citrus, Stone Fruits, Pome Fruits	Every 10 to 15 days from pre-flowering to veraison	Fertigation	10-20
Other Vegetables	Every 7 to 10 days from the first green leaves	Fertigation	10-30
Cauliflower, Cabbages, Lettuce and other Leafy Vegetables	Every 7 to 10 days from the first green leaves	Fertigation	10-15
Cereals	From stem elongation to booting	Fertigation	5-10
Ornamental and Floral Crops	Every 12 to 14 days in full vegetative growth, as needed	Fertigation	10-20
Strawberry	2 to 3 applications every 10 to 15 days during rooting and after the vegetative recovery at the end of harvest	Fertigation	10-20
Melon, Cucumber	From the initial vegetative phases every 12 to 15 days	Fertigation	20-30
Olive tree	Every 15 days during the greatest vegetative growth periods	Fertigation	20-30
Processing Tomato	Every 12 to 14 days in full vegetative growth, as needed	Fertigation	10-30
Table and Wine Grapes	Every 10 to 15 days from pre-flowering to veraison	Fertigation	10-30
Ornamental and Forest Nurseries	Every 7 to 12 days from first phases of post-transplant	Fertigation	10-20
Courgette	Every 12 to 15 days from vegetative recovery to first harvest	Fertigation	20-30
Asparagus, Watermelon, Carrot, Pepper, Eggplant, Tomato	Every 8 to 12 days from transplant to full production phase	Fertigation	10-30
Vegetable	Before transplanting seedling soaking	Immersion	10 l/100 l water

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN fluid gelatine for agricultural use

ORGANIC FARMING ILSA

FERTIGATION

ILSA

ILSAMIN BIO-K

NK 5,5.0.2,5

ILSAMIN BIO-K is a liquid organic fertiliser containing nitrogen and potassium for fertigation applications. It improves soil fertility and allows a complete and appropriate nutrition throughout all stages of the crop cycle, thanks to the contribution of organic nitrogen, potassium, amino acids, polysaccharides and organic carbon.

ILSAMIN BIO-K is suitable for fertigating vegetables, vines, olive trees and fruit trees, as it positively stimulates the vegetative phases, the flower bud induction, fruit development and ripening.

- It improves the microbiological fertility of the soil;
- It nourishes crops throughout the cycle;
- It can be used on all crops, both vegetable and tree crops;
- Allowed in organic farming.

20 kg

250 kg

1200 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	5.5%	Total amino acids	> 28%
of which: organic Nitrogen (N)	5.5%	pH	6.5 ± 0.5
Water soluble Potassium Oxide (K_2O)	2.5%	Density	1.23 ± 0.02 kg/dm^3
Organic Carbon (C)	21%	Conductivity	1.80 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	From pre-flowering to the beginning of veraison, every 15 days	Fertigation	30-35
Stone Fruits, Pome Fruits	From pre-flowering to the beginning of veraison, every 15 days	Fertigation	20-30
Strawberry, Melon, Courgette	From post-transplanting to ripening, every 12-15 days	Fertigation	25-30
Tomato, Pepper, Eggplant, Potato	From inflorescence to ripening, every 12-15 days	Fertigation	25-30
Cauliflower, Turnip and other Cabbages	From post-transplant to pre-harvest, every 15-20 days	Fertigation	20-25
Garlic, Scallio, Carrot	During bulb-rhizome swelling, every 15 days	Fertigation	20-25
Lettuce, Spinach and other Leafy Vegetables	From post-transplanting, during the cycle, every 10 days	Fertigation	20-25
Olive tree	From post-flowering to the beginning of veraison, every 20 days	Fertigation	25-30
Table and Wine Grape	From pre-flowering to the beginning of veraison, every 15 days	Fertigation	25-30
Ornamental and Floral Crops	During the cycle, every 10 days	Fertigation	500 g / 100 l water

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSAMIN BORO

N+B 4(5) **45% GELAMIN®**

ILSAMIN BORO is a foliar fertilizer based on L-amino acids and boron.

- **it is absorbed immediately through leaves making boron available to plants;**
- **it improves fruit set and formation of new vegetal tissues.**

ILSAMIN BORO is used on sensible crops like grapevine and fruit plants; it increases the production and the commercial quality of fruits.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Organic Nitrogen (N)	4%	Total amino acids	>25%
of which: soluble organic Nitrogen (N)	4%	Contains L-form amino acids	
Water soluble Boron (B)	5%	pH	8.5 ± 0.5
Organic Carbon (C)	15%	Density	1.26 ± 0.02 kg/dm^3
		Conductivity	1.35 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Olive tree	Pre- and during flowering, and two applications at inolition	Foliar	2-2.5
Courgette	From the initial vegetative phases every 12 to 15 days	Foliar	1-1.5
Stone and Pome Fruits	Pre-, during and post-flowering	Foliar	2-3
Strawberry	Every 10-12 days from flowering, as needed	Foliar	1-1.5
Tomato	Every 10-12 days from early flowering	Foliar	1-1.5
Watermelon, Eggplant, Cauliflower	Every 12-14 days during the intense plant growth stages, as needed	Foliar	1-1.5
Wine Grape	Every 8 days before flowering to berries ripening	Foliar	2-2.5

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSAMIN CALCIO

N+CaO 5(8) 62% GELAMIN®

ILSAMIN CALCIO is a foliar fertilizer based on complexed calcium and containing free amino acids obtained by enzymatic hydrolysis. The presence of peptides and natural L-amino acids ensures a rapid and efficient absorption through leaves.

- it prevents and cures calcium deficiency;
- it prevents specific physiopathies caused by calcium deficiency;
- it improves the quality of products.

ILSAMIN CALCIO is recommended for all calcium-deficient crops. It improves production quality and shelf life.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Organic Nitrogen (N)	5%	Total amino acids	>30%
of which: soluble organic Nitrogen (N)	5%	Contains L-form amino acids	
Water soluble Calcium Oxide (CaO)	8%	pH	6.0 ± 0.5
Organic Carbon (C)	15%	Density	1.28 ± 0.02 kg/dm^3
		Conductivity	4.00 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Cherry tree	Every 15 days from fruit set to veraison	Foliar	2.5-4
Watermelon	Every 12 to 14 days in full vegetative growth as needed	Foliar	1.5-2.5
Strawberry	Every 10 to 12 days after flowering, as needed	Foliar	2.5-3
Eggplant	Every 12 to 14 days in full vegetative growth as needed	Foliar	1.5-2.5
Apple tree	4 to 5 applications every 10 to 12 days from stone fruit	Foliar	2.5-5
Melon	Every 12 to 14 days in full vegetative growth as needed	Foliar	1.5-2.5
Nectarine	3 to 4 applications every 10 to 15 days from fruitlet formation to ripening	Foliar	2.5-4
Olive tree	2 to 3 applications every 12 to 15 days with fruitlet growth	Foliar	2.5-5
Pear tree	4 to 5 applications every 10 to 12 days from stone fruit	Foliar	2.5-5
Peach tree	From the stone fruit to ripening every 7 to 10 days	Foliar	2.5-4
Tomato	From fruit set to ripening every 7 to 10 days	Foliar	2-3
Processing Tomato	From fruit set to ripening every 7 to 10 days	Foliar	2-3
Plum tree	3 to 4 applications every 10 to 15 days from fruitlet formation to ripening	Foliar	2.5-4
Wine Grape	From grape to ripening every 7 to 10 days	Foliar	2.5-5
Courgette	From the initial vegetative phases every 12 to 15 days	Foliar	1.5-2.5

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSAMIN CaMg

N+CaO+MgO 9(9-2) **34% GELAMIN®**

ILSAMIN CAMG is a foliar fertilizer based on complexed calcium and magnesium and containing **GELAMIN®**.

- it prevents and cures physiopathies due to specific deficiencies such as calcium and magnesium;
- it fosters chlorophyll photosynthesis;
- it increases sugar synthesis improving fruit consistency and shelf life.

ILSAMIN CAMG is recommended for grapevine orchards, leafy vegetables and vegetables.

It may be used both in fertigation and by foliar application.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)		9%
of which: organic Nitrogen (N)	3%	
nitric Nitrogen (N)	6%	
Water soluble Calcium Oxide (CaO)		9%

Water soluble Magnesium Oxide (MgO)	2%
Organic Carbon (C)	9%
Total amino acids	>18%
pH	5.6 ± 0.5
Density	1.39 ± 0.02 kg/dm^3
Conductivity	5.00 ± 0.50 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha	METHOD	kg/ha
Citrus, Actinidia, Olive tree	From fruit set to ripening every 7 to 10 days	Fertigation	10-15	Foliar	2-4
Stone Fruits	4 to 5 applications every 10 to 12 days from stone fruit	Fertigation	15-20	Foliar	2.5-4
Strawberry, Melon	From initial fruit set to harvest every 7 to 10 days	Fertigation	25-40	Foliar	2-2.5
Eggplant	After initial flowering every 10 to 12 days	Fertigation	25-40	Foliar	2.5-4
Apple tree, Pear tree	4 to 5 applications every 10 to 12 days from stone fruit	Fertigation	15-20	Foliar	2.5-4
Leafy Vegetables	4-5 Applications every 15 days, from 2 weeks after transplanting	Fertigation	20-25	Foliar	2-2.5
Pepper, Tomato, Processing Tomato	After initial flowering every 10 to 12 days	Fertigation	25-40	Foliar	2.5-3
Table and Wine Grapes	From grape to ripening every 7 to 10 days	Fertigation	10-15	Foliar	2.5-3.5

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

ILSAMIN MMZ

N+MgO 4 (2) **45% GELAMIN®**

ILSAMIN MMZ is a **GELAMIN®**-based foliar fertilizer with complexed magnesium, manganese and zinc.

- it cures and prevents the specific deficiencies of citrus and other fruit crops;
- it increases photosynthetic activity, enhancing leaf color;
- it stimulates fruit swelling, increases fruit weight and contrasts fruit drop.

ILSAMIN MMZ is used as foliar fertilizer, in fruit and horticultural crops, in order to reduce fruit losses.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Organic Nitrogen (N)	4%	Water soluble Zinc (Zn)	1%
of which: soluble organic Nitrogen (N)	4%	EDTA chelated Zinc (Zn)	1%
Water soluble Magnesium Oxide (MgO)	2%	Organic Carbon (C)	15%
Water soluble Manganese (Mn)	0.2%	pH	6.5 ± 0.5
EDTA chelated Manganese (Mn)	0.2%	Density	1.22 ± 0.02 kg/dm^3
		Conductivity	1.80 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Every 15 to 20 days, at least 3 or 4 applications	Foliar	2-4
Artichoke	Every 7 to 15 days during growth and development of the flower heads	Foliar	2-2.5
Cauliflower, Pepper, Processing Tomato	Every 10 to 20 days as needed	Foliar	2-4
Cherry and other Stone Fruits	Every 15 to 20 days as needed	Foliar	2-4
Watermelon, eggplant	Every 12 to 14 days in full vegetative growth as needed	Foliar	2-4
Olive tree	Every 15 days from fruit filling to ripening	Foliar	3-5
Small Fruits	Every 15 to 20 days as needed	Foliar	2-4
Pome Fruits	Every 15 to 20 days as needed	Foliar	2-4
Rice	Blossoming/earing	Foliar	3-5
Table and Wine Grape	Every 10-15 days from germination	Foliar	2-4

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSAMIN MULTI

N 6 **70% GELAMIN®**

ILSAMIN MULTI is a fluid fertilizer based on organic Nitrogen and chelated microelements: it may be used both in fertigation and by foliar application. Its balanced formulation, based on **GELAMIN®** and microelements (Fe, Zn, B, Mn), makes it suitable to prevent and cure stress conditions caused by nutritional deficiencies.

- it integrates basal fertilization in crops with high requirements of microelements and nitrogen;
- it prevents yellowing and other symptoms caused by nutritional deficiencies;
- it makes plants more lush and productive.

ILSAMIN MULTI may be used to prevent nutritional deficiencies in horticultural plants in the first growth stages, especially during the full growth. It is particularly indicated for calcareous soils or soils with an abnormal pH.

ILSAMIN MULTI may be supplied by foliar application in fruit crops, immediately after growth resumption.

1 kg
5 kg
20 kg

Formulation: liquid

COMPOSITION

Total Nitrogen (N)	6%
of which: organic Nitrogen (N)	6%
Organic Carbon (C)	16.5%
Water soluble Zinc (Zn)	0.3%
EDTA chelated Zinc (Zn)	0.3%
Water soluble Iron (Fe)	0.6%

DPTA chelated iron (Fe)	0.6%
Water soluble Manganese (Mn)	0.3%
EDTA chelated Manganese (Mn)	0.3%
Water soluble Boron (B)	0.3%
pH	7.0 ± 0.5
Density	1.23 ± 0.02 kg/dm^3
Conductivity	1.40 ± 0.20 dS/m

GELAMIN® Fluid gelatine for agricultural use

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Every 15 days from growth recovery	Foliar	1.5-2
Beetroot, Rape	Every 15 days from growth recovery	Fertigation	10-20
Ornamental and Floral Crops	Every 15 days from early growth stages	Fertigation	10-20
Stone Fruits	Every 15 days from growth recovery	Foliar	1.5-2
Melon	Every 15 days from early growth stages	Fertigation	10-20
	Every 15 days from early growth stages	Foliar	1.5-2
Leafy Vegetables	Every 15 days from early growth stages	Fertigation	10-20
	Every 15 days from early growth stages	Foliar	1.5-2
Pome Fruits	Every 15 days from growth recovery	Foliar	1.5-2
Tomato	Every 15 days from early growth stages	Fertigation	10-20
	Every 15 days from early growth stages	Foliar	1.5-2
Table and Wine Grapes	Every 15 days from growth recovery	Foliar	1.5-2
Courgette	Every 15 days from early growth stages	Fertigation	10-20
	Every 15 days from early growth stages	Foliar	1.5-2

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ORGANIC FARMING ILSA

FOLIAR FERTILIZER

FERTIGATION

ILSA

ILSAMIN S

$N+SO_3$ 4 (50) CONTAINS GELAMIN®

Formulation: liquid

ILSAMIN S is a liquid nitrogen organic fertilizer containing 20% highly available sulphur. It is **GELAMIN®** based and contains amino acids obtained from enzymatic hydrolysis; its features include high stability, pH sub-acid and low conductivity, such as to allow mixing with all the main formulations present on the market, including plant protection products. **ILSAMIN S**, applied on the foliage at the beginning of the vegetative growth phase of vines and fruit trees produces organic nitrogen and carbon, amino acids and sulphur which are important for nourishing plants and for improving their vegetative growth; above all in stressful situations.

On olive trees, vegetables in greenhouses and in open fields, **ILSAMIN S** is useful both in the early vegetative phases and during ripening, thus favouring the improvement of the final quality, in terms of oil yield, flavours and aromas.

- it supplies organic nitrogen and sulfur highly bioavailable;
- it nourishes and prevents the deficiencies of sulfur and other elements;
- it increases the final quality of vegetables and fruit;
- it improves the vegetative well-being of plants;
- allowed in organic farming.

COMPOSITION

Total Nitrogen (N)		4%	Total Aminoacids	25%
of which: Organic Nitrogen (N)	4%		pH	5.5 ± 0.5
Sulfur Trioxide (SO_3)		50%	Density	1.28 ± 0.02 kg/dm^3
Organic Carbon (C)		15%	Conductivity	0.43 ± 0.20 dS/m

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Garlic, Onion	3-4 applications during bulbs enlargement	Foliar	3-4
Cauliflower, Turnip and other brassicacee	2-3 applications from flowering, every 12 days	Foliar	3-4
Cereals and Industrial crops	1-2 applications during vegetative development	Foliar	4-5
Ornamental and Floral Crops	During the cycle, every 10-12 days	Foliar	300-400 gr/100 l water
Cherry tree, Apricot tree, Peach tree, Nectarine, Plum tree	2-3 applications from growth recovery to flowering	Foliar	3-3.5
Olive tree	2-3 applications from growth recovery to flowering 2 applications in early autumn to increase olive ripening	Foliar	2.5-3
Lettuce and other Leafy Vegetables	2-3 applications from post-transplanting, every 12 days	Foliar	3-4
Apple tree, Pear tree, Actinidia, Citrus	2-3 applications from growth recovery to flowering	Foliar	3-3.5
Tomato, Pepper, Aubergine, Courgette, Melon	2-3 applications before flowering 2 applications during fruit enlargement	Foliar	3-4
Table and Wine Grape	3-4 applications from growth recovery to flowering	Foliar	3-3.5

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSAVEGA

N 5 VEGETAL ORIGIN

ILSAVEGA is an organic fertilizer derived exclusively from vegetal origin, with nutritional and phytostimulant actions; it is obtained by fermentation according to particular and controlled processes.

- It has high content of dry matter and a very low level of ashes;
- it feeds plants and supplies high amounts of free essential amino acids, peptones, nucleic acids and natural chelates;
- it increases the activity of natural auxins, provides full plant growth in every critical situation and stimulates root system growth;
- it fosters better nutrient uptake.

ILSAVEGA may be used in fertigation. It prevents nutritional stresses. Its use stimulates the development of the microorganisms in the soil, crop growth improving production quality and, at the same time, reducing production waste.

1 kg
5 kg
20 kg
250 kg
1200 kg

Formulation: liquid

COMPOSITION

Organic Nitrogen (N)	5%
Organic Carbon (C)	22%
Organic matter with nominal molecular weight <50 kDa	>30%

pH	8.7 ± 0.5
Density	1.18 ± 0.02 kg/dm^3
Conductivity	0.90 ± 0.20 dS/m

DIRECTIONS FOR USE*

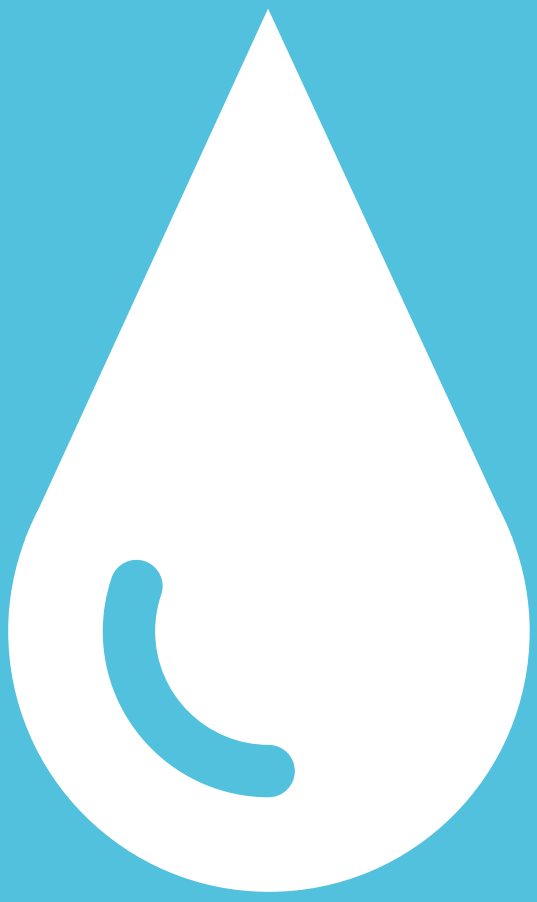
CROP	TIMING	METHOD	kg/ha
Actinidia, Citrus	Every 10 to 15 days from pre-flowering to veraison	Fertigation	15-30
Other Vegetables	Every 8 to 12 days from transplant to full production phase	Fertigation	20-40
Ornamental and Floral Crops	Every 12 to 14 days in full vegetative growth, as needed	Fertigation	20-40
Stone fruits, Pome fruits	Every 10 to 15 days from initial vegetative phases to fruit filling	Fertigation	15-30
Strawberry	2 to 3 applications every 10 to 15 days during rooting and after the vegetative recovery at the end of harvest	Fertigation	20-40
Lettuce, Chicory, Spinach and other Leafy Vegetables	From early vegetative development	Fertigation	10-30
Melon, Watermelon	From the initial vegetative phases every 12 to 15 days	Fertigation	15-30
Tomato	Every 12 to 14 days in full vegetative growth, as needed	Fertigation	20-40
Table and Wine Grapes	Every 10 to 15 days from pre-flowering to veraison	Fertigation	15-30
Ornamental and Forest Nurseries	Every 7 to 12 days from first phases of post-transplant	Fertigation	20-30

Foliar application: 2-3 kg / ha, for 2-3 applications, to increase both vegetative development both fruit enlargement.

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

GELAMIN

fluid gelatine for agricultural use



ILSA

The green evolution

Acidifier:
ILSA H+

Activated products:
ILSACTIGREEN START GRANULARE
ILSACTIGREEN START MICROGRANULARE

Repellent:
ILSANEEM

ADVANCED FERTILIZERS FOR HIGH ADDED VALUE CROPS

The IlsaTec line includes products with very different characteristics and purposes, highly technological and tailored to meet the plant's needs.
Products made to feed or products that can stimulate the metabolism of the plants and prevent or treat stress, as the products contained in the BIOSTIMULATION CATALOG.
What they have in common is the fact of being each a specific product, unique in its kind.

ALL THE PRODUCTS IN THE **BIOSTIMULATION CATALOG** BELONG TO THE ILSATEC LINE.

ILSAC-ON
ILSAVIS+
ILSASTIM+
ILSAMIN N90
SPLINTER NEW
ILSAPOLICOS
ILSAFORMA
ILSAGIRMA
ILSARODDER
ILSASTIMSET
ILSAGRADER
ILSAKOLORADO
ILSAVIVIDA
ILSASHAPE
ILSAVEGETUS
ILSADURADA
ILSALEVA
ILSANOBREAK
ILSAINTEGER
ILSATERMIKO
ILSADEEPDOWN

REFER TO THE **BIOSTIMULATION CATALOG** IN ORDER TO HAVE ALL TECHNICAL INFORMATION, THE COMPOSITIONS AND THE DIRECTIONS FOR USE FOR ALL BIOSTIMULANTS.

ILSA H+

FERTILIZER SOLUTION NP 3.17 WITH ACIDIFYING ACTION

ILSA H+ is a nutritional formula with acidifying action, surfactant and stabilizing action containing a colour change indicator that colours the water depending on the pH reached: yellow for values greater than 6.0; orange for values 6.0-5.5 and red for values lower than 5.5. The use of **ILSA H+** during the preparation of foliar treatments enables to obtain the following advantages:

- it acidifies the solution to reach pH values of 4.5-5.5 thus avoiding alkaline hydrolysis;
- it stabilizes the active ingredients and the nutritive elements present in the solution, thus favouring their solubilization and effectiveness;
- it determines a lowering of the surface tension, ensuring greater wettability, penetration and diffusion of the substances administered inside the vegetative organs of the plant;
- it can be used with the main fertilizers, pesticides and plant growth regulators.

1 kg

Formulation: liquid red colour

COMPOSITION

Total Nitrogen (N)		3%
of which: Ureic Nitrogen (N)	3%	
Water soluble Phosphorus Pentoxide (P_2O_5)		17%

pH	1.75±0.5
Conductivity (mS/cm)	4.20 ± 0.20
Density (kg/dm^3)	1.17 ±0.02

METHOD OF USE

Fill roughly 2/3 of the atomizer volume with water and, while constantly stirring, add an **ILSA H+** dosage of 40-60 (m/hl) and check the water colour: yellow for pH values ≥ 6.0 ; orange for pH values 6.0-5.5; red for pH values ≤ 5.5. We recommend you continue adding **ILSA H+** until the solution highlights the first shades of red. At this point, add the products to be used in the mixture along with the rest of the water.

ILSACTIGREEN START GRANULARE

ORGANO-MINERAL FERTILIZER WITH CO-FORMULANT BY ENZYMATIC HYDROLYSIS

ILSACTIGREEN START GRANULARE is the only granular fertiliser that combines an high fractions of slow-release and soluble Nitrogen content, **AGROGEL®**, with a high molecular weight co-formulant with verified (certified) biostimulating activity, **GELAMIN®**.

ILSACTIGREEN START GRANULARE is obtained by low temperature granulation without acids in order to preserve each element, especially organic matter.

- highly efficient starter action by nitrogen and phosphorus;
- persistent loss-free action by nutrients;
- stimulates the growth of more active root systems towards soil nutrients;
- reduces salinisation and soil compaction.

ILSACTIGREEN START GRANULARE may be used at low dosage avoiding waste and losses. It is designed for localized applications with both precision and gravitational machines.

25 kg

Formulation: granular - 1.5/2.8 mm

COMPOSITION

Total Nitrogen (N)	9%	Organic Carbon (C)	19%
of which: organic Nitrogen (N)	5%	of which: extractable organic Carbon (C)	18%
ureic Nitrogen (N)	4%	Co-formulant by enzymatic hydrolysis	12%
Total Phosphorus Pentoxide (P_2O_5)	18%		
of which: Phosphorus Pentoxide (P_2O_5) soluble in water	17%		

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Playing fields	After aeration/coring	Top dressing	25 gr/m²
Ornamental and Floral crops	Transplanting	Localized placement	40-60 gr/m²
Wheat and other Cereals	Sowing	Seed localized	35-50
Corn, Sugar Beet	Sowing	Seed row placement	50-80
Cultures for Fresh Vegetables	Soil preparation	Underground	25 gr/m²
Tomato and other Vegetables	Transplanting	Localized placement at sowing or during the following phases	75-100
Soy Bean, Sunflower, Tobacco	Sowing	Localized placement at sowing or during the following phases	75-100
Lawns	New seeding/turf roll laying	Top dressing/broadcasting before laying down turf rolls	25-30 gr/m²
Grape, Olive tree and Fruits	Transplanting	Root area/rootstock placement, 30-40 cm distance	50-70
	During full production phase	Row/plant placement	50-150

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AGROGEL

GELAMIN

ILSACTIGREEN START MICROGRANULARE

ORGANO-MINERAL FERTILIZER WITH CO-FORMULANT BY ENZYMATIC HYDROLYSIS

ILSACTIGREEN START MICROGRANULARE is the only granular fertiliser that combines an high fractions of slow-release and soluble Nitrogen content, **AGROGEL®**, with a high molecular weight co-formulant with verified (certified) biostimulating activity, **GELAMIN®**.

ILSACTIGREEN START MICROGRANULARE is obtained by low temperature granulation without acids in order to preserve each element, especially organic matter.

- highly efficient starter action by nitrogen and phosphorus;
- persistent loss-free action by nutrients;
- stimulates the growth of more active root systems towards soil nutrients;
- reduces salinisation and soil compaction.

ILSACTIGREEN START MICROGRANULARE may be used at low dosage avoiding waste and losses. It is designed for localized applications with both precision and gravitational machines.

10 kg

Formulation: microgranular - 0.5/1.5 mm

COMPOSITION

Total Nitrogen (N)	9%	Organic Carbon (C)	19%
of which: organic Nitrogen (N)	5%	of which: extractable organic Carbon (C)	18%
ureic Nitrogen (N)	4%	Co-formulant by enzymatic hydrolysis	12%
Total Phosphorus Pentoxide (P_2O_5)	18%		
of which: Phosphorus Pentoxide (P_2O_5) soluble in water	17%		

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Sugar Beet	Sowing	Localized placement	15-30
Industrial Crops	Sowing	Localized placement	20-30
Ornamental and Floral Crops	Transplanting	Planting hole placement	50 gr/m²
Durum and Common Wheat	Sowing	Seed localized	20-30 kg/1000 m²
Golf green	During regeneration operations	Top-dressing	25 gr/m²
Endive, Lettuce, Chicory, Arugula, Spinach	Sowing	Localized placement	20-25 gr/m²
Corn	Sowing	Localized placement	20-30
Vegetables in greenhouse	Transplanting	Localized placement	5-8 kg/1000 m²
Substrates	In substrate preparation phase	Mix carefully	400-500 gr/m³
Lawns	New seeding/turf roll laying	Top dressing/broadcasting before laying down turf rolls	20-25 gr/m²
Professional Turf	New seeding/turf roll laying	Top dressing/broadcasting before laying down turf rolls	20-25 gr/m²

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

AGROGEL

GELAMIN

ILSANEEM

NEEM VEGETAL OILCAKE 20% AGROGEL® 80%

This innovative product is obtained by thermal reaction between **AGROGEL®** (hydrolyzed gelatin for agricultural use) and Neem (Azadirachta Indica vegetal oilcake).

ILSANEEM creates the most favourable conditions in the soil for the growth of healthy and strong plants.

ACTIVATION of soil fertility and production improvement in soils at risk: it triggers a good start in plants, increases vegetation growth and strengthens roots in fruits and vegetables.

NUTRITIONAL ACTION efficient for plants: the availability of Nitrogen from **AGROGEL®** and the greater force of roots allow plants to absorb all the Nitrogen and the other elements in the soil. The absence of leaching phenomena makes **ILSANEEM** an ideal product for specialized and low environmental impact farming.

REPELLING ACTION to prevent diseases and stress: it helps plants build their natural defences by exploiting the repellent properties of Neem towards insects, nematodes and cryptogams, also for ornamental crops and biological farming.

ILSANEEM, in addition to nitrogen nutrition, brings great benefit to the activity of the microbial flora by stimulating soil microorganisms to develop an intense biological activity.

The dual activity of **ILSANEEM** in feeding plants and revitalizing 'tired' soils is specifically targeted for use in the cultivation of cash crops.

Formulation: pellet - 4.0 mm

COMPOSITION

Total Nitrogen (N)	11%	Organic substance	72%
of which: organic Nitrogen (N)	11%	Nitrogen (N) from AGROGEL®	10.3%
Organic Carbon (C)	42%	Nitrogen (N) from Neem oilcake	0.7%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Vegetables	Sowing	Localized placement	200-500
Vegetables in greenhouse	Sowing	Localized placement	50-100 kg/1000 m²
Table and Wine Grape	Growth recovery	In soil mixtures	400-500
Ornamental and Floral crops	At the beginning of the growth season	Top dressing application/first soil layers incorporation	150 kg/1000 m²

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSA AGRO

PROFESSIONAL NPK
CONCIME ORGANO MINERALE NPK
ILSA AGRO
PROFESSIONAL NPK
PROFESSIONAL N
CONCIME ORGANICO AZOTATO
ILSA AGRO
PROFESSIONAL N

PROFESSIONAL ORGANIC AND ORGANO-MINERAL FERTILIZERS FOR THE NUTRITION AND CARE OF TURF

Public and private landscaped areas in urban environments are given greater and greater attention because of their importance for life quality improvement. Turfs are the main component of urban green, and their care requires specific and environment-friendly fertilizers, like those of the Ilsa Agro line.

They are suitable for turfs of any kind, i.e., turfs of high aesthetic quality as well as athletic fields used intensively for games.

PROFESSIONAL N

PROFESSIONAL NPK

PROFESSIONAL N

N 12 **100% AGROGEL®**

PROFESSIONAL N is a nitrogen organic fertilizer based on slow-release **AGROGEL®** and designed for turfs and professional green.

- it allows to reduce the applications;
- it provides regular growth without altering the species related ratio in the turf community;
- its microgranular formulation facilitates the distribution of the fertilizer and enhances turf uniformity.

PROFESSIONAL N ensures a stable and regular growth with few applications and gives meadows a homogenous aspect to the turf.

25 kg

Formulation: microgranules

COMPOSITION

Total Nitrogen (N)	12%
of which: water soluble Nitrogen (N)	5%
Organic Carbon (C)	40%

Extractable organic Carbon (C) / Total organic Carbon	95%
pH	4.5

This product has been made with the contribution of:

- California State Polytechnic University, Pomona
- Washington State University, Research and Extension Unit
- Alma Mater Studiorum - University of Bologna - Department of Agro-Environmental Sciences and Technologies

AGROGEL

DIRECTIONS FOR USE*

		jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
New trees plantations	kg/100 mq		3-4			3-4			4-5			6-7	
Playing Fields	kg/100 mq		5-6			6			7			10	
Lawns	kg/100 mq			5-6							8-9		
Professional Turf	kg/100 mq		3-4			3-4			4-5			6-7	
Ornamental and Forest nurseries	kg/100 mq		3-4			3-4			4-5			6-7	

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

PROFESSIONAL NPK

NPK 8.6.14 **20% AGROGEL®**

PROFESSIONAL NPK is a **NPK** organo-mineral fertilizer whose nutrient ratio fits the needs of the meadow.

Each granule contains uniformly protein nitrogen, phosphorus and potassium.

- its natural slow-release stimulates homogeneous growth and reduces leaching losses;
- its microgranular formulation ensures a homogeneous distribution of the product.

PROFESSIONAL NPK maintains the balance between the species in the turf community.

Formulation: microgranules

COMPOSITION

Total Nitrogen (N)		8%	Total Magnesium Oxide (MgO)		2%
of which: organic Nitrogen (N)	2%		Water soluble Sulphur Trioxide (SO_3)		20%
ammonium Nitrogen (N)	4%		Water soluble Boron (B)		0.01%
ureic Nitrogen (N)	2%		Total Iron (Fe)		0.5%
Total Phosphorus Pentoxide (P_2O_5)		6%	Total Zinc (Zn)e		0.01%
Water soluble Potassium Oxide (K_2O)		14%	Organic Carbon (C)		7.5%

AGROGEL

DIRECTIONS FOR USE*

		jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Playing Fields	kg/100 mq			8		6				8		12	
Ornamental and Floral Crops	kg/100 mq			5		8				10	15		
Lawns	kg/100 mq			4		3				4		8	
Public Parks	kg/100 mq			10		15				15	20		

B.T.C. LOW CHLORINE CONTENT

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSA COM

QUALITY PRODUCTS COMMERCIALIZED BY ILSA

CALCIOCIANAMIDE

ILSAFOL 20.20.20

ILSASOL 20.20.20

SFEROSOL

SILIFORCE

ILSA LIFE

The IlsaLife product is a natural organic amendments able to improve chemical, physical, biological and mechanical characteristics of soils. Regular use of this fertilizer allows maintaining or increasing fertility of agricultural soils and improving their structure. It is rich with organic matter from raw matters of vegetable and animal origin and represents the ideal substitute for mature manure.

ILSALIFE

CALCIOCIANAMIDE PERLKA®

CALCIOCIANAMIDE PERLKA® is a simple EC nitrogenous fertiliser performing multiple actions for the benefit of plants. Once distributed and in the presence of humidity, it activates, making slow-acting nitrogen and calcium readily available to the plants.

- balanced and effective nitrogen nutrition;
- easily assimilated calcium;
- excellent quality and yield;
- stronger plants on a healthier soil.

For best results, **CALCIOCIANAMIDE PERLKA®** must be applied on horticultural crops 2 weeks before seeding or transplanting and on trees 2 weeks before their vegetative growth. **CALCIOCIANAMIDE PERLKA®** must be distributed evenly and in the presence of humidity in order to facilitate its transformation.

CALCIOCIANAMIDE PERLKA® is a fertiliser suitable for horticultural crops, quality fruit and rice; it improves greatly the quality level of the products.

5 kg

25 kg

600 kg

Formulation: microgranular, granular

COMPOSITION

	Granular and Micro
Total Nitrogen (N)	19.8%
of which: nitric Nitrogen (N)	1.8%
cyanamid Nitrogen (N)	>15.5%
dicyandiamide Nitrogen (N)	ca. 0.5%
Calcio (CaO)	>50.0%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia, orange tree	About 2 weeks before growth resumption	Basal dressing	400
Other vegetables	10-12 Days before sowing/transplanting	Basal dressing	500
Asparagus	After shoot harvest	Basal dressing	400
Artichoke	15 Days before growth resumption	Basal dressing	400
Stone fruits	About 2 weeks before growth resumption	Basal dressing	400
Strawberry	8-10 Days before transplanting	Basal dressing	400-500
Apple tree, pear tree	About 2 weeks before growth resumption	Basal dressing	300-400
Hazelnut tree, olive tree	About 2 weeks before growth resumption	Basal dressing	400
Pepper, tomato, potato	8-10 Days before transplanting	Basal dressing	400
Rice	About 1 week before submersion	Basal dressing	250-350
Table and wine grape	About 2 weeks before growth resumption	Basal dressing	300-400

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

Distribution areas: Veneto, Friuli Venezia Giulia, Trentino Alto Adige, Lombardia (except for Milano e Pavia)

ILSAFOL 20.20.20

2,5 kg

ILSAFOL 20.20.20 is a water-soluble fertilizer for foliar application. Its balanced ratio between nitrogen, phosphorus and potassium enables it to be applied during all stages of the crop production cycle until the fruit is full. It is suitable during the vegetative growth of the herbaceous plants and during the lengthening of the sprouts of the arboreal plants, thus favouring a regular and uniform development of the leaves while stimulating the photosynthetic activity. The presence of chelated micro-elements also prevents micro-nutritional deficiencies.

ILSAFOL 20.20.20 is particularly indicated, along with specific natural biostimulants, for the formation and enlargement of the fruits, while reaching a uniform and distributed size in the major classes. **ILSAFOL 20.20.20** is rapidly absorbed at the foliage level, thanks to the presence of surfactant substances. For complete effectiveness, mixing with an organic co-formulant is recommended. Carry out preventive tests when mixing with mineral oils and Bordeaux mixture.

- provides nitrogen, phosphorus and potassium in a balanced manner;
- it provides meso and microelements useful to prevent micro-deficiencies;
- promotes vegetative development;
- it favours the enlargement of the fruits.

Formulation: hydrosoluble powder

COMPOSITION

Total Nitrogen (N)		20%
of which: Ureic Nitrogen (N)	11.4%	
Nitric Nitrogen (N)	5.2%	
Ammoniacal Nitrogen (N)	3.4%	
Phosphoric Anhydride (P_2O_5) soluble in neutral ammonium citrate and water		20%
Water soluble Phosphoric Anhydride (P_2O_5)		20%

Water soluble Potassium oxide (K_2O)	20%
Water soluble Boron (B)	0.02%
Water soluble on dry EDTA chelated Cooper (CU)	0.02%
Water soluble EDTA chelated Iron (Fe)	0.04%
Water soluble EDTA chelated Manganese (Mn)	0.02%
Water soluble Molybdenum (Mo)	0.01%
Water soluble EDTA chelated Zinc (Zn)	0.02%

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Cherry tree, Apricot tree, Peach tree, Nectarine, Plum tree, Olive tree	2-3 applications during vegetative development, every 15 days 2-3 applications during fruit enlargement, every 12 days	Foliar	2-2.5
Ornamental and Floral Crops	During the cycle, every 10-12 days	Foliar	250-300 gr/100 l water
Apple tree, Pear tree, Actinidia, Citrus	2-3 applications during vegetative development, every 15 days 3-4 applications during fruit enlargement, every 12 days	Foliar	2-2.5
Leafy Vegetables	2-3 applications from post-transplanting, every 12 days	Foliar	2-2.5
Fruit Vegetables in open field	3-4 applications during fruit enlargement, every 15 days	Foliar	2-2.5
Greenhouse Fruit Vegetables	3-4 applications during fruit enlargement, every 15 days	Foliar	250-300 gr/100 l water
Table Grape	2-3 applications during vegetative development, every 15 days 3-4 applications during berries enlargement, every 12 days	Foliar	2.5-3
Wine Grape	2-3 applications during vegetative development, every 15 days 1-2 applications during fruit setting, every 10 days	Foliar	2-2.5

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ILSASOL 20.20.20

ILSASOL 20.20.20 is a water soluble **NPK** + microelements fertilizer that provides all the elements useful for plant nutrition. **ILSASOL 20.20.20** is a water soluble fertilizer for fertigation systems, suitable for all phenological stages, from the fruit setting to the phases preceding the harvest.

Thanks to the purity and quality of the raw materials used during production, **ILSASOL 20.20.20** can meet the needs of all demanding crops, trees, horticulture and flowers. The combined application of **ILSASOL 20.20.20** with the **VIRIDEM®** line's radical biostimulants, considerably increases the roots' absorption efficiency.

- fertilizer with an acidic and immediately soluble reaction;
- it provides all the nutrients necessary for the growth of crops;
- promotes harmonious development of crops;
- it's particularly suitable combined with radical biostimulants.

25 kg

Formulation: hydrosoluble powder

COMPOSITION

Total Nitrogen (N)		20%
of witch: Ureic Nitrogen (N)	14%	
Nitric Nitrogen (N)	4%	
Ammoniacal Nitrogen (N)	2%	
Phosphoric Anhydride (P_2O_5) soluble in neutral ammonium citrate and water		20%
Water soluble Phosphoric Anhydride (P_2O_5)		20%

Water soluble Potassium oxide (K_2O)	20%
Water soluble Boron (B)	0.01%
Water soluble on dry EDTA chelated Cooper (CU)	0.01%
Water soluble EDTA chelated Iron (Fe)	0.02%
Water soluble EDTA chelated Manganese (Mn)	0.01%
Water soluble Molybdenum (Mo)	0.005%
Water soluble EDTA chelated Zinc (Zn)	0.01%

FERTIGATION

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	Every 10-15 days from fruit set to veraison,as needed	Fertigation	25-50
Cherry tree, Apricot tree, Peach tree, Nectarine, Plum tree	Every 10-15 days from fruit set to veraison,as needed	Fertigation	50-75
Ornamental and Floral crops	During the cycle, every 10-12 days	Fertigation	500-600 gr/100 l water
Apple tree, Pear tree, Actinidia	Every 10-15 days from fruit set to veraison,as needed	Fertigation	50-75
Olive tree	Every 10-15 days from fruit set to veraison,as needed	Fertigation	25-50
Greenhouse Vegetables	Every 10-15 days from post-transplanting	Fertigation	5-6 kg/1000 m²
Vegetables in open field	Every 10-15 days from post-transplanting	Fertigation	50-75
Table and Wine Grape	Every 10-15 days from fruit set to veraison,as needed	Fertigation	50-75

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

SFEROSOL

SFEROSOL is a nutritional supplement based on micronized Sulphur into bentonite.

- its exclusive lenticular form has been designed for handling and use;
- the presence of clay makes sulphur soluble into the soil very quickly;
- it decreases pH of alkaline and saline soils, so providing nutrient uptake.

SFEROSOL is recommended for crops that need high amounts of Sulphur for quality productions.

Formulation: lenticular

COMPOSITION

Total Sulphur (S)	87%	Sulphur Trioxide (SO_3)	217%
of which: soluble Sulphur (S)	87%		

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Actinidia	Soil preparation	Basal dressing	200-500
Carrot and Pastinaca	Soil preparation	Basal dressing	150
Cereals	Soil preparation	Basal dressing	100-150
Stone Fruits	Soil preparation	Basal dressing	150-300
Forage Crops	Soil preparation	Basal dressing	100-150
Potato	Soil preparation	Basal dressing	200-500
Pepper, Tomato, Processing Tomato	Soil preparation	Basal dressing	200-500
Pome Fruits	Soil preparation	Basal dressing	150-300
Table and Wine Grape	Soil preparation	Basal dressing	200-300
Other Vegetables	Soil preparation	Basal dressing	150-300

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

SILIFORCE

SILIFORCE® is a liquid fertilizer composed of a mixture of micro-elements containing silicic acid, molybdenum and zinc. The orthosilicic acid is completely bioavailable. Its formulation allows to elemental silicon to be absorbed through the tissues of plants and exert its strong biological activity.

- it improves nutrient assimilation and traslocation into the plant;
- it improves lymph circulation and stimulates the development of the root system while reducing the evapotranspiration rate;
- it improves the resistance against cryptogamic diseases and makes foliar surfaces inhospitable to parasites.

SILIFORCE® leads to produce healthier fruits, improving the quality and the resistance to post-harvest operations.

1 lt

Formulation: liquid

COMPOSITION

Water soluble Molybdenum (Mo)	0.2%	Water soluble Zinc (Zn)	1.8%

IN ORTHOSILICIC ACID

The efficacy of **SILIFORCE®** is strictly dependent on the bioavailability of the orthosilicic acid contained in it.
It is necessary to follow the product use instructions present on the label.

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	cc/ha
Actinidia	Every 10 to 15 days from pre-flowering to veraison	Fertigation/Foliar	250-300
Apricot tree, Cherry tree, Peach tree	After fruit set every 15 days	Fertigation/Foliar	250-300
Onion	Every 15 days during most intense growth period	Fertigation/Foliar	250-300
String Bean	Every 10-15 days in the most intense growth stages	Fertigation/Foliar	250-300
Strawberry	Every 10 to 12 days from pre-flowering throughout the harvest time	Fertigation/Foliar	250-300
Durum and Common Wheat	At raising with the herbicide or fungicide. At blossoming/ earing with fungicides	Foliar	500
Eggplant, Tomato	Every 8 to 12 days from transplant to full production phase	Fertigation/Foliar	250-300
Apple tree, Pear tree	After fruit set every 15 days	Fertigation/Foliar	250-300
Melon, Pepper	From initial flowering every 10 to 12 days	Fertigation/Foliar	250-300
Potato, Garlic, Processing Tomato	Every 8 to 10 days during most intense growth period	Fertigation/Foliar	250-300
Rice	At raising with herbicides	Foliar	500
Table and Wine Grape	Every 10 to 15 days from pre-flowering to veraison	Fertigation/Foliar	250-300
Courgette, Cucumber	From the initial vegetative phases every 12 to 15 days	Fertigation/Foliar	250-300

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

ORGANIC FARMING ILSA

FOLIAR FERTILIZER

FERTIGATION

ILSALIFE

FERTILISING COMPOST WITH HIGH CONTENT OF ORGANIC NITROGEN

ILSALIFE is a highly versatile product with a soil conditioning and fertilising function useful on all types of soil with a low content of organic matter. It is obtained from the reaction between well-ripened plant material and manures. Its pellet formulation and low humidity (15%) ensure this fertiliser is not subject to fermentation, so there are no problems for storage and conservation in the warehouse.

The matrices used are of high quality, free from environmental pollutants. During the final treatment phase, they are dried at low temperature without using ovens or flames. The overall treatment guarantees they are not harmful for humans, animals and plants, ensuring full compliance with all biological health regulations.

ILSALIFE does not contain organic matrices deriving from industrial sludge and/or from water treatment plants. **ILSALIFE** is recommended:

- on rotation crops, during pre-ploughing interventions;
- on "depleted" land (land used for landfill);
- when planting tree crops and preparing environmental green areas.

COMPOSITION

Humidity	15%
Organic substance humidified on dry	43-45%
Organic carbon (C) of biological origin on dry	25-26%
pH	7.5-8%
Total Nitrogen (N) on dry	3%
Organic Nitrogen (N) on dry	2.2%
Total Phosphorus Pentoxide (P_2O_5) on dry	1.5%
Soluble potassium oxide (K_2O) on dry	1.5%
Humic and fulvic carbon (C) on dry	7%
Ratio C/N	11
Total copper (Cu) on dry	130 mg/kg
Total Zinc (Zn) on dry	280 mg/kg
Electric conducibility	6.30 mS/cm

DIRECTIONS FOR USE*

CROP	TIMING	METHOD	kg/ha
Citrus	After harvest	First soil layers incorporation	1000-1500
Apricot tree, Cherry tree, Peach tree, Plum	From early vegetative development	First soil layers incorporation	800-1500
Alfalfa, Grasslands, Pasture Lands	Pre-sowing	Incorporate into the soil	700-1000
Potato	Broadcasting during seedbed preparation	Incorporate into the soil	1000-2000
Vegetables, Leafy Vegetables	Broadcasting during seedbed preparation	Incorporate into the soil	1000-2000
Olive tree	After harvest	First soil layers incorporation	1000-1500
Stone Fruits	From early vegetative development	First soil layers incorporation	1000-1500
Table and Wine Grape	From early vegetative development	Incorporate into the soil	1000-2000

*Dosages are purely indicative and may vary depending on pedoclimatic conditions and average yields expected.

CONVERSION TABLE kg/lt

liters = kg/density

Product	Density kg/l at 20°C	kg	liters	kg	liters	kg	liters	kg	liters	kg	liters	kg	liters	kg	liters	kg	liters
CEREALMAX	1.16	1	0.862	1.5	1.293	2	1.724	2.5	2.155	3	2.586	5	4.310	10	8.621	20	17.241
CEREALMAX PLUS MICRO	1.20	1	0.833	1.5	1.250	2	1.667	2.5	2.083	3	2.500	5	4.167	10	8.333	20	16.667
CLASS FE G-FORM	1.28	1	0.781	1.5	1.172	2	1.563	2.5	1.953	3	2.344	5	3.906	10	7.813	20	15.625
ILSACROP	1.16	1	0.862	1.5	1.293	2	1.724	2.5	2.155	3	2.586	5	4.310	10	8.621	20	17.241
ILSACTIVE FINALE	1.35	1	0.741	1.5	1.111	2	1.481	2.5	1.852	3	2.222	5	3.704	10	7.407	20	14.815
ILSACTIVE START	1.19	1	0.840	1.5	1.261	2	1.681	2.5	2.101	3	2.521	5	4.202	10	8.403	20	16.807
ILSADRIP FERRO	1.26	1	0.794	1.5	1.190	2	1.587	2.5	1.984	3	2.381	5	3.968	10	7.937	20	15.873
ILSADRIP FORTE	1.21	1	0.826	1.5	1.240	2	1.653	2.5	2.066	3	2.479	5	4.132	10	8.264	20	16.529
ILSAMIN BIO-K	1.23	1	0.813	1.5	1.220	2	1.626	2.5	2.033	3	2.439	5	4.065	10	8.130	20	16.260
ILSAMIN BORO	1.25	1	0.800	1.5	1.200	2	1.600	2.5	2.000	3	2.400	5	4.000	10	8.000	20	16.000
ILSAMIN CALCIO	1.28	1	0.781	1.5	1.172	2	1.563	2.5	1.953	3	2.344	5	3.906	10	7.813	20	15.625
ILSAMIN CAMG	1.39	1	0.719	1.5	1.079	2	1.439	2.5	1.799	3	2.158	5	3.597	10	7.194	20	14.388
ILSAMIN MMZ	1.22	1	0.820	1.5	1.230	2	1.639	2.5	2.049	3	2.459	5	4.098	10	8.197	20	16.393
ILSAMIN MULTI	1.23	1	0.813	1.5	1.220	2	1.626	2.5	2.033	3	2.439	5	4.065	10	8.130	20	16.260
ILSAMIN S	1.28	1	0.781	1.5	1.172	2	1.563	2.5	1.953	3	2.344	5	3.906	10	7.813	20	15.625
ILSAVEGA	1.18	1	0.847	1.5	1.271	2	1.695	2.5	2.119	3	2.542	5	4.237	10	8.475	20	16.949

VIRIDEM®

vegetal extracts for agricultural use

ILSA
The green evolution

ILSA DISTINCTIVE FEATURES

Allow us to highlight those distinctive features that even our competitors give us credit for:

OUR HISTORY
To our customers, over half a century of history means continuity, solidity, ability to stay in the market and always meet requests with high quality products.

WE ARE FOUND IN OVER 40 COUNTRIES
To our customers, this means enjoying our great experience in applications for any kind of crops and conditions.

WORLD LEADER IN THE FIELD OF PLANT NUTRITION IN BIOLOGICAL REGIME
One could think that this leadership is the result of ILSA's deliberate business strategy, yet 90% of our turnaround comes from traditional agriculture; in our customers' eyes, this is concrete proof of the company's great competitiveness in prices and product performance. Our products are employed in traditional crops while meeting the needs of consumers increasingly aware of environmental issues.

HUGE INVESTMENTS IN RESEARCH
ILSA invests so much in research, which shows our awareness of how much is still left to know about plants and soil. To our clients, this means entering a partnership with a company aware of knowledge importance in always ensuring application quality, productivity, and respect for the environment. Distributing ILSA products benefits the merchant's reputation.

AGROGEL®: AN EXCLUSIVE MATRIX
This matrix is the result of research: it is used for producing ILSA fertilizers, has enjoyed legal recognition since March 2007 and is the only natural raw material totally standardized. So, we can provide our customers with precise information about the content of organic nitrogen, soluble organic nitrogen, organic carbon, soluble organic carbon, humidity, pH, etc. In short, objective quality and awareness of using a low environmental impact product.

QUALITY AND AGRONOMIC EFFECTIVENESS OF PRODUCTS
In order to get ILSA's brand, each product must brilliantly overcome a path that lasts no less than three years and goes from the growth chamber to the open field.
ILSA is one of the few companies provided with an in-house structure exclusively devoted to quality control of incoming raw materials and outcoming formulations, and most of all to evaluating fertilizer efficiency: this means providing our customers with maximum agronomic performance, so meeting the expectations on each product and putting our customer in the condition to enhance their market presence in the best possible way.

INNOVATIVE PRODUCTS
Solid organic gradual-release fertilizers and liquid fertilizers whose molecular weight is pre-determined during production are just a few examples of ILSA's innovation ability. The method of releasing nutrients is calculated since production stage, so that the product can meet crop requirements with maximum efficiency according to nutrient absorption curves. Feeding plants as needed means maximum efficiency with any soil, balance and maximum yield.

COMPLETENESS OF OUR PROPOSAL
Our products meet all the intervention techniques in fertilization, i.e. solid radical way, foliar way for general or specific purposes, or fertigation: this means customers can rely completely on ILSA to meet all the nutritional requirements of crops.

AGROGEL®

gelatine for agricultural use

GELAMIN®

fluid gelatine for agricultural use

VIRIDEM®

vegetal extracts for agricultural use

ILSA
The green evolution

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