

SMEs EXPORT

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Exporting Potential

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LORY MÁQUINAS FAS, the only manufacturer of serial tea harvesters in Argentina



Lory is a company specialized in machine engineering for crop fields such as tea, yerba mate and tobacco. Its 40-year history, and a close labor relationship with farmers in Oberá region, Misiones province, has allowed them to design new solutions to the existing problems, thus developing innovative proposals upon the prevailing challenges affecting the different types of crops.

The harvesters are built with robust materials and a hydraulic system to support high loads and increase useful life. Cabin protection, sun protection and ergonomics allow working in a safe and comfortable environment.

The tea harvester has a 4x4 mobility, hydraulic transmission, a fully equipped cabin and leaf transport with air system. The yerba mate harvester has a cutter bar adaptable to tea harvesters with a performance of up to 2,000 kilos of green leaf per hour.

On the other hand, the benefit-cost ratio is excellent thanks to the harvest speed and the autonomy with a single operator.

The company ***works by adapting the designs of its harvesters to the needs of each crop and region, aiming at increasing production and profitability of the client.*** The appropriate technology is selected through material and field tests, adapting the development of the models to specific crops.

Their systems are designed to simplify the crop configuration by adjustment mechanisms in height, cut speed and tire adaptation.

The equipment is prepared to be coupled and packed safely and travel in the transport systems mostly used. The adapted models of harvesters have been exported to Ecuador and Kenya. According to David Lory, Production Manager, Africa, India and Sri Lanka are the most important tea markets, this is why they are aiming at expanding their presence there.

The company is ISO 9001/2015 certified and has a production capacity of 40 harvesters per year, all of them manufactured with national components.

INTI has participated in projects related to production, marketing and sales improvement. They have worked on a layout analysis to strengthen sales and standardize welding parts molds of tea and yerba mate harvesters. "INTI's help enabled an improvement of the efficiency of the production process, achieving a decrease in downtime and a significant reduction in the discarding of raw materials. Sales growth required an expansion and thinking about the factory more efficiently," said David Lory.

"We are the only manufacturers in Argentina that produce harvesting machines through mass production at an industrial level and a great differential is that we always have spare parts in stock," concluded Lory.

• **HS Code (NCM)**

- 8433.59.90 / tea harvester



AGROMETAL S.A., pioneer in machinery for direct sowing



Specialized in the manufacture of agricultural machines for precision sowing, from the town of Monte Maíz, province of Córdoba, Agrometal S.A. adapts its equipment to the different sowing systems and their seed variation, as well as in the application of herbicides and fertilizers.

With more than 50 years of experience, the company manufactures well-known equipment among the agricultural market, such as the Air Drill fine grain planter (wheat and barley), which can also be used for coarse grains with an adaptation kit. It is the only one in the market that has a compact design and a folding transportation system that reduces its size to 3.5 meters wide and 3.6 meters high.

Furthermore, they produce hoppers that differ in that they have a single seed and fertilizer deposit, with quick and comfortable replacement, which are moved to the different sowing areas through air pressure.

INTI has given technical assistance to different areas of the company for more than a decade, such as machine simulation tests in real planting conditions, developed equipment design improvement and prototype validation. INTI also provided training in management technologies oriented to continuous improvement.

Agrometal has an annual production capacity of 450 sowing equipment, ranging from 5 meters to 20 meters working width, equipped with different levels of technology for direct sowing agriculture. Through different accessories, its seeders are adapted to all types of land that allow tillage on stony, uneven surfaces and at extreme temperatures.

For decades the company has been recognized in several Latin American countries, as well as in Mozambique, Italy, Spain and Bulgaria. They are currently working to enter Eastern Europe and Brazil.

Sergio Di Benedetto, Agrometal Commercial Manager, said that the company has an after-sales network and a renowned service vocation. "Our machines are strong, and we ensure there are always spare parts and trained technicians at our customers disposal.

Each machine has a mandatory spare parts kit additional to the one bought by dealerships, “ he added. The Manager of the company also pointed out that they are constantly looking for companies to represent them abroad and this is why they currently have dealerships in several countries.

The company has been recognized several times by the Center for Innovation in Agricultural Technology of Argentina (CITA) in the category of agricultural parts, due to the development of hydropneumatic actuators for sowing bodies. These actuators allow the machines to provide better performance in seeding depth, more accurate grain implantation and increased productivity of the equipment, resulting in more hectares per day.

It also received an award for the development of the APX coarse grain planter, which includes a number of innovations related to folding for transportation, air drill system and chassis with land copy system and transfer of weight. What is more, the equipment has all supporting wheels in front of the sowing lines and hoppers with centralized loading.

The Commercial Manager of the company concluded: “We have a wide experience in the market that supports us and a recognized leadership as manufacturers of direct sowing machines in Argentina and other countries.”

• **HS Code (NCM)**

- 8432.31.10 / seeders - spreaders



OTHALA S.A., platform for assisted harvesting of "Rinde" fruits



From Luján de Cuyo, Mendoza province, the company developed "Rinde", a grape and fruit harvesting platform used in espalier or trellis plantations such as kiwis, passion fruits, avocados, pears, apples, papayas, etc., which enables simultaneous collection and transfer, providing higher performance conditions with less effort.

INTI worked in the development and design of this equipment unique in the world, which improves labor performance and reduces production costs. It is an assisted harvesting platform that integrates the work and automates the transfer efficiently and comfortably. It can transport four people seated in front of the vineyard, two at each side of the row, with trays to deposit the grapes and directly fill the plastic boxes.

RINDE has several advantages, mainly related to labor in the wine sector: it enables harvesting in difficult conditions, avoids the contact of the operator with the land, eliminates the use of ladders to reach the fruit, reduces the risk of accidents as operators do not need to walk or carry weight and enables harvesting in adverse conditions. Furthermore, it has utilities such as leaf removal, pre-pruning and grinding of pruning remains, with minimal maintenance.

RINDE enables a 40% reduction in the cost of the harvest and increases 5 times the working capacity of the harvester which, thanks to the platform, avoids the usual physical effort of walking between 10 to 15 km per day, with 1200 kg of daily harvest on back, in ploughed land, avoiding the use of ladders. ***This way, there is a 60% reduction in the cost per kilo of grapes and, in two months of harvest, the value of the equipment is amortized, which has a useful life of more than 15 years.***

Their proposal is to offer the producer a better-quality crop since, by having a neat harvest, the fruit does not suffer any kind of alteration until it is processed.

This platform works with a generator that sets the belt in motion, providing constant lighting, enabling continuous work for 24 hours. Besides, using this equipment makes possible the incorporation of people with reduced physical capacities to perform harvesting tasks.

RINDE is manufactured in series with a minimum production capacity of ten equipment per month and the company ***is planning to market this platform in countries in Europe, Latin America and the United States.***

When it comes to the machinery, Sergio Garbi, managing partner of the Agricultural Division of the company, commented that, with a winemaking history of 150 years in the province, the only tool used for the harvest stage has been the traditional basket until now, that is why ***“RINDE represents a technological improvement that changes the paradigm of fruit picking labor in this area.”***

“We are a company that aims at improving production outputs and final product quality while providing better working conditions for those who tend the crops. ***The world of this type of harvest leads to wines of higher quality at a significantly lower cost,***” concluded Garbi.

• HS Code (NCM)

- 8428.32.00.000B / Continuous action elevators or conveyors of goods

MARTÍNEZ Y STANECK S.A., innovation at the service of the agro-livestock producer



From the city of Tandil, province of Buenos Aires, the company manufactures equipment designed to meet the requirements and optimize the work of agro-livestock production. Its services reach more than 25 international destinations.

With a manufacturing plant of a covered surface of more than 3,000 square meters, the company is recognized by the manufacture of three lines of products. The first one is the agricultural line with the **9-foot "Silograin Zero Energy" dry grain bagger**, which is a unique innovation in the global agricultural market because it works without a tractor. This technique has minimized storage costs, energy consumption and environmental impact.

The second one is the line of animal nutrition that includes the **grain crusher for silage making** that has an excellent breaking of wet grain, with high compaction bagging in plastic bag silo for efficient animal nutrition, offering palatable high-quality food with high energy value and digestibility. The third equipment is the **forage stuffer**. The nutritional value of forage stored in a bag silo provides storage throughout the year, ensuring a linear increase in milk and meat production.

Within this same line, the **dual-purpose wagon** is manufactured. It combines a mixer and forage wagon, reducing ration costs in mechanical grazing or reserve preparation in the form of a silo. The **mixer** achieves a fast and homogeneous ration, without over-mixing for the entire roundup, while accomplishing an efficient mixture of fibers, grains, stone and vitamin components, leading to more balanced diets, with its exclusive material removal and mixing system.

Its sports field line has the **STEEL CUTTER Helical Lawn Mower of 3 and 5 bodies**, with 3.5 meters working width, a drag format, a helical cutting system with self-sharpening blades, an adjustable cutting height of 8/45 mm, with cardan transmission, 8.25 x 12 wheels, a weight of 700 kg, a power requirement of 40/50 HP and accessories with a set of blades with cardan command.

The company has a production capacity of 300 machines per year and is CE (Conformité Européenne) approved.

Furthermore, it has achieved invention patents on the three products abovementioned: 9-foot zero energy grain bagger, grain crusher for silage making and dual-purpose wagon, which are unique products in the world and the maximum evolution within its category.

For 10 years, INTI has provided the company with technical assistance and training in the application of continuous improvement technologies through Kaizen and 5S Japanese methodologies.

It has a history of more than 25 years of exports to the five continents. It is present in countries such as Uruguay, Paraguay, Bolivia, Brazil, Chile, Ecuador, Peru, Colombia, Venezuela, Panama, Nicaragua, Costa Rica, Mexico, France, Spain, Germany, Hungary, Russia, India, Pakistan, South Africa, New Zealand, Australia, and the United Kingdom. Now, it is expecting to enter the markets of the United States, Canada, Kazakhstan, Ukraine, Belarus, Kenya, Angola, and Bangladesh.

Lucía Martínez, Director of the company, said the following: “We see ourselves as a company that strives to grow based on the changing and evolving needs of our agricultural producers, both local and foreign, with whom we keep a permanent contact, listening and analyzing their comments and observations to understand how we can improve and make our value proposition evolve with superior, simpler and friendly solutions.”

And she added: “We work for an intelligent, efficient, profitable and sustainable agriculture. Both our Silograin Zero Energy bagger and our wet grain mixers and stuffers are distinguished by the fact that they minimize energy consumption, contributing to the reduction of the environmental impact.”

Martínez y Staneck S.A. counts with professionals specialized in innovation and development who, by means of analyzing and understanding the needs of the agricultural producer, find the tools to offer them a valuable solution.

• **HS Code (NCM)**

- 8422.30.21.000U / 9-foot Silograin Zero Energy dry grain bagger
- 8436.80.00.999E / Grain crusher for silage making
- 8422.30.21.000U / Forage stuffer
- 8436.10.00.000H / Dual purpose wagon
- 8436.10.00.000H / Mixer
- 8433.19.00.000K / STEEL CUTTER helical lawn mower of 3 and 5 bodies



MÁQUINAS AGRÍCOLAS OMBÚ S.A., leaders in self-unloading grain carts



Located in Las Parejas, Santa Fe province, for more than 30 years the company has specialized in the production of agricultural equipment that reaches several global destinations.

Its products include self-unloading grain carts, hoppers for fertilizers and seeds, corn and sunflower headers, grain fillers and extractors, forage trailers, mixers and disc harrows.

Its emblematic product is the self-unloading grain cart, produced in 7 models adapted to different needs and equipped with the technology that makes it a leader in loading capacity. The biggest hopper is the line self-unloading grain cart CRV 35 with a loading volume of 43,750 T and a wheat load capacity of 35 T. Its unloading speed (Wheat) is 7.33 T/minute, and its unloading time is 9,166 T/minute. Each unit counts with a cargo cover system, folding bottom plates, toolbox, water tank with soap dispenser and LED lights at the back.

As to exports, it has a commercial network of direct sales from the manufacturing plant to producers in destination countries, as well as a network of representatives, through which it trains dealerships abroad to provide technical assistance.

So far they have traded in Latin American markets such as Ecuador, Mexico, Nicaragua, Venezuela and Peru; in European markets, such as Spain, Germany, Slovakia and the Czech Republic; besides Australia, Oceania, and India. They have associated manufacturing in self-unloading grain carts in South Africa, Russia and France. They are currently planning to enter the United States and Canada.

INTI has worked with the company for more than a decade in the design of new products, among which the corn header stands out. The equipment has a configuration that allows working on crops sown at different distances, in a transversal direction and can collect corn sown in any direction. Furthermore, together with specialists from INTI, they have implemented finite element simulation techniques in the PAO 3000 sprayer and the 2020 corn header, among others. What is more, they have implemented productivity techniques in manufacturing plants, applying continuous improvement methodologies, such as Kaizen and 5S.

Ombú counts with IRAM certification ISO 9000 standard, it has a monthly production capacity of 250 agricultural machines, 90 trailer units and 12 urban hygiene units.

Among the most important recognitions, Ombú's CM 2020 corn header has received the Good Design Seal award, granted by the Ministry of Production of Argentina.

The Engineer Danilo Gribaudo, foreign trade manager of Ombú, highlights the multifaceted profile of the company regarding its range of products, both in agricultural machines, trailers and urban hygiene; with a mixed commercial system made up of dealerships, commercial travelers and affiliates in Latin American countries. "From our origins we have worked to improve the quality of agricultural work in Argentina and the world with a varied offer, multiple access facilities and outstanding after-sales assistance. The price-product ratio is significantly competitive with similar products, both in quality and technology," concluded Gribaudo.

• **HS Code (NCM)**

- 8716.20.00.900Z / Self-unloading grain carts
- 8433.59.90.900D / Corn headers
- 8433.59.90.900D / Sunflower headers
- 8716.39.00.900W / Hoppers for fertilizers and seeds
- 8436.80.00.990K / Grain stuffers
- 8436.80.00.990K / Grain extractors
- 8436.80.00.990K / Forage trailers
- 8436.10.00.000H / Mixers
- 8424.81.19.990T / Sprayers
- 8432.21.00.000K / Disc harrows



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• International Technical Cooperation



Over the last few years, there has been a strong collaboration in countries of the region in the transfer of knowledge about cutting-edge technologies in the metal mechanic, machine and tools sector, materialized in south-south and triangular cooperation projects, financed by the Argentine Foreign Ministry. Through these projects, technical actions have been taken in Bolivia, Peru and Ecuador, aiming at generating support capacities in the industry of those countries.

At the same time, INTI has historically formalized collaboration alliances with European academic institutions which facilitate the updating of our technicians and professionals, the exchange of experiences, the survey of technology in high-development centers and advanced industrial establishments, as well as deepening institutional relationships. This is how they have been working together with experts from the University of Bologna and the University of the Basque Country in projects such as the casting process, special steels, high-performance machining technologies, industrial application of laser technologies and mechanical design management. Furthermore, INTI's technicians had the possibility to access training scholarships in Austria (PRODINTEC Technology Center), Germany; German Materials Society (DGM) and Spain (University of Oviedo), with the support of the European Union.

More recently, INTI expanded its traditional relationships with the world and established a

• Capabilities of the INTI for International Markets



The agricultural machinery sector has had a significant growth in Argentina during 2020. INTI accompanies this thriving sector in four fundamental axes: **Industry 4.0, tests on agricultural machinery, technical regulations and certifications.**

Industry 4.0 appeared thanks to a high technology strategic project of the German federal government in which manufacturing computerization is promoted, as well as the need to have absolutely everything interconnected to make real time decisions.

INTI provides its capabilities to support the technological transformation of a more competitive and sustainable national industry, with the application of tools related to communications, internet of things, artificial intelligence and collaborative robotics, among other technologies, which are already producing a radical change in the forms of production.

In relation to the tests available for this industrial sector, INTI is working together with the Institute of Applied Mechanics and Structures (IMAE) of the Faculty of Exact Sciences, Engineering and Surveying of the National University of Rosario (UNR), on the first laboratory in Latin America entirely for the testing of components of the sector, related to international technological requirements for agricultural machinery and agro-parts.

This new laboratory, which is expected to be put into operation next year, is currently in a planning

technical linkage with the Testing Center (AzTEST) of the State Committee on Standardization, Metrology and Patents of Azerbaijan, achieving a milestone in terms of the scope of the international cooperation actions of this Argentine institute.

The metal-mechanic sector is extremely important for any country who wants to improve and be more developed. Any promotion of industrial activity needs the support of the metal-mechanical system. INTI understands this need and that is why it permanently accompanies the dynamism of this industrial sector through international technical cooperation.

phase and it will be ready to provide the first service in the short term: testing of cardanic bars. This new space is expected to centralize most of the tests set forth in the IRAM 8076 standard and to count with a traceable quality system associated with an international testing laboratory.

Besides, the technical regulations contemplating specifications per product make it possible to determine quality standards and also guarantee the customer or user of agricultural machinery access to safer and more efficient equipment.

In terms of certifications, the contributions of INTI allow industries to adjust their processes, designs and materials to the strictest international standards.

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