



developing, and optimizing a line of products based on microbials?

Ours is a different approach; we focused on the operation that our products perform compared to microorganisms naturally present in soil. The agricultural soils are characterized by their residual fertility understood as the ability of the soil to produce. Encouraging the dynamics related to the soil's microbiology that determine the increase of the indigenous microbial flora has proved successful. Today, our products are appreciated for the specific action they exert on the ground even when low dosages are applied.

You have developed technologies for the production of biostimulants and resistance inducers. These technologies are based on the enzymatic hydrolysis process and on controlled temperature extraction processes, for example Gelamin. Is this product, based on amino acids, only used in-house as a base for your biostimulants line or do you also sell it to third parties who use it as a raw material?

From 1993 to 2003 we perfected the process of enzymatic hydrolysis by working on a single raw material: collagen. The product obtained has allowed us to develop a wide range of products for the nutrition and for the biostimulation of the plants. The prevalence of left-handed amino acids, the high efficiency and very low salinity made Gelamin an essential raw material for ILSA and other companies in the industry offering high-quality biostimulants to the market. From 2003 onwards, in collaboration with leading research institutes and Italian and foreign universities, we have selected plant materials containing bioactive substances and we have perfected enzymatic hydrolysis techniques before and supercritical extraction afterwards, more suitable for creating biostimulants and resistance inducers unique for efficacy and for chemical characteristics.

In your Brazil factory set up in 2009, do you also produce biostimulants or only the Agrogel that is your slow release nitrogen base?

ILSA Brazil for now produces Agrogel and is equipped with biostimulant product formulation installations that use raw materials imported from Italy. Our project includes an upgrade of the Brazilian industrial structure, with the construction of enzymatic hydrolysis and pelleting plants for the production of organo-mineral fertilizers. Everything will be done simultaneously with the growth of our revenues in Central and South America.

While ILSA was founded in 1956, your presence in the international market is much more recent. What is today the share of exports in the overall business? And where would you like to see it in five years?

For many years our company has been limited to sales of an industrial nature. The marketing activity with its own brand was initiated in 1980. Average annual growth from 1995 to date has been 9%, from € 6.1 million in 1995 to € 27.2 million in 2014. Until 2009, the demand in the Italian market was always been greater than our supply capacity. This affected our growth in the foreign market. In 2009 an important phase of expansion of industrial capacity was initiated. In late 2009, the Brazilian plant entered into production and this allowed us to increase availability of solid fertilizers and in 2011 we expanded the lines of enzymatic hydrolysis, expected to double by the end of

Executives Speak

Paolo Girelli, President and CEO of ILSA (Italy)

ILSA was established in 1956 based on insight of your founder who recognized that the collagen in hides is a valuable resource for organic nitrogen fertilizers. Is the founder a member of your family and ILSA is today still a family-owned company?

ILSA is a "family company"; the capital is owned by three families, all represented on the board. The heirs of the founder are present in the company with responsibility duties. In its 60 years of existence the company has grown remaining consistent with the company's mission and philosophy decided by its founder, today more relevant than ever.

Some of your research is dedicated to the development of what you call "metabolic activators" based on natural molecules. These molecules are capable of increasing yields and impact the self-defense mechanisms of plants, activating the secondary metabolic routes. Do you consider these products to be biostimulants and can you list the types of molecules that you use?

Our research began and has proceeded in a structured manner since 1976. Thanks to this long activity, today we dispose of biostimulants and resistance inducers ready for registering and placing on the market. Next autumn we will present the "PROGRAMMA VIRIDEM" to our sales network and to the international market, within which there will be biostimulant products with very specific claims and characterized by the presence of bioactive compounds such as carbohydrates, amino acids, flavones, isoflavones, phenolic compounds and more. In the coming years some natural resistance inducers will be added to these.

You also conduct research on the use of applied microbiology to better understand the soil system, environment, and plants. Is this aiming at creating,

2016. From the first months of 2016 the facility of supercritical extraction will also be fully implemented. Ilsa is today the undisputed leader in the Italian market in which, in early 2015, it achieved 71% of its total turnover; growth in foreign markets is under way and this goes hand in hand with the increase in the quantity of biostimulants produced. We aim to see the foreign market representing 50% of our total sales revenue by the end of 2018.

Which product line do you see having the best future?

Our company has three unique technologies in the fertilizer sector: thermal hydrolysis in a controlled environment, enzymatic hydrolysis in a controlled environment and supercritical extraction. These three technologies allow us to produce products with specific action on plants (bio-stimulation and resistance induction), on soil (nutrition and bio-stimulation) and on other fertilizers (formulants). We believe that all three of these technologies will offer our company great growth opportunities.

In amino acids, there is the same challenge as in the seaweed or humic acid business: Not all amino acids are the same: vegetal or animal origin, various extraction processes, etc. How do you see this evolving? A market for each category or simply one raw material or one process definitely better than the other?

You cannot generalize; each product has its own peculiarities that depend on the raw material used, the industrial process applied, the efficiency of the finished product and the overall environmental impact determined by the production and consumption of the product itself. I don't believe the existence of a generic category or the need to register each product is the discriminating factor that will determine the spread of products based on amino acids; the market will reward the best product in terms of sustainability as compared to the worst product. This applies to any product.

You are a member of EBIC. How do you view the current developments in the shaping of a European legislation on biostimulants that is likely to categorize "substances" only, i.e. will not allow to differentiate end-products?

We've always believed in the need to be represented as a category at the European level. The category of biostimulant products is strategic to meet the challenges that lie ahead, challenges related to both the demographic and the consequent growth of food requirements. The European institution has the duty to achieve the necessary legal instruments to promote the spread of biostimulant products. I therefore hope the European legislation will be directed towards simple and affordable registration even for small and medium enterprises that often produce excellent products from the agronomic point of view and safe products from the environmental point of view.

Do you see the future of Ilsa as a stand-alone company or would you positively consider the merging within another Group that would have the means to help you boost your business?

We have a clear goal: "to sell our products on the global market leading to saturation of our industrial capacity in

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the shortest amount of time possible". The projections made by analyzing this perspective tell us that conditions exist to significantly increase our revenue and our EBITDA. Any functional project related to this goal will be taken into account.

