

# COMPANY PROFILE



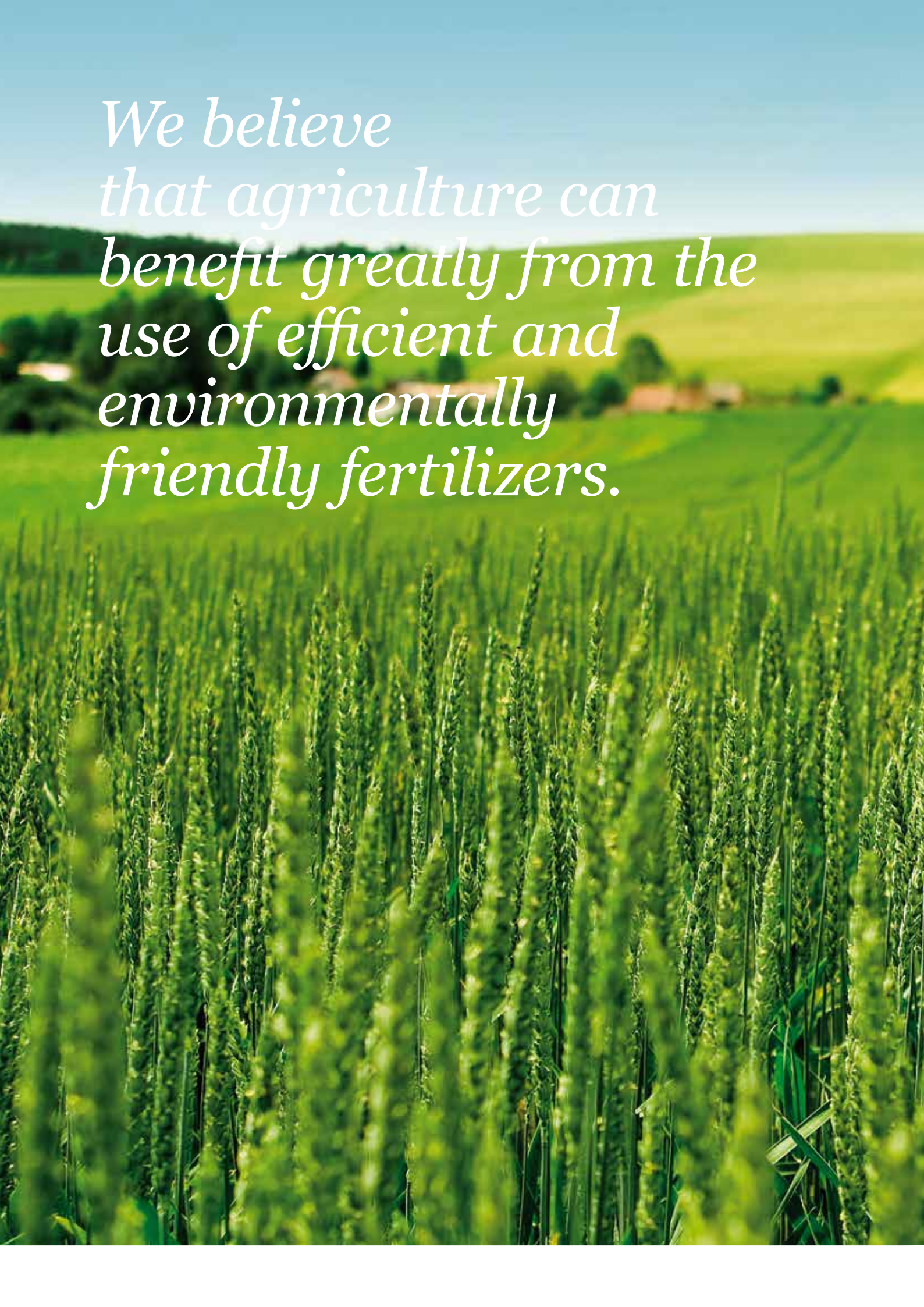
**ILSA**  
The green evolution



*The well-being of  
humanity will increasingly  
depend on the development  
of agriculture.*







*We believe  
that agriculture can  
benefit greatly from the  
use of efficient and  
environmentally  
friendly fertilizers.*





# ILSA: THE GREEN EVOLUTION

*Our idea about agriculture.*



**PAOLO GIRELLI**

*"Only by combining chemistry, agriculture and the environment we can ensure food security for all."*

*We at ILSA believe in a model of sustainable agriculture capable of simultaneously satisfying the social, environmental and economic needs of the community.*

*This idea of agriculture is achievable by applying new scientific knowledge and transforming it into process and product innovation.*

*Intense and continuous research has allowed our company to develop and produce new generation fertilizers which are effective with low doses and compatible with the need to protect and improve the environment.*

*Our products are obtained starting mainly from renewable sources and using modern automated industrial technologies which are energy-efficient and with low emissions, and hence able to make high quality and standardised products.*

*Our idea has always been that of progress capable of combining product performance with respect for nature and people.*

*We have called this "The Green Evolution" and it is much more than a simple and noble proposition. It is the philosophy which guides our action in the belief that this is the only way we can ensure solid development and lasting success and help deliver a better world for generations to come!*

*The Green Evolution is proof that we at ILSA, among the world leaders in the production of biostimulants and organic and organo-mineral fertilizers, have always been aware of our social responsibilities.*

Paolo Girelli  
ILSA Chairman





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A photograph of a modern building entrance. The building has a light blue-grey facade and a large glass canopy over the entrance. The entrance consists of glass doors and windows. Two large potted plants are on either side of the entrance. A poster titled 'Green L...' is visible in the glass door. The text 'Since 1956 we have been developing innovative and sustainable agro-technologies.' is overlaid on the top left of the image.

*Since 1956 we have  
been developing  
innovative and  
sustainable  
agro-technologies.*





# THE EXCELLENCE OF A COMPETITIVE AND **SUSTAINABLE** BUSINESS MODEL

*The development of innovative products,  
balanced use of resources and soil fertility  
have always been our goals.*



# About ILSA

ILSA is a global company, which since 1956 has been providing farmers all around the world with products to improve crop yields.

It produces and markets biostimulants and products with a specific action, organic and organo-mineral fertilizers, solids and liquids for best meeting agricultural requirements which are increasingly specialized and attentive to environmental sustainability.

It has a full range of products, split over multiple lines, for conventional and organic farming.

The activity carried out by the C.R.A. (Centro Ricerca Aziendale - Corporate Research Centre), in collaboration with leading universities, confirms the desire for continuous improvement and enables ILSA to remain at the top of the biotechnology sector for plant nutrition and biostimulation.

The reduction of greenhouse gas emissions and climate change are issues of primary interest for the ILSA. To compete globally in the medium and long term, we have to innovate, meet the highest standards of safety and operate according to essential criteria for environmental sustainability.

Flexibility, ability to innovate and enthusiasm best sum up our working approach, which has led the company to excel in the organic fertilizer market and become identified as a benchmark for the biostimulant sector.

Quality, innovation, sustainability, and much more; ILSA's commitment to practise agriculture properly, respecting the relationship between human beings and the earth.



# 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 fertilisers. 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.

### 2017

#### IN 2017 ILSA BECAME A "LARGE COMPANY" THANKS TO THE AGREEMENT WITH BIOLCHIM S.p.A. 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 - Matécsa, producer of peats and derivatives.

### 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».

### 2014

#### IN 2014 ILSA RENEWES 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.



# 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.

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+.

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®.

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.

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.





*In 2050 there will be  
more than 9 billion  
people.*

*In the future  
we will have to  
increase agricultural  
production by 70%.*





The green evolution





**9**

**BILLION**  
WORLD  
POPULATION  
IN 2050

SOURCE: FAO



**+70%**

GLOBAL  
INCREASE  
IN PRODUCTION  
FOR FOOD  
SUFFICIENCY  
BY 2050

SOURCE: FAO



**+30%**

GLOBAL  
INCREASE  
IN CEREAL  
PRODUCTION  
TO BE REACHED  
BY 2050

SOURCE: FAO

# FEEDING THE PLANET WHILE **RESPECTING** AND IMPROVING THE ENVIRONMENT

# *The current scenario: as the population increases, the need for food grows and individuals' needs and expectations increase in proportion.*

It is estimated that by 2050 the Earth will probably have more than 9 billion inhabitants, or 2.3 billion more than today.

Population growth will result in a greater need for food, and simultaneously the spread of well-being will increase the demand for meat, eggs and dairy products. Hence agricultural production will need to be increased.

To ensure food security for everyone (food in adequate quantity, of good quality and safe in health terms), global production will have to increase by 70%.

Over 4/5 of this production increase will have to take place mostly on land already cultivated via a sustainable intensification using water and soil resources efficiently, preserving and improving them.

Our planet can sustain such a demographic increase only by developing agriculture that is more sustainable.

**ILSA is ready!** Farmers can give less to produce more thanks to its natural products, with high efficiency, which make soils and plants more productive.



*Conserving  
natural resources  
also for future  
generations.*







**SINCE 1956  
WE HAVE BEEN  
PROMOTING  
A MODEL OF  
SUSTAINABLE  
AGRICULTURAL  
DEVELOPMENT IN  
TERMS OF SOCIAL,  
ENVIRONMENTAL  
AND ECONOMIC  
FACTORS**



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## MISSION

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### *Eco-sustainable agricultural productivity.*

*Best meet the needs of increasingly specialised agriculture by helping farming business people increase the quality and production yields of their crops in a socially responsible and environmentally friendly fashion.*



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## PHILOSOPHY

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### *Will for ongoing improvement.*

*The vocation of ILSA is to formulate innovative, high quality and efficient products, favouring good quality raw materials. The technical skill acquired over the years, both as technological and agronomic know-how, means we can produce fertilizers, biostimulants and products with a specific action for more evolved farming, without losing sight of farmers' budget requirements.*





# **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.*

1

## RENEWABLE SOURCES

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

2

3

## 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.*

4

5

## 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\*).*

## 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.*

\* PEF: Product Environmental Footprint

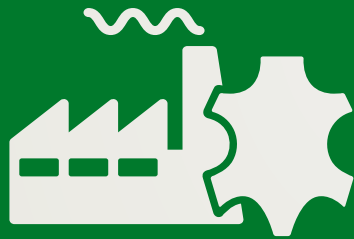
\* OEF: Organization Environmental Footprint

# ILSA SUPPLY CHAIN

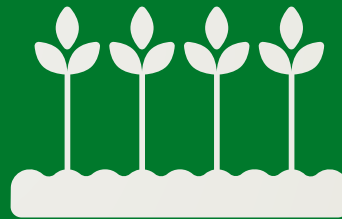
*An integrated, controlled and certified chain.*

## PRODUCT LIFE CYCLE

*Procurement of raw materials*



**RENEWABLE SOURCES  
OF ANIMAL ORIGIN:  
COLLAGEN, PROCESSED  
SKINS, OTHERS**



**RENEWABLE SOURCES  
OF PLANT ORIGIN:  
FABACEAE, MICROALGAE,  
YEASTS, OTHERS**



**MONITORING AND  
TRACEABILITY OF  
RAW MATERIAL**



**CERTIFICATION  
OF SUPPLIER'S  
CHAIN**



**PROXIMITY  
OF RAW  
MATERIAL**



**INPUT  
ANALYSIS  
AND MONITORING**





PROTECTION AND  
ENHANCEMENT  
OF PEOPLE



RESEARCH AND  
DEVELOPMENT  
OF NEW PRODUCTS  
AND TECHNOLOGIES



INNOVATION  
OF PRODUCT  
AND PROCESS



SELF-PRODUCTION  
OF ENERGY



GREEN TECHNOLOGY  
WITH LOW  
ENVIRONMENTAL  
IMPACT



FINISHED PRODUCT:  
CHEMICAL  
CHARACTERISATION,  
AGRONOMIC  
EFFICIENCY TEST



FINISHED PRODUCT:  
REGISTRATION AND  
CERTIFICATION



TRAINING AND  
DISSEMINATION  
DISTRIBUTORS AND  
FARMERS



INTEGRATED LOGISTICS  
AND DELIVERIES



SALES



AFTER-SALES



*People in the heart of the  
organizational process.*









# 97

EMPLOYEES

ILSA S.p.A.	50
ILSA BRASIL Ltda	28
ILSA MEDITERRANEO S.p.A.	9
ECR Ltda	10

Updated data at 31/12/2017



# 2,000

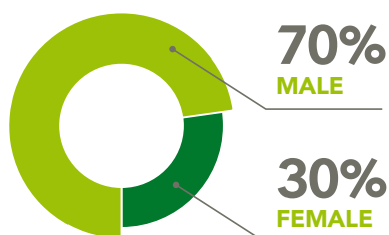
AVERAGE  
NUMBER  
OF TRAINING  
HOURS

ILSA S.p.A. - BETWEEN 2011-2017

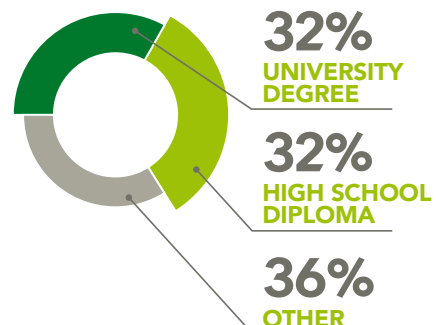
# THE EXCELLENCE OF PEOPLE

*What we are we owe to the commitment, expertise and passion of many people who have worked and are working for a common goal: "to make ILSA a solid and credible company".*

## GENDER



## EDUCATION



# *Professional and human knowledge, skills and ability represent the strategic patrimony of ILSA.*

The human resources, in the company, are our key asset. People, regardless of their role, constitute the essence of ILSA: their involvement, motivation and their ability to operate at different levels of autonomy, allow us to put their skills to use in the company in order to achieve business goals and continue on the path of development.

Company priorities include:

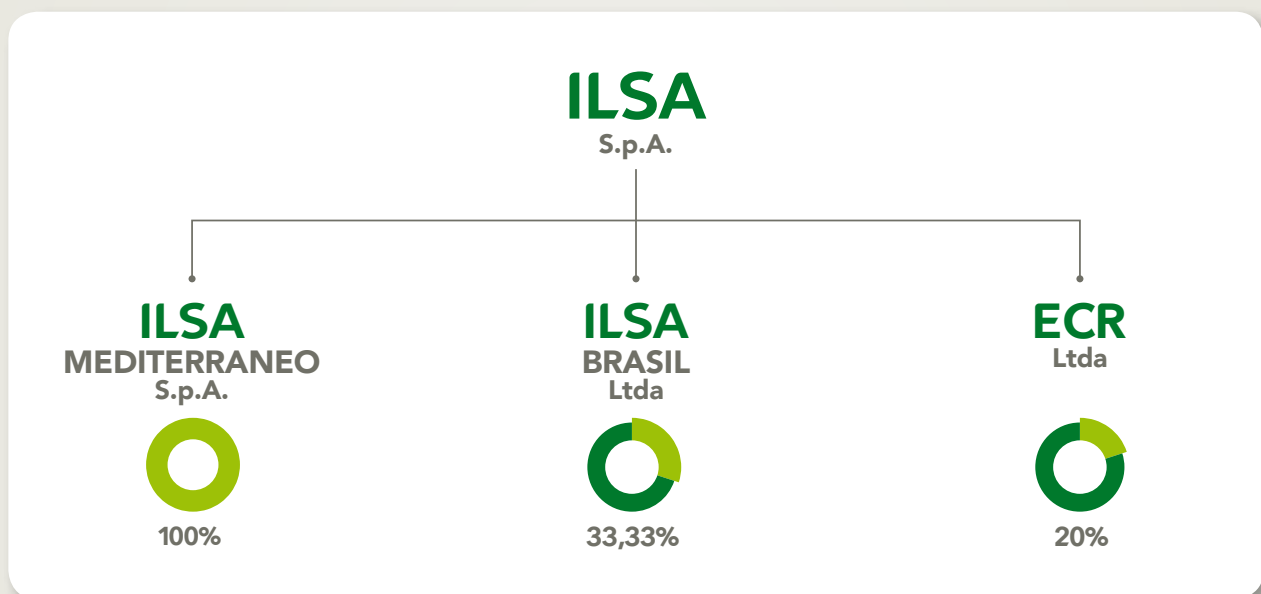
- The promotion of a common goal oriented mood
- The promotion of personal development of those working in the company

## *ILSA places people in the heart of the organizational process*

- *Presenting understandable and exhaustive information when hiring*
- *Involving people participating in discussions and decisions*
- *Guaranteeing stimulating and respectful working conditions*
- *Opposing any discriminatory attitude or behavior*
- *Investing in training and professional development*
- *Allocating part of the corporate profit to employees*
- *Organizing events involving the participation of the entire company*

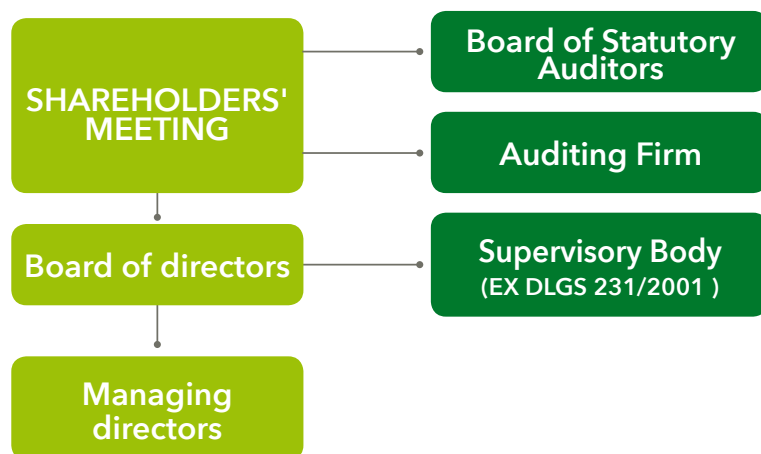
# SYSTEM OF GOVERNANCE

## *Organisational chart of company functions*



## *System of governance*

*ILSA S.p.A. uses a traditional system of governance (art. 2380 C.C.).*





## Corporate offices

### BOARD OF DIRECTORS



**PAOLO GIRELLI**

*President and managing director*

### OTHER COMPONENTS OF BOARD OF DIRECTORS

**BARBARA PIONA**

*Managing Councilor*

**LEONARDO VALENTI**

*Managing Councilor*

**PHILIPPE BERNARD HERVÉ GUÉRIN**

*Councilor*

**MARCO DE SIMONI**

*Councilor*

### COLLEGIO SINDACALE

**SONIA MAZZI**

*President*

**MAURIZIO SALOM**

*Sindaco Effettivo*

**PAOLO ZANOTTI**

*Sindaco Effettivo*

### AUDITING FIRM

**KPMG S.p.A.**

### SUPERVISORY BODY

**SONIA MAZZI**

*President*

**ENRICO BIAGINI**

*Member*

**ROSSI RICCARDO**

*Member*

## ILSA management commitments

The management of ILSA constantly affirms the commitments that should guide the conduct of business and corporate activities by all those who have a relationship of any kind with the company, and bases its own activities on management principles shared by all those working within the organisation, such as:

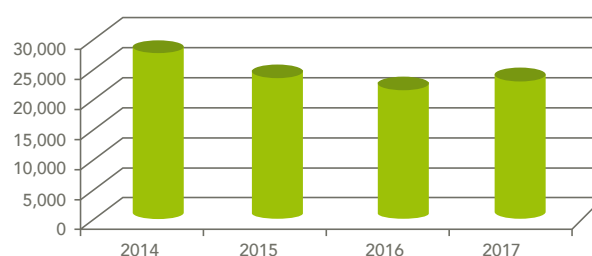
- *Honesty and transparency*
- *Responsibility*
- *Centrality of the individual*
- *Protection of labour*
- *Environmental protection*



# FINANCIALS ILSA S.p.A.

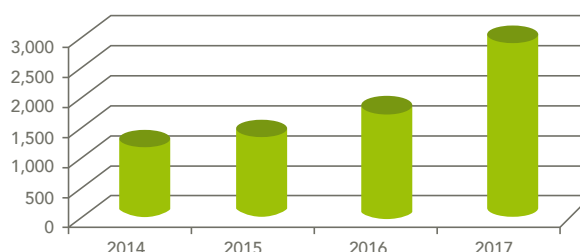
## Turnover ILSA S.p.A. (in thousands of Euros)

<b>2017</b>	<b>22,498</b>
<b>2016</b>	<b>21,080</b>
<b>2015</b>	<b>22,732</b>
<b>2014</b>	<b>26,709</b>



## Gross margin (EBITDA) ILSA S.p.A. (in thousands of Euros)

<b>2017</b>	<b>2,940</b>
<b>2016</b>	<b>2,161</b>
<b>2015</b>	<b>1,781</b>
<b>2014</b>	<b>1,635</b>



## Turnover of other societies in the group (in thousands of Euros)

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>ILSA MEDITERRANEO S.p.A.</b>	2,275,000	2,549,080	1,457,350	1,355,590
<b>ILSA BRASIL Ltda</b>	2,228,000	2,413,061	2,430,383	2,062,745
<b>ECR Ltda</b>	667,350	784,990	999,826	1,284,925

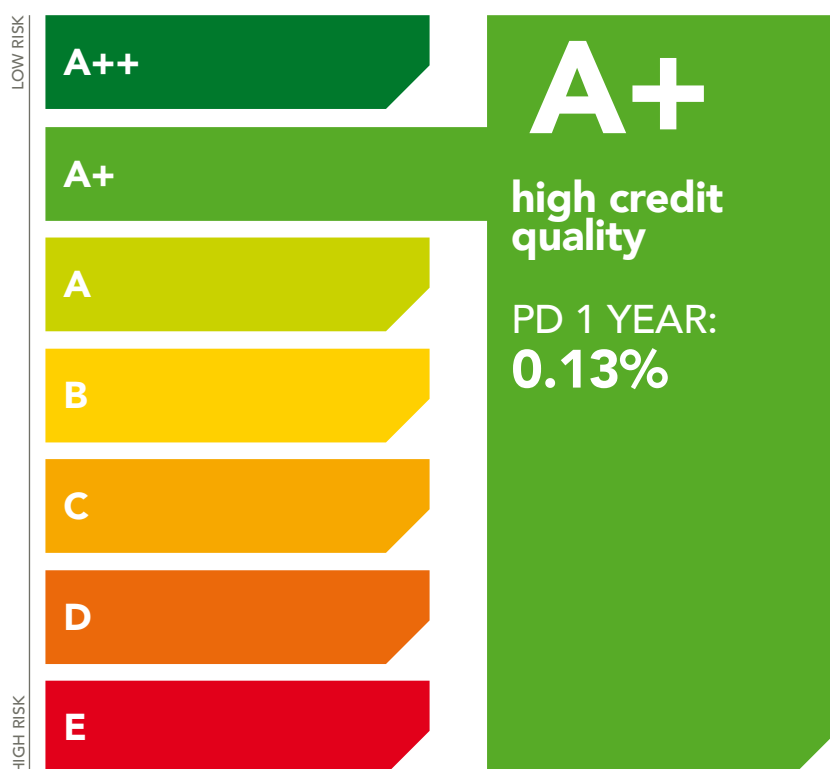
## *Rating A+: maximum transparency with the financial system*

The **Credit Passport**<sup>®</sup> Report indicates the ability of a company to perform its financial obligations in the six months following the preparation of the Report.

**Credit Passport**<sup>®</sup> is the result of advanced mathematical models, including RiskCalc from Moody's Analytics, and the constant search by the analysts at Credit Data Research.

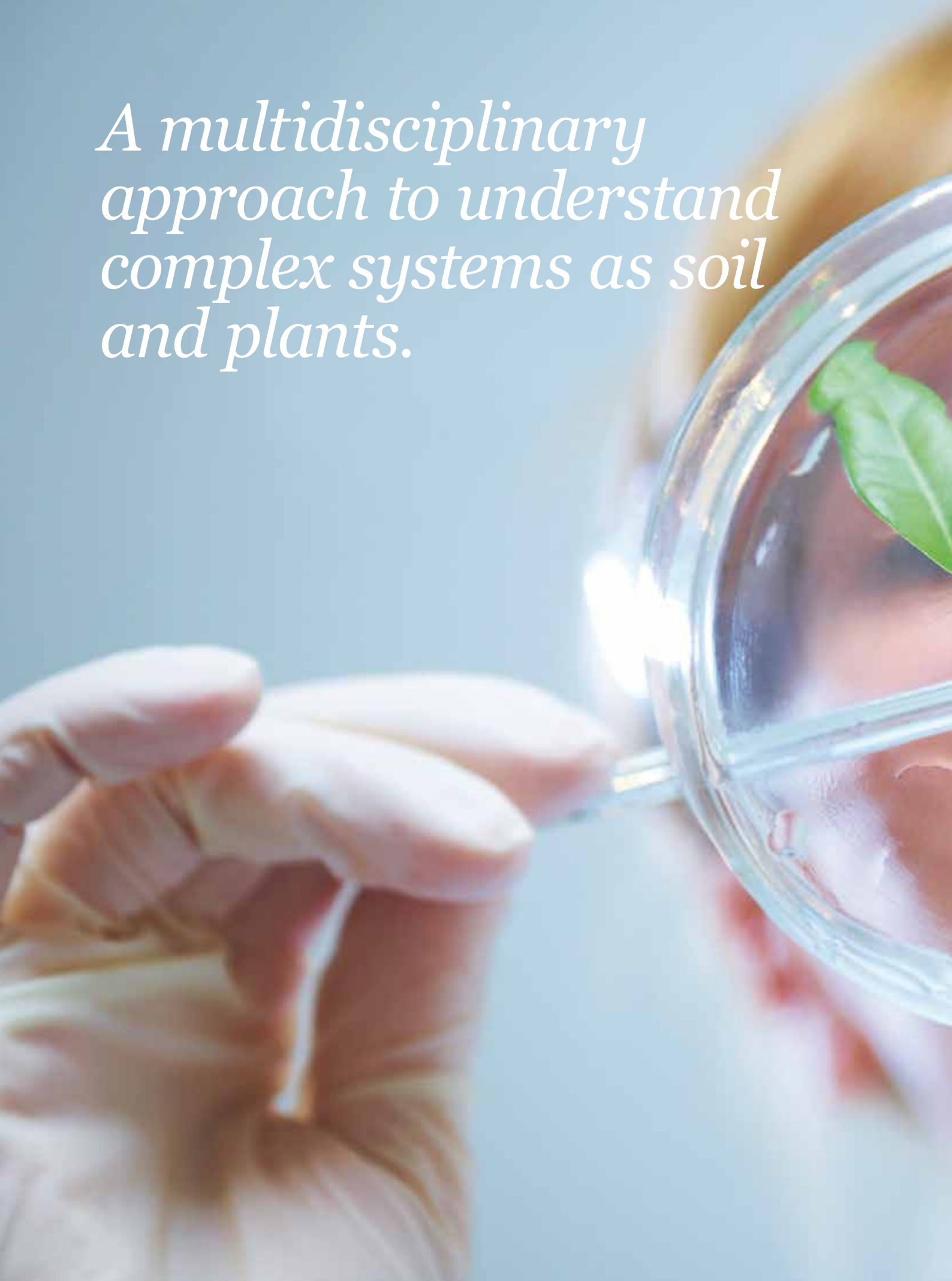
The models take financial input data from the filed balance sheet and behavioural data from the Banca d'Italia's Centrale Rischio (CCR), the most complete and updated source of credit information supplied by the banking system.

### ILSA S.p.A. - CREDIT PASSPORT ANALYSIS





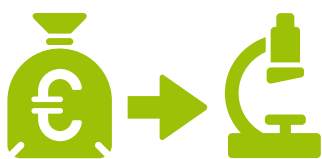
*A multidisciplinary  
approach to understand  
complex systems as soil  
and plants.*





# EXCELLENCE IN RESEARCH

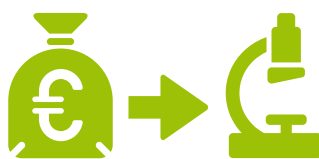
*ILSA research opens up  
new avenues for agriculture  
in the near future.*



**9.8**

MILLION EUROS  
IN RESEARCH AND  
DEVELOPMENT  
FOR THE  
BIOSTIMULATION

TOTALLY FINANCED  
BY THE COMPANY



**8.97**

MILLION EUROS  
IN RESEARCH AND  
DEVELOPMENT  
FOR THE  
BIOSTIMULATION

WITH THE CONTRIBUTIONS  
OF THE REGION, THE STATE  
AND THE EUROPEAN UNION



**18.77**

TOTAL MILLION  
EUROS IN  
RESEARCH AND  
DEVELOPMENT  
FOR THE  
BIOSTIMULATION



# C.R.A. - ILSA's Corporate Research Centre: an example of excellence in the world of fertilizers.

Active since 2005, the Corporate Research Centre occupies highly skilled staff from all major Italian universities. Biotechnologists, chemists, agronomists and engineers work with the common goal of achieving product and process innovation. The activity is carried out in permanent collaboration with Italian and foreign universities.

The research center has the most modern equipment through which it is possible to carry out chemical characterisation of raw materials

and finished products and evaluate agronomical efficiency in a controlled environment.

In growth rooms within the facility, it is possible to simulate the conditions in which the products have to prove their effectiveness.

The company develops research projects financed with its own resources and with resources made available by regional, national and European institutions.

## Funded projects

**1998-2001**

**F.I.T. - INNOVAZIONE TECNOLOGICA (TECHNOLOGICAL INNOVATION)**

*In collaboration with the Italian Ministry of Education, University and Research*

**2002-2006**

**BIO.VE.NUS - PRODOTTI BIOSTIMOLANTI VEICOLANTI NUTRIZIONALI (BIOSTIMULANT, CARRIER, NUTRITIONAL PRODUCTS)**

*In collaboration with the Italian Ministry of Economic Development*

**2005-2006**

**BFP'S - BIOLOGICAL FOOD FOR PLANTS**

*In collaboration with European Union*

**2006-2007**

**BIO.FUL - BIOLOGICAL FERTILIZER FROM UNTANNED LEATHER**

*In collaboration with Veneto Region*

**2007-2009**

**VEBIOF - VEGETABLE BIOLOGICAL FERTILIZER**

*In collaboration with the Italian Ministry of Economic Development*

**2010-2012**

**UVA - UREA VEGETALE ANIMALE (VEGETAL AND ANIMAL UREA)**

*In collaboration with Veneto Region*

**2011-2013**

**METADUE - STUDIO SUL METABOLISMO SECONDARIO (STUDY ON SECONDARY METABOLISM)**

*In collaboration with Veneto Region*

**2013-2014**

**NA.S.CO. - NATURAL SOIL CONDITIONERS**

*In collaboration with Veneto Region*

**2013-2014**

**I.C.I. - INNOVAZIONE DI PROCESSO (PROCESS INNOVATION)**

*In collaboration with Veneto Region*

**2014-2015**

**AD.EX.TE - ADVANCED EXTRACTION TECHNIQUES FOR HIGH-TECH AGRICULTURE**

*In collaboration with Veneto Region*

**2014 - 2017**

**GREEN LIFE - GREEN LEATHER INDUSTRY FOR THE ENVIRONMENT**

*In collaboration with Veneto Region*

**2016 - 2019**

**LIFE BIOPOL**

*In collaboration with European Union*

**2017-2018**

**PROGETTO RPE (RISE PHOSPHORUS EFFICIENCY)**

*In collaboration with Veneto Region*



# SKILLS AND REASERCH AREAS



# *A multidisciplinary approach.*

Soil and plants are very complex biological systems that can only be studied and understood by adopting a multidisciplinary study method.

Chemistry, biochemistry, omics sciences, genetics, microbiology and physiology are just a few among the specific skills needed to understand the phenomena that regulate life in soil, promote the relationship between plants and soil in the rhizosphere and allow for a balanced growth of plants so increasing their ability to produce qualitatively and quantitatively adequate agricultural commodities.

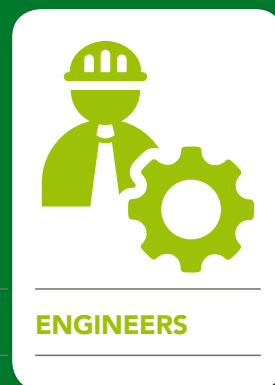
ILSA has equipped itself with these skills and has developed for years its research projects by applying a multidisciplinary approach with the aim of producing continuous innovation.

In the past few years the biology of complex systems and the various omics sciences related to it have revolutionised study and research so opening the way to new levels of understanding and research fronts.

Genomics, transcriptomics, proteomics and metabolomics represent innovative scientific study systems that allow identifying and characterising the molecular components of a cell and describing its chemical profiles, suggesting possible operation modes of the biological system and giving graphical representations of the same.

This is essential information to monitor the biochemical responses of plants; such responses, before these new technologies were introduced, were not available.

## *Skills*

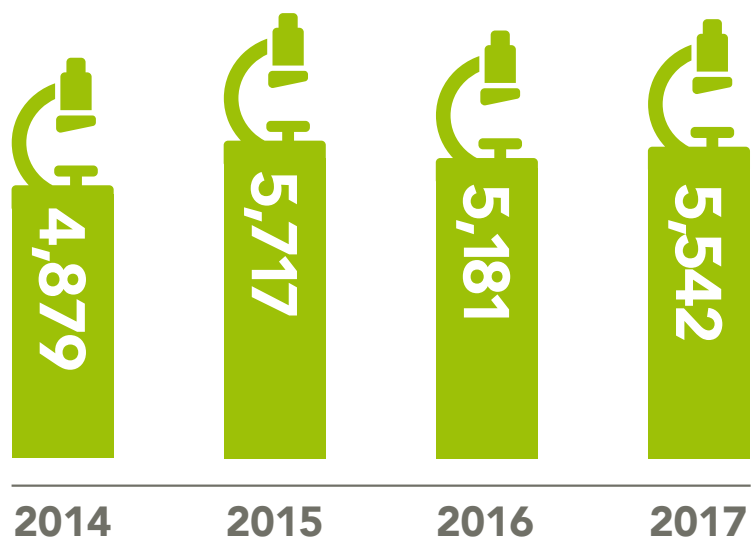




# CREDIBILITY IS GAINED WITH FACTS

*An internal accredited laboratory as a guarantee of security and transparency.*

## NUMBER OF ANALYSIS PER YEAR





## *ILSA laboratory accredited by ACCREDIA UNI EN/ISO 17025.*



ACCREDIA is the only national body authorised to perform accrediting activity for testing and calibration laboratories, and whose certifications are valid throughout Europe.

Among fertilizer producers, ILSA is the first Italian company to have an internal laboratory accredited by ACCREDIA.

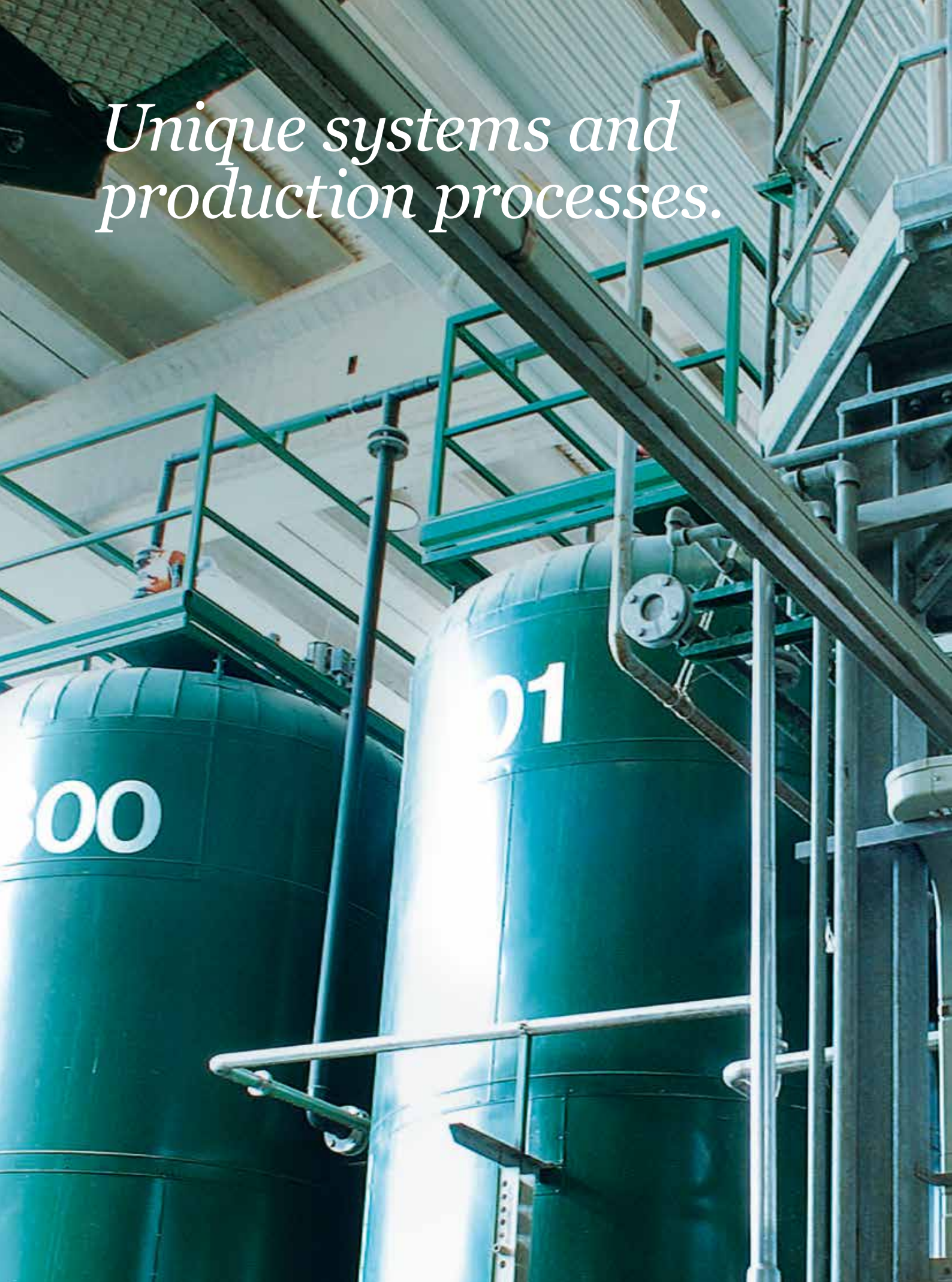
The quality of raw materials and of ILSA's products is guaranteed by the internal Quality Control laboratory.

The aim is to guarantee farmers and industry partners the fundamental chemical parameters of its fertilizers in an even more rigorous manner, according to strict international protocols and by using innovative equipment.





*Unique systems and  
production processes.*







# ORIENTATION TOWARDS CONTINUOUS IMPROVEMENT



*The most exciting challenge  
is the ability to continually  
improve all our activities.*



*Starting from Italy we aim for excellence in performance in all our activities.*

“Made in Italy” represents the ability of Italian companies to produce quality, innovation and culture that are appreciated throughout the world. Our company puts all its ability, all its passion and all its sensitivity into every product with the aim of transferring its values everywhere.







MORE THAN

**90%**

RAW MATERIAL  
FROM RENEWABLE  
SOURCES



MORE THAN

**1,700**

PROCESS  
PARAMETERS  
UNDER  
CONTINUOUS  
CONTROL



**11**

CHEMICAL  
AND PHYSICAL  
PARAMETERS ON  
ENVIRONMENTAL  
EMISSIONS UNDER  
CONTINUOUS  
CONTROL

# EXCELLENCE IN INDUSTRIAL PRODUCTION

*The lever of proprietary technologies.*



**0.79**

KILOGRAMS  
OF CO<sub>2</sub>

THE CARBON FOOTPRINT AVERAGE  
OF 1 KG OF ILSA FERTILIZER  
(REF. YEAR 2013)



AN AVERAGE OF

**380**

TONS OF PETROL  
SAVED PER YEAR

EQUIVALENT TO THE AVERAGE  
NUMBER OF ENERGY EFFICIENCY  
CERTIFICATES ACHIEVED PER YEAR  
(2009-2017)



**16**

NUMBER OF  
ENVIRONMENTAL  
IMPACT  
CATEGORIES

VALUED ON THE ENVIRONMENTAL  
FOOTPRINT STUDY PEF/OEF

## *ILSA's "The green evolution" philosophy is also applied to the entire production process.*

FAO defines as sustainable that agriculture which is able to guarantee to “all people, at all times, physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.

This is why the chemical industry of the fertilizer industry is called to give concrete answers and we believe that efficient and sustainable products must come from a just as many efficient and sustainable production, reason why we set ourselves the goal of reducing the environmental impact of every single product and production process.

At the heart of our production processes there is the use of renewable raw materials, as well as the valorization of residues and by-products of other productive sectors through "biorefining" processes.



*At Federchimica, the commitment to reduce the environmental impact of fertilizers during their life cycle allowed ILSA to receive the "Product Stewardship Award" awarded by Responsible Care to companies that were most outstanding in improvement programmes related to environmental aspects, as well as health and safety at work.*



# CERTIFICATION

*Quality, environment, energy,  
health and safety at work.*



# ILSA management systems

## Process Certifications



In 2003 it adhered to the **Quality Management System** according to **UNI EN ISO 9001:2008** with the goal of continuous improvement of own products and corporate processes.

In 2006 it adheres to the **Environmental Management System** certified in accordance with the **UNI EN ISO 14001:2004** standard, thus integrating and enforcing compliance with regulations and improving environmental management performance.

In 2010 it adheres to the **Energy Management System** certified according to the **UNI EN ISO 50001:2011** standard: **ILSA was the first Italian SME to set up this management system**, placing energy efficiency and savings among the main points of its operations.

## Product Certifications



From 1996  
to 2014



From 2014  
to today

The **Institute for the Control and Quality Assurance of Fertilizers (ICQF)** has been certifying that fertilizers comply with the label on the packaging and with legislation since 1996. **ILSA has always obtained**, for its organic and mineral-organic products, this certification which in 2014 evolved into the **ICQRF - Quality Control and Fraud Repression Institute** certification.

**The company has always obtained** the **ICQRF Quality Mark - Quality Control and Fraud Repression Institute**, issued by Certiquality through Assofertilizzanti in 2014: a voluntary agreement for a third entity to verify the quality of the products manufactured.



## ORGANIC Certifications

Organic farming employs cultivation techniques that avoid over-exploiting natural resources, in particular soil, water and air.

ILSA has a wide range of organic and organic-mineral fertilisers, both solid and liquid, used by organic farms, in Italy and all over the world. The company is regularly subjected to inspections on part of specific accredited certification bodies to determine the compliance and allowance of ILSA's technical means in organic farming. The products allowed are distinguished by the brand "**ILSA Organic Farming**".



### NUTRITION CATALOG

50

TOTAL  
PRODUCTS

56%

PRODUCTS  
ALLOWED IN  
ORGANIC FARMING

### BIOSTIMULATION CATALOG

21

TOTAL  
PRODUCTS

52%

PRODUCTS  
ALLOWED IN  
ORGANIC FARMING

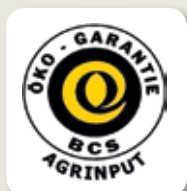
Below is a list of the certification bodies ILSA refers to for the inspections provided for by their protocols for admission to organic farming.



### MEZZI TECNICI AIAB

**AIAB is the main Italian association of organic farming.** Adhering to its standard for technical means (including fertilisers and plant protection products) ensures greater safety for consumers and transparency for ORGANIC producers.

For the ILSA products that have achieved the **Mezzi Tecnici AIAB** brand, **the entire production process prepared by the company has been certified**, preventing contamination with other inadmissible elements. It is a quality certificate that guarantees that the ILSA products featuring this brand are compatible with the environment and meet ethical, environmental and technical requirements, additional with respect to the regulations in force which only indicate the raw materials that can be used for the production of organic fertilisers, but does not specify the type of production process allowed.



### OKO GARANTIE BCS

ILSA fertilisers allowed in organic farming, as well as having a large market in Italy and in Europe, are widely spread also in other countries around the world, especially in South America for the production of many organic crops intended for the tables of consumers from the Old Continent and from the United States. Since these products come from third countries, it is necessary for an accredited body to make sure that their production, and therefore also the use of fertilisers, complies with the reference international standards on organic farming. For this, ILSA relies on **KIWA BCS ÖKO-GARANTIE GMBH**, with headquarters in Germany, recognised globally as **one of the most important and reliable bodies operating in the organic sector**.

In order to operate in specific markets, ILSA has had to ensure that its products also complied with the specific national regulations regarding organic farming.



### IMO CHILE (GRUPPO ECOCERT)

**IMO CHILE (ECOCERT GROUP)** is the undisputed leader in Chile among the various certification bodies.

For several years, for example, the company is present with its products in the **IMO CHILE** register of fertilisers complying with Chilean regulations.



### CONTROL UNION PERU'

**CONTROL UNION** is an independent organisation present in more than 70 countries that is engaged in inspection and certification activities.

**CONTROL UNION PERÙ** checked that the ILSA products, intended for organic production in PERÙ, comply with the reference Peruvian Regulation (RTPO – Reglamento Técnico para los Productos Orgánicos – Subprogram: Organic Equivalence (Perù)) .



### FIBL

FIBL is a **Research Institute for Organic Farming** based in Austria, Germany and Switzerland.

ILSA boasts the presence of **ILSAC-ON**, its biostimulant 100% of plant origin in the list **FIBL** of inputs that can be used in organic farming in Germany.





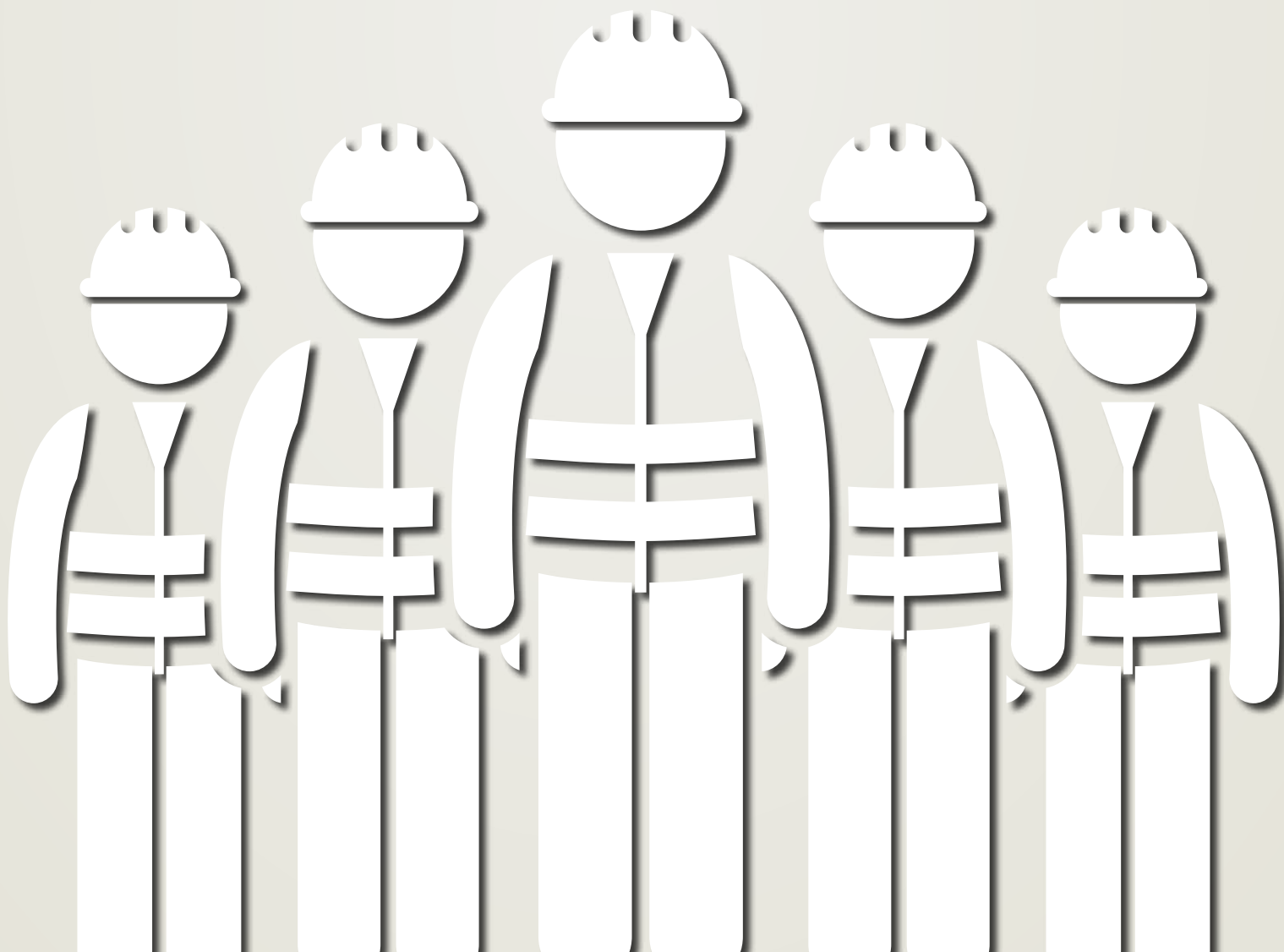
## Energy and Work



In 2004 ILSA joins the **worldwide “Responsible Care Programme”** promoted in Italy by Federchimica. ILSA has adhered to this volunteer program (adhering to the guidelines certified by the third party Certiquality in 2014) that promotes Sustainable Development of the World Chemical Industry, in accordance with values and behaviours oriented towards Safety, Health and the Environment, within the more general scope of Corporate Social Responsibility. In 2014, at Federchimica, the commitment to reduce the environmental impact of fertilizers during their life cycle, allowed ILSA to receive the "Product Stewardship Award" awarded by Responsible Care to companies that were most outstanding in improvement programmes related to environmental aspects, as well as health and safety at work.



In 2011 the company adopted a **Safety Management System** according to UNI INAIL “**Safe Work**” guidelines.



## Environmental Footprint

ILSA, leading among the companies in the organic fertilizer sector, has decided to run a study of its environmental footprint organization, **OEF - Organization Environmental Footprint**, and product, **PEF - Product Environmental Footprint**, throughout their life cycles up to the final consumer.

The results obtained, expressed by the sixteen (16) impact categories (climate changes, band Ozone reduction, toxicity, soil use, etc.) are certainly encouraging, highlighting for many of those categories, impacts even more lower than 50%, on the same nutritional units applied to the soil, using as benchmark the studies of other synthetic products historically in the market. (The results obtained are shown in the poster attached below).

Encouraged by these results, ILSA is holding a strong knowledge instrument for its environmental performance, for its improvement points and the reduction of its impact in order to strengthen its "green reputation". With the PEF/OEF - Product Environmental Footprint/Organization Environmental Footprint study, which started in 2014 and ended in 2015, ILSA, the leading European company in the sector, adhered to the European Community 2013/179/EU recommendation calculating the environmental impact generated throughout the lifecycle of its exclusive matrices **AGRO-GEL®** and **GELAMIN®**, creating a tool that will permit further improvement of environmental performance by working on different classes of impact.

*ILSA's logo referring to the Environmental Footprint study of product (PEF) and organization (OEF)*



# PRODUCTION PLANTS



---

**2.5**

**MILLIONS LITERS OF  
LIQUID PRODUCTS**

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TOTAL PRODUCTIVE CAPACITY PER YEAR

---



---

**100,000**

**TONS OF SOLID  
PRODUCTS\***

---

TOTAL PRODUCTIVE CAPACITY PER YEAR

---

\* 88,000 DIRECT PRODUCTION  
12,000 THIRD PARTY PLANTS





## **ILSA** S.p.A.

*Arzignano (Vicenza)*

The headquarters of ILSA S.p.A. is located in Italy in Arzignano, in the province of Vicenza, in the heart of Europe's most significant tanning sector. The plant covers a total surface area of 39,000 square metres. It houses management, three production departments and the corporate research centre. The production capacity is equal to 55,000 tons of solid products and 2,500,000 kg of liquid products.



## **ILSA MEDITERRANEO** S.p.A.

*Molfetta (Bari)*

ILSA MEDITERRANEO S.p.A. is located in Molfetta, in the province of Bari. The plant, which was built in 2000, covers a total surface area of 15,800 square metres. The production capacity is equal to 18,000 tons of solid products.



## **ILSA BRASIL** Ltda

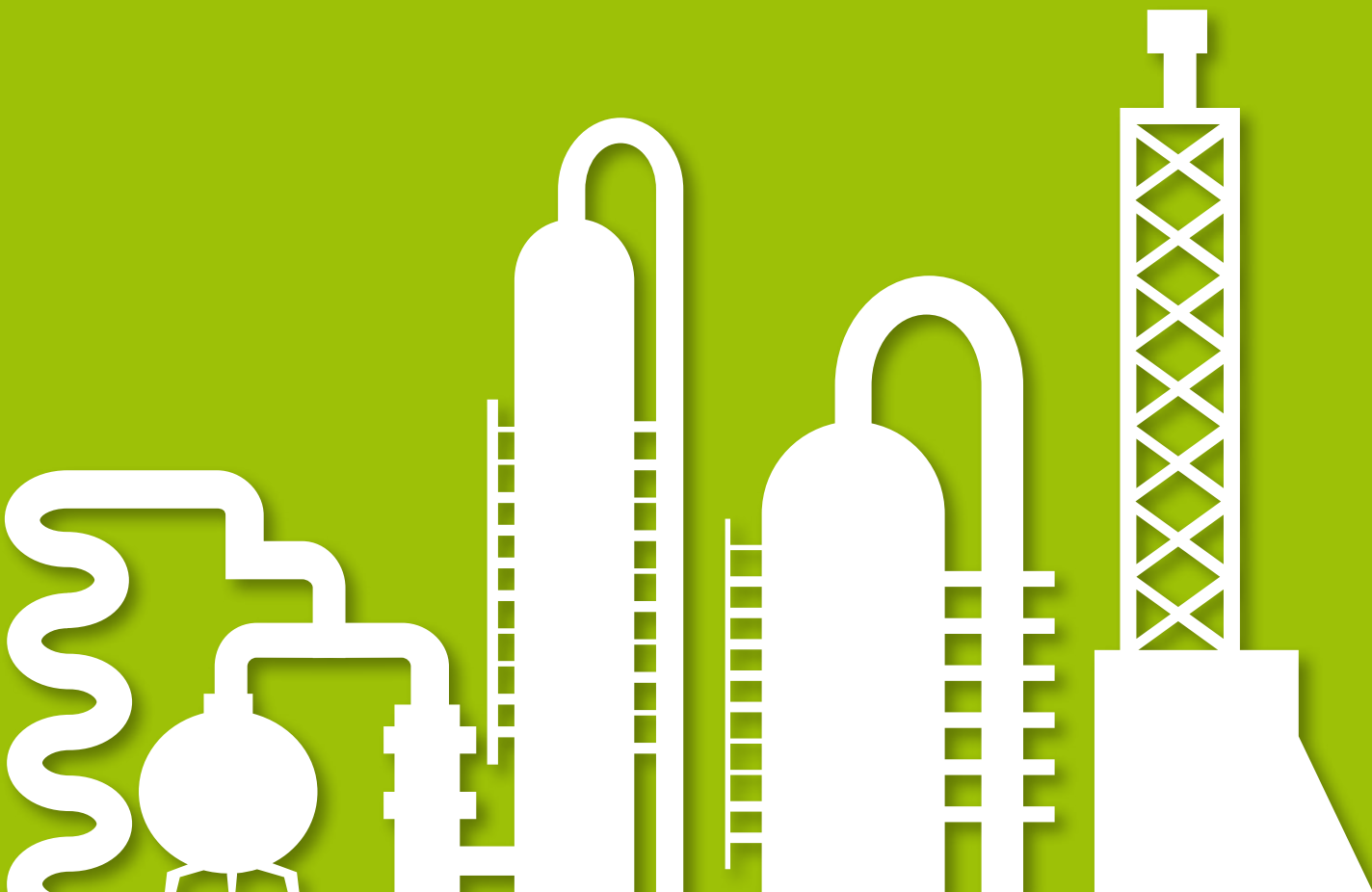
*Portao (Porto Alegre)*

ILSA BRAZIL Ltda: the headquarters of the Brazilian branch is in Portao, about 50 km from Porto Alegre. Built in 2009, it covers a total surface area of about 22,000 square metres. It houses a department that can produce 15,000 tons of AGROGEL®. It is the only fertilizer industry that produces nitrogen in the state of Rio Grande do Sul.



# UNIQUE PRODUCTION PROCESSES

*The lever of proprietary technologies.*





FULLY  
CONTROLLED  
HYDROLYSIS

1



FULLY  
CONTROLLED  
ENZYMATIC  
HYDROLYSIS

2



SUPERCritical  
FLUID  
EXTRACTION

3

## *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 have 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 physiochemical process that involves breaking of a chemical bond through the effect of water; it can be thermal, chemical or enzymatic.





FULLY  
CONTROLLED  
HYDROLYSIS

1

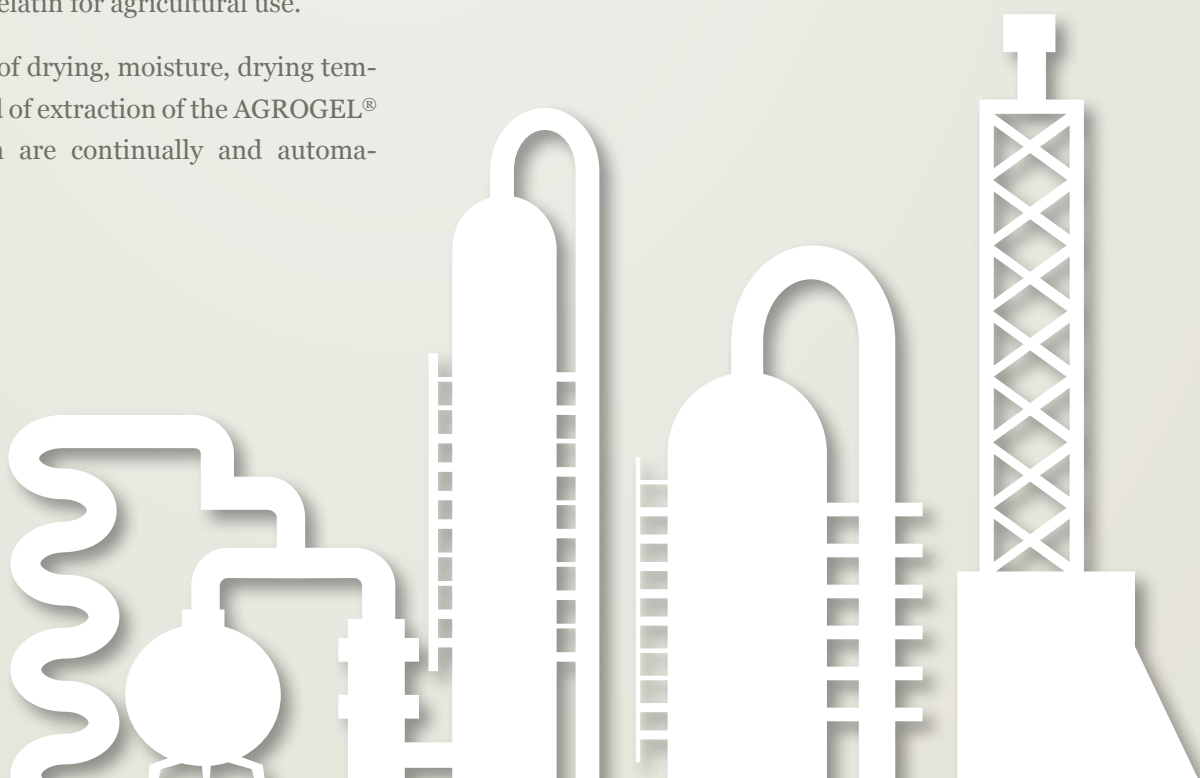
AGROGEL<sup>®</sup>, the first and only hydrolysed gelatin for agricultural use, is obtained from the FCH<sup>®</sup> process. The thermal hydrolysis of collagen occurs within rotating type autoclave reactors; the process is developed in three subsequent phases having different durations and operating conditions, i.e. at distinct and controlled temperatures and pressures.

The output of hydrolysed gelatinous material from the four reactors is sent to the continuous drying plant inside which, in a controlled environment at low temperature (100-120°C), the collagen is finally converted into gelatin for agricultural use.

During this phase of drying, moisture, drying temperature and speed of extraction of the AGROGEL<sup>®</sup> hydrolysed gelatin are continually and automa-

tically regulated and monitored, so as to obtain a homogeneous and standardised product, characterised by the presence of protein chains of different sizes, according to a pre-established pattern, such as to allow a transfer of nitrogen to the soil and naturally mediated by micro-organisms.

The mode of transfer, already determined in the production phase, allows AGROGEL<sup>®</sup> to meet the agronomic needs of crops according to the curves of absorption of nutrients.





FULLY  
CONTROLLED  
ENZYMATIC  
HYDROLYSIS

## 2

Besides thermal hydrolysis, ILSA has fine-tuned an enzymatic hydrolysis process over the years which can be applied to raw materials of animal or plant origin. This type of hydrolysis is positively characterized by its ability to free amino acids and peptides in a mainly levorotatory form, which is a form that is more biologically active and useful for plants.

The raw material is dispersed in water inside stored bio-reactors equipped with temperature, weight and pH control. A selected enzymatic pool is subsequently introduced, made up of specific proteolytic enzymes (i.e. that cut the proteins thus catalysing the protein hydrolysis), and cellulolytic enzymes (which allow the splitting of the cellulose present in biomasses and facilitate the rupture of the cell walls of plant cells).

The reaction mixture thus obtained is maintained under constant stirring at a temperature (55-60 °C) which is most suitable for the bio-catalytic activity of the enzymes. The mixture remains in these conditions for up to 12 hours, depending on the type of raw material and characteristics of the desired finished product. When enzymatic reaction has terminated, the liquid suspension is successively subjected to centrifugation, clarification and filtration.

The liquid fraction thus obtained is subjected to concentration in a falling film vacuum evaporation

plant until reaching the desired concentration in protein substance. In this last phase, deactivation of the enzymatic pool also takes place simultaneously. After a further filtration of the product, stabilised, clear and free of sediments, it is sent for final storage.

From the FCEH® process ILSA obtains GELAMIN®, a fluid gelatin for agricultural use. GELAMIN® is obtained by means of this process of enzymatic hydrolysis of raw materials rich in collagen.

Attacked by a pool of specific enzymes (stereo selective), the protein chains of collagen, a material which is particularly rich in protein, break according to defined criteria and in a manner that is always replicable.

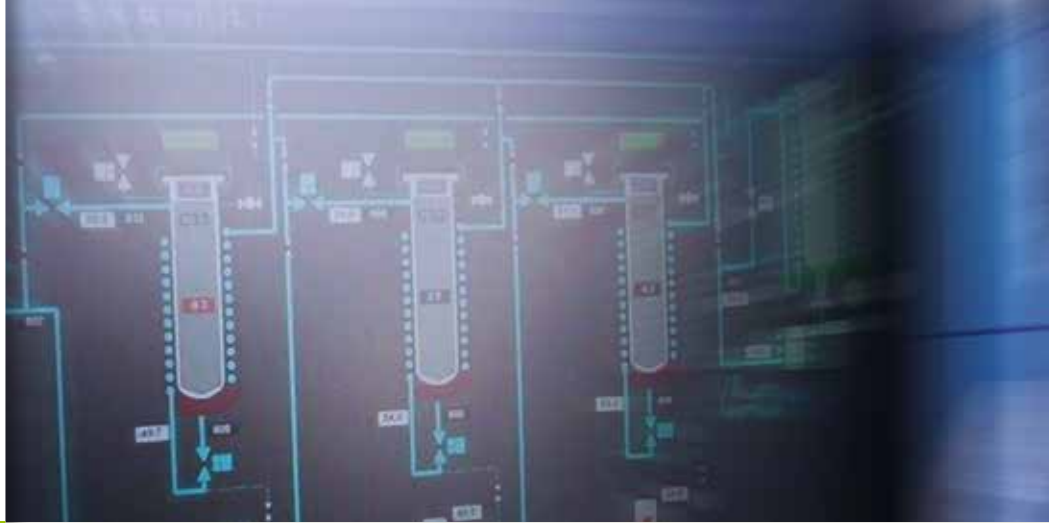
GELAMIN® is characterised as a standardised, stable and homogeneous product, characterised by the predominance of levorotatory free amino acids, easily absorbable by plants because of their compatibility with the physiology of the different plants.

GELAMIN® is the ideal raw material for the formulation of fertilizers suitable for fertigation and for foliar treatment with nutritional compounds immediately available to the plant.

GELAMIN® is characterised by its high biostimulant, complexing and carrier properties.



SUPERCritical  
FLUID  
EXTRACTION



### 3

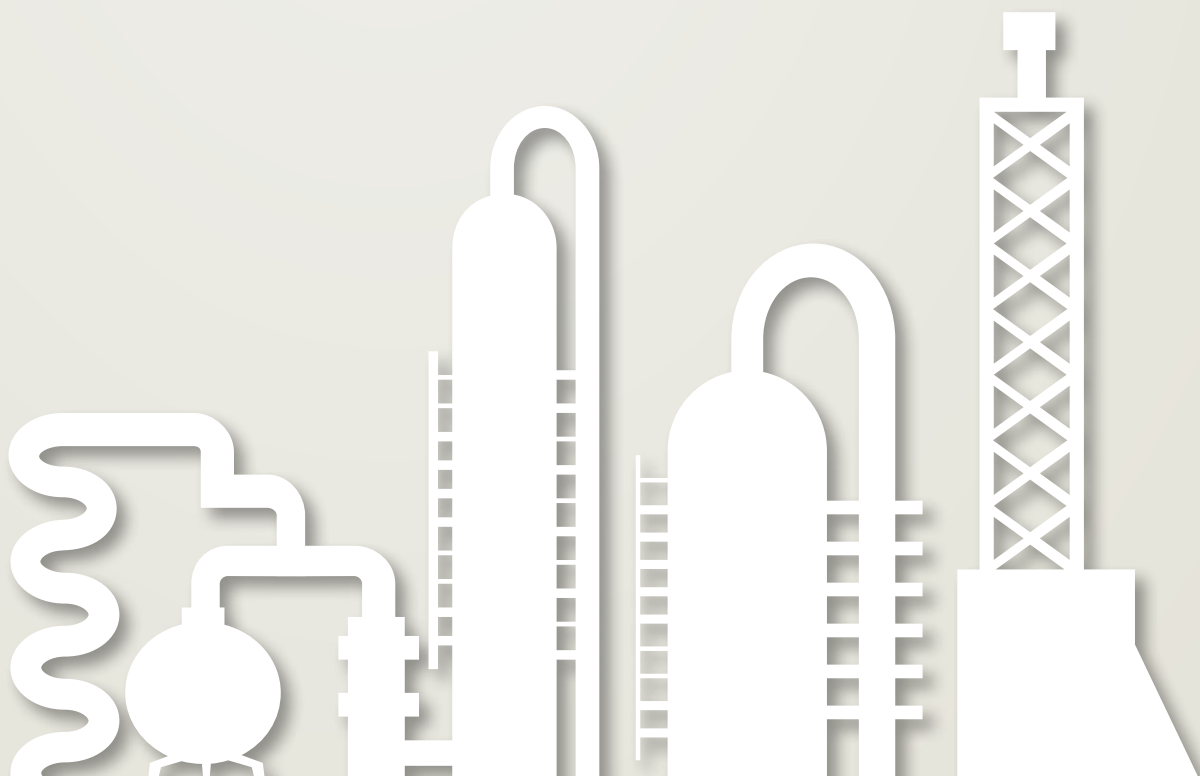
The extraction of bioactive substances from plant matrices is conducted by using carbon dioxide (CO<sub>2</sub>) as an extraction fluid in supercritical conditions.

The solvent power of CO<sub>2</sub> can be adjusted by increasing or decreasing the pressure and/or temperature.

By appropriately changing the conditions of pressure (which can reach up to 1000 bar) and temperature (which never exceeds 80°C), such

extraction can be highly selective offering the possibility of creating unique extractions, with different levels of oils, waxes and desirable extracts.

Raw plant materials, correctly dried and ground, are entered into the system. Carbon dioxide (CO<sub>2</sub>), a gas which under specific environmental conditions (temperature of 31.1°C and pressure of 73.8 bar) is in the supercritical phase, is brought to the required temperature and pressure, thus starting the extraction phase.







**GRAS APPROVED**

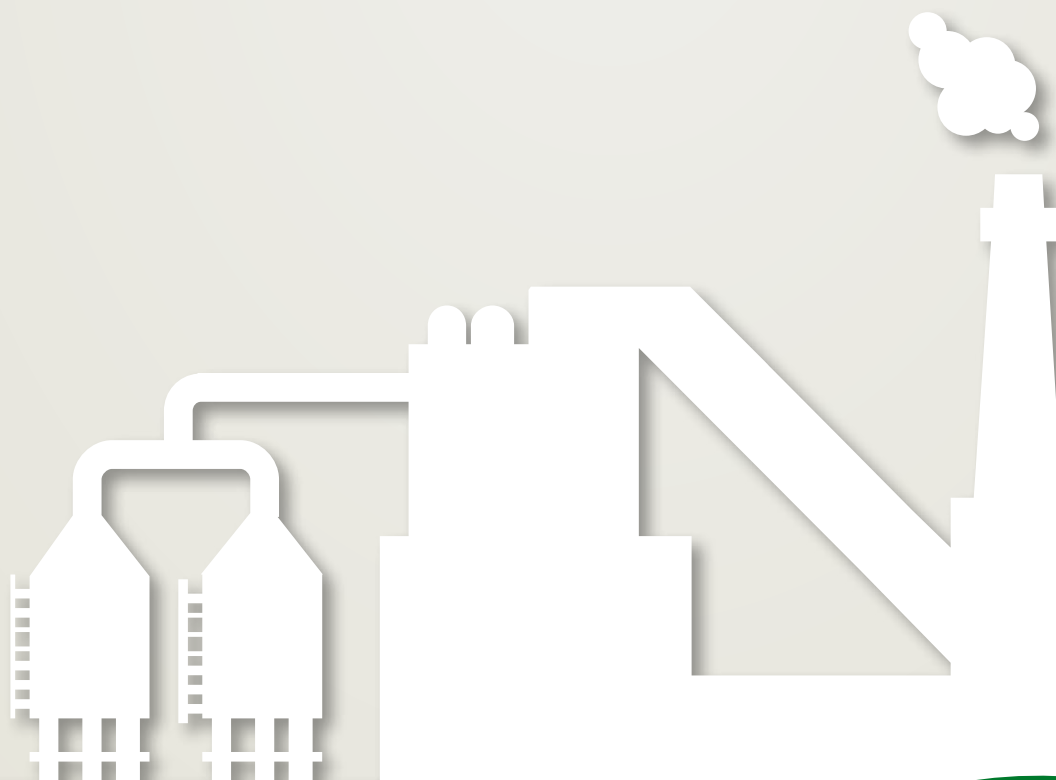
GENERALLY  
RECOGNIZED  
AS SAFE

Upon completion of extraction, the operating pressure is lowered and the CO<sub>2</sub> loses its solvent strength, releasing the extracted substances which become available in concentrated form.

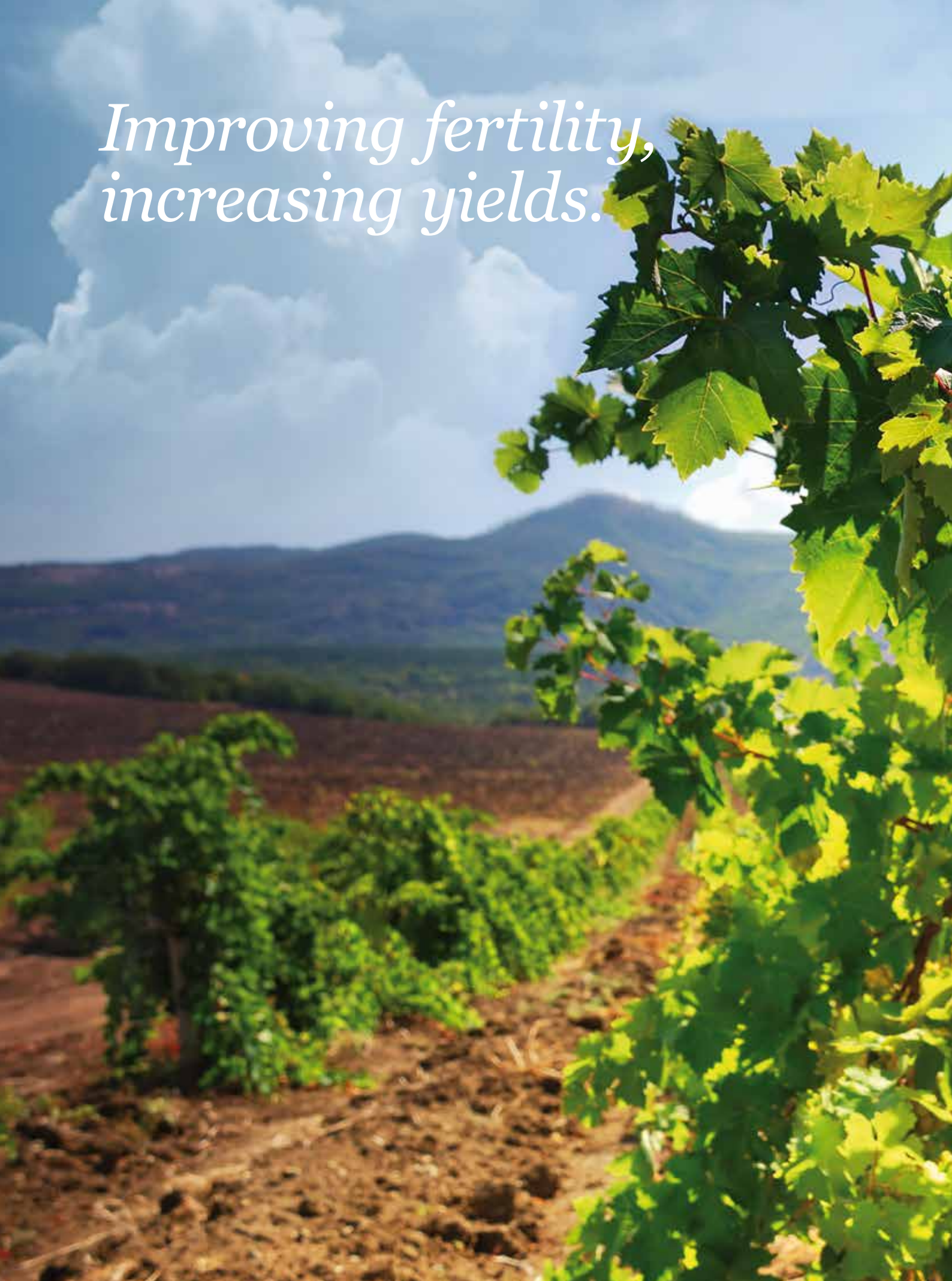
The resulting extracts are microbiologically stable and do not require preservatives. Unlike conventional processes, the selectivity of ILSA's extraction process does not involve thermal stress on the raw

materials and does not require the use of organic solvents.

Because of its low environmental impact, the FDA (U.S. Food and Drug Administration) has awarded this industrial process the attribution of GRAS (Generally Recognised as Safe) for use in foodstuffs.



*Improving fertility,  
increasing yields.*









# THE EXCELLENCE OF OUR PRODUCTS

*Fertility is the natural ability of  
agricultural land to produce.*

*A full range of solid and liquid fertilizers for conventional and organic farming that satisfies all intervention techniques, by both root and foliar application.*

ILSA fertilizers contribute to the conservation and improvement of this fertility, increase yields and guarantee economic sustainability, while protecting the environment, the natural cycles of the seasons and crops.



## FERTILIZERS

*"Intelligent" fertilizers, able to modulate the release of nitrogen in sync with the demand of plants and in line with the new concepts of "sustainable agriculture".*



## BIOSTIMULANTS

*Efficient biostimulants based on molecules and natural substances capable of acting on the primary and secondary metabolism of plants.*

# EARTH'S LIVING WITH AGROGEL®

A valid alternative technique for normal fertilisation practices envisages the use of fertilizers based on AGROGEL® hydrolysed gelatin for agricultural use, a completely natural and exclusive organic matrix produced by ILSA as a result of over 60 years of innovation, research and experimentation.

The use of fertilizers based on AGROGEL® helps reduce the number of interventions and losses due to gasification and nitrogen leaching while increasing yields.

With AGROGEL®, the earth can give its best and make the nitrogen crops need available when they need it, without waste and loss. AGROGEL® is an intelligent means that nurtures and takes care of the soil and plants, respects the environment and ensures indisputable economic benefits.

## *Advantages of AGROGEL® matrix products*

- *Modulated transfer of nitrogen*
- *High water retention capacity*
- *More prolonged and continuous availability of nutrients*
- *No loss of nutrients due to leaching and gasification*
- *Absence of nitrate accumulation in vegetal tissues*
- *Improvement of the microbiological fertility of the soil*
- *Greater compatibility and miscibility with other nutrients*
- *Reduction of field interventions*
- *Savings for the farmer*



# AGROGEL®

gelatine for agricultural use

BIO



A complete line of organic and organo-mineral fertilizers used in organic farming, which have a high content of modulation transfer protein-based organic nitrogen (AGROGEL®).



FERT

A line of organo-mineral fertilizers in different formulations that meet the nutritional needs of all crops, and are particularly suitable where agriculture with low environmental impact is carried out. They are obtained by making the various mineral components react chemically or thermally with the organic part (AGROGEL®).



TEC

The IlsaTec line includes products with very different characteristics and purposes that stimulate the metabolism of plants, feed, provide energy, prevent and treat stress. The common feature is that each product has specific and unique properties.



The green evolution

# PLANT GROWS UP HEALTHY AND ROBUST WITH GELAMIN®

The foliar nutrition with GELAMIN®-based products is a guarantee of high yields even at very low dosages. The complexing and carrier properties of GELAMIN® increase the absorption efficiency of amino acids and nutrients.

GELAMIN® is the exclusive fluid organic matrix of ILSA, completely natural, result of innovation, continuous research and experimentation.

GELAMIN®, an essential component of many ILSA's liquid and water-soluble fertilizers, provides an outstanding agronomic efficiency, thanks to the high presence of organic nitrogen, amino acids and peptides easily available to plants. Used in foliar application or fertigation, it performs nutritional and biostimulant activities ensuring production and quality with indisputable economic benefits.

## *Advantages of GELAMIN® matrix products*

- *Easy and quick assimilation/absorption*
- *Improvement in plants' internal response capacity*
- *Improved absorption efficiency*
- *Improvement in the ability to respond to abiotic stresses*
- *Metabolic stimulation*
- *Uniform and balanced growth*
- *Increase in biomass and productive capacity*
- *Lower use of water during fertigation*
- *High biostimulant, complexing and carrier properties*
- *High solubility in water and perfect miscibility with phytosanitary products*



fluid gelatine for agricultural use

**GELAMIN®-based products used for foliar application** (low molecular weight) are very quickly assimilated and transported throughout the plant. The high presence of left-handed amino acids, readily used in the plant's primary metabolism processes, ensures uniform, balanced growth which leads to an increase in biomass and therefore of productivity. Foliar fertilisation with readily absorbed GELAMIN® based products also make it possible to act promptly in cases of nutritional deficiency or during critical periods of the plant's growth.

**The GELAMIN®-based products used in fertigation** (high molecular weight) are characterised by their purity and their ability to meet the nutritional needs of crops at the different stages of their vegetative growth. They provide organic nitrogen that is rapidly broken down by soil bacteria and transformed into forms assimilable by the roots (polypeptides, peptides and amino acids), thus allowing quick response by the plants and a more uniform and balanced vegetative growth.

Some of the foliar or fertigation products are able to perform several tasks at the same time, such as stimulating the metabolism of plants, feeding, providing energy, and preventing and reacting to situations of stress.



A complete line of products to be used for foliar application and/or through the roots in order to promote the healthy and abundant growth of all crops. Many of the products in this line can be used in organic farming.



A product line to stimulate plants' metabolism, feed, provide energy, prevent and respond to stress.





# VIRIDEM® PROGRAMME

*For years, ILSA has been engaged in a programme called VIRIDEM®, aimed at the development of natural plant-based biostimulant products with a clear philosophy:  
"From plants for plants".*

*With VIRIDEM®, "The green evolution" takes another important step forward.*





vegetal extracts for agricultural use

*Through the VIRIDEM® programme, ILSA embraces the philosophy of creating products for plants, starting from the plants themselves.*

VIRIDEM® is the ILSA programme that incorporates the company's scientific heritage for the development of its plant-based biostimulants. It encapsulates the most advanced knowledge of molecular biology, microbiology, proteomics, metabolomics, physiology, chemistry and bio-processes which, over years of work, have made it possible to identify, isolate, purify, analyse and extract the metabolites and natural substances that have become the basis of its latest products for the biostimulation of crops. VIRIDEM® is ILSA 's offering for creating innovative agricultural techniques that aim to "achieve more with less".

*In the field of biostimulants, the VIRIDEM® programme represents*

- *Excellence in research oriented towards developing products for a more and more sustainable agriculture*
- *Excellence in selecting plant-based raw materials and experimenting specific substances extracted from them*
- *Excellence in the method of extracting bioactive substances*
- *Excellence in the ability to combine them to create innovative biostimulant and nutritional products that are both innovative and highly efficient*



# VIRIDEM<sup>®</sup> 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

PRODUCT PACKAGING  
AND LAUNCH



11

APPROVAL OF LAUNCH  
PLAN AND INDUSTRIAL  
START-UP



10

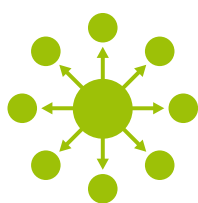
IDENTIFICATION OF THE  
EFFECTS, DOSES AND  
BENEFITS OF THE FINAL  
PRODUCT





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)



# 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

# FROM VIRIDEM® THE EXCELLENCE OF PLANT-BASED BIOSTIMULANTS

*It is estimated that in the world at least 30% of production is lost because of environmental stresses to which plants are subjected.*

*Adverse conditions limiting the quantity and quality of agricultural production.*

*ILSA has launched a line of products with a specific action that are completely natural, very effective and made with lowest environmental impact technologies.*

# *ILSA innovation in the world of vegetal biostimulants with a specific action.*

ILSA biostimulants with a specific action can act on plant metabolism to respond to specific qualitative and quantitative needs such as, 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 them 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



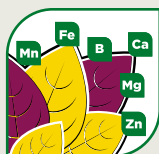
ROOTING



UNIFORMITY IN COLOUR  
AND RIPENING



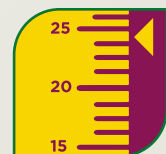
SIZE



NUTRITION AND NUTRIENT  
BIODISPONIBILITY



PLANT BIOMASS



DEGREES BRIX





An aerial photograph of a field showing rows of young green plants growing in dark brown soil. The plants are spaced out in a grid-like pattern, and the soil appears moist and rich. The lighting is warm, suggesting late afternoon or early morning.

*Always by the side  
of our clients.*







# ILSA IN THE WORLD

*An international organisation*



1

**ILSA**  
S.p.A.  
ARZIGNANO (VI)



2

**ILSA**  
**MEDITERRANEO** S.p.A.  
MOLFETTA (BA)

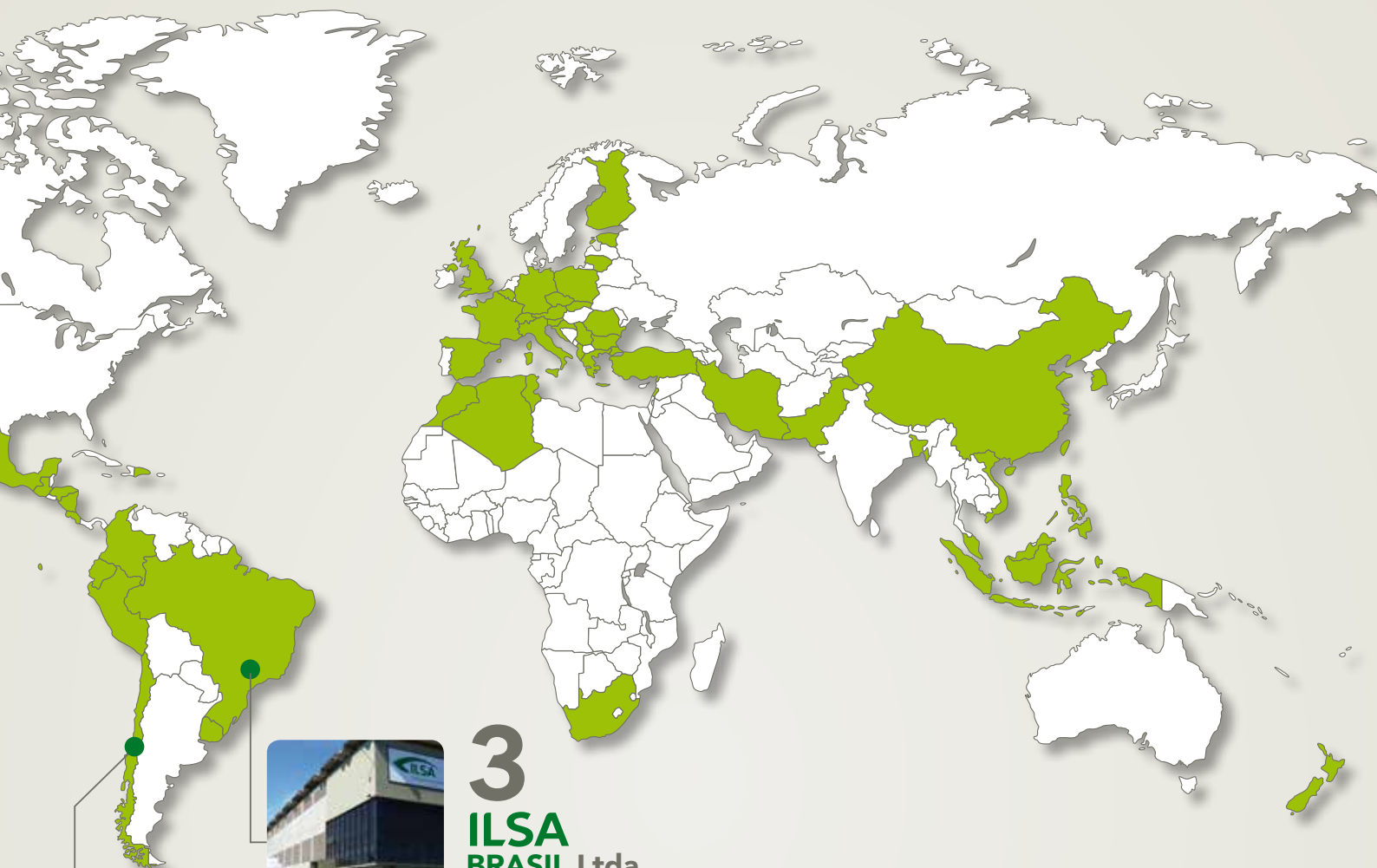
## *Commercial policy*

ILSA targets its sales on two main channels: the industry and the distribution under its own mark. Industry has gone along with ILSA since its foundation, while distribution under its own mark dates back to the early 70s at the time of the birth of FERTORGANICO, which today still is one of its most well-known products.

Solid and liquid protein hydrolysates, plant extracts and biostimulants, to be used as such or as raw material, are the product categories bought by industrial customers to which the company offers both a product customisation service and a packaging service.

As to the sales under its own mark, ILSA uses a selected dealer network. Each dealer is provided with a sales manager and a technical manager to address for task planning, operational management and result monitoring.

The aim is to offer each dealer excellent pre- and post-sales support to help them differentiate themselves from competitors and spread a culture of really professional, advanced and sustainable agriculture. Promoting our dealers' growth is a main goal of ours that necessarily relies on providing exclusive and characteristic products and on a strong and lasting partnership.



**3**  
**ILSA**  
**BRASIL Ltda**  
 PORTAO  
 (PORTO ALEGRE)



**4**  
**ECR**  
**Ltda**  
 SANTIAGO DEL CILE



**49**  
**COUNTRIES**  
**WHERE ILSA IS**  
**PRESENT**

**COUNTRIES WHERE ILSA  
 SELLS ITS OWN TRADEMARK**

ITALY	MOROCCO
ALBANIA	MEXICO
ALGERIA	PERU
AUSTRIA	POLAND
BELGIUM	DOMINICAN REPUBLIC
BRAZIL	ROMANIA
BULGARIA	SERBIA
CHILE	SLOVENIA
CYPRUS	SPAIN
COLOMBIA	SWITZERLAND
COSTARICA	TUNISIA
CROATIA	TURKEY
ECUADOR	URUGUAY
ESTONIA	VIETNAM
FINLAND	
FRANCE	
GERMANY	
GREECE	
GUATEMALA	
HONDURAS	
IRAN	
SOUTH KOREA	
LEBANON	
LITHUANIA	

**COUNTRIES WHERE  
 ILSA SELLS UNDER  
 OTHER TRADEMARKS**

ITALY  
 BANGLADESH  
 BRAZIL  
 CHINA  
 COSTARICA  
 ECUADOR  
 PHILIPPINES  
 FRANCE  
 GERMANY  
 INDONESIA  
 ENGLAND  
 MALAYSIA  
 MEXICO  
 MOROCCO  
 NEW ZEALAND  
 PAKISTAN  
 PERU  
 CZECH REPUBLIC  
 DOMINICAN REPUBLIC  
 SLOVAKIA  
 SLOVENIA  
 SOUTH AFRICA  
 VIETNAM





# ILSA IN NUMBERS



4

COMMERCIAL  
SOCIETIES

ILSA S.p.A.  
ILSA MEDITERRANEO S.p.A.  
ILSA BRASIL LTDA  
ECR LTDA

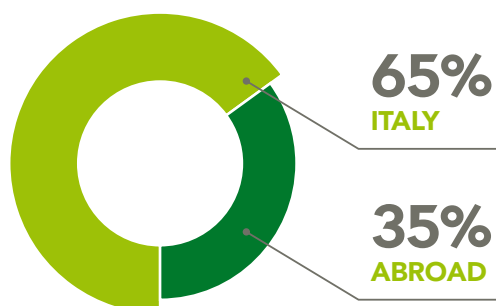


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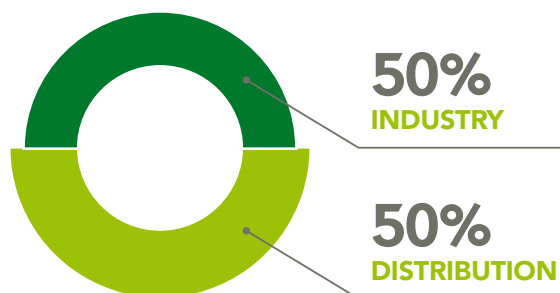
ALL OVER THE WORLD

## *Sales*

### ITALY AND ABROAD



### INDUSTRY AND ILSA'S TRADEMARK



# TEST IN OPEN FIELD

*We think that innovation is such only if it is transformed into objective result.*

For all market participants, be they farmers or retailers, to have proof of the quality and effectiveness of the products has an utmost importance. That's why we organize on our products' target crops demonstration fields around the world every year.

For farmers being able to access to the results of the technical activities carried out in the field, compared with the standard practice, means gaining confidence in new means for agriculture and this is transformed into purchases increasing the sell-out of products.

**AVERAGE TESTS  
PER YEAR  
BETWEEN 2011  
AND 2017:**



**ITALY**

**25**

**ABROAD**

**35**

TESTS ON: CEREALS - VEGETABLES - FRUIT - GRAPEVINE - OLIVE

# TRAINING AND COMMUNICATION

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



AVERAGE MEETINGS  
PER YEAR  
(2011-2017):

ITALY  
**48**

ABROAD  
**40**



AVERAGE  
PARTICIPANTS PER  
YEAR (2011-2017):

ITALY  
**1,900**

ABROAD  
**1,540**



# *Training and 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.

ILSA 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.

## *Communication tools*

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

- *Websites ([www.ilsagroup.com](http://www.ilsagroup.com) - [www.agrogel.it](http://www.agrogel.it) - [www.gelamin.it](http://www.gelamin.it))*
- *Video tutorials*
- *Informative newsletters*
- *In-depth dossiers on crops and products*
- *Reports on the results of in-field activity*
- *Product data sheet (technical data sheets, safety data sheets, fertilisation plans and application instructions)*



*"We will have to spend many years in the laboratory and many seasons out in fields all around the world.*

*We know that the future of the planet and the future of agriculture go hand in hand.*

*We'll be there for that future, always."*





**ILSA** S.p.A.

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*Tel. +39 0444 452020  
Fax +39 0444 456864*

*[www.ilsagroup.com](http://www.ilsagroup.com)*

MADE IN ITALY

