

Your turn-key partner in Walnut Business

Products & Services- 2024

Nisão - NutVision

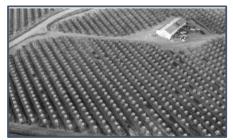


We help you start by asking the right questions

It is highly costly and often impossible to change the course of a walnut project that has began with mistakes. And experienced walnut growers know that success largely depends on minimizing tactical mistakes and avoiding strategic mistakes at all cost. Nisão's goal is to help you ask the right questions from the very beginning so that you can plan and execute your project with precision. From strategic financial modeling and plantation establishment to processing and marketing, we offer a comprehensive range of services and products to support you every step of the way. With our help, you can become a more skilled and successful walnut grower.



Strategic financial Modeling



Orchard planning & establishment



Processing plant design and implementation



International Marketing

Nisão – NutVision

Welcome to Nisão - NutVision, your trusted partner in the walnut industry. As a designer, manufacturer and turn-key integrator of walnut processing systems, we are committed to delivering innovative solutions that help streamline your production processes, improve product quality and maximize profits. We provide turn-key solutions for harvesting, processing, sorting, storage and packaging. Our systems are designed with your unique needs in mind, and we work closely with you to ensure that they are tailored to your specific requirements.

Lets face it; with higher input costs and stagnant product prices, the walnut market is going through a period of unknowns. We understand that product quality, efficiency and productivity are the key areas that each grower must focus to maintain its competitiveness in this market conditions. With its experience in walnut production, harvest and processing, Nisão – NutVision offers a comprehensive range of services, from strategic financial modeling, all the way to international marketing. Our specialized team will work with you to identify areas where you can improve your operations and to provide practical solutions that will help you achieve your goals.

We are dedicated to delivering outstanding customer service and support, and we are always available to provide guidance and assistance whenever you need it. Whether you're looking to upgrade your existing production systems or starting a brand-new walnut production venture, we have the expertise and resources to help you succeed. Contact us today to learn more about how we can help your walnut business with our turn-key systems and consultancy services.

Advanced Walnut Drying Lines

Designed & Built for Walnut Growers by Walnut Growers

Superior nut quality and energy efficiency through low temperature drying without compromising on drying time.

Advanced Design

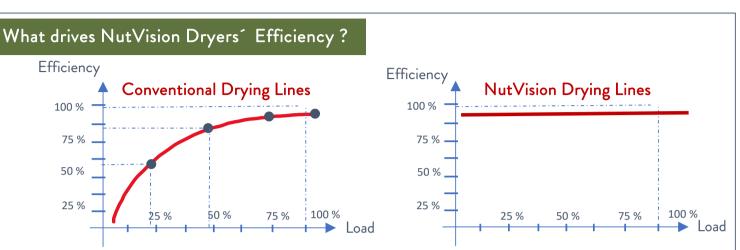
Our unique design concepts:

Tandem Heaters, Individual Fan Design, DPC -Drying Process Controller

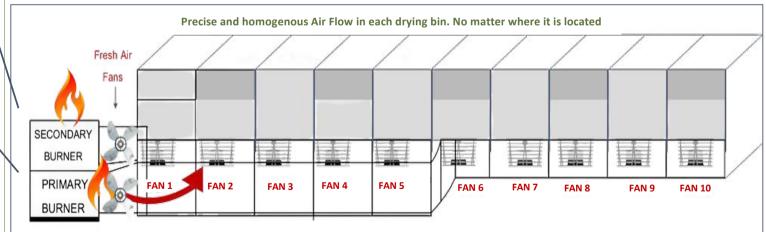
Nisão - NutVision offers the most technologically advanced, energy and labor efficient Walnut drying lines in the market today.



Lower Primary Heater (burner) and the upper Secondary Heater (burner)



Conventional Drying Lines with single source of air (fan) rely on frequency drivers (VFD) to reduce airflow when operating with less than full capacity (*few full bins*). In each reduction of motor load, the system is forced to work with less efficiency. NutVision drying lines, with their individual fan design for each drying bin, provide precise air flow. When a bin is empty or its content fully dries, its fan stops while others continue to work with full load and with full efficiency.



Demonstration of NutVision Drying Line with Individual Fans and Tandem Heater Design

Advanced Engineering



Two-leveled walking platform for easy access of the entire line

Precise and Homogenous Air Delivery -> Uniform Drying

Contrary to common understanding, drying is a result of air travelling through stack of walnut removing moisture as it leaves the drying bin. And the heat is merely a vehicle of reducing the relative humidity of air so it could absorb more moisture as it travels through the stack of walnuts. That is why precise air delivery (flowrate, pressure and distribution) to each bin and its uniform move inside of it are essential for a homogenous drying operation. To ensure this Nisão – NutVision Dryer Lines rely on technologies and innovative engineering that standardize the amount of delivered air to each bin <u>at all times</u>, rather than making estimates or operating with averages. Nisão – NutVision´s Advanced Walnut Drying Lines operate with precise flow-rate and pressure of air and <u>heat is only used</u>, when needed, to reduce the relative humidity of the air delivered, ensuring a fast, low-consumption drying process. The source of air (from inside or outside the drying room) is selected by the DPC Unit that regulates all environmental controls through a network of sensors.

•<u>Individual fan system</u> with integrated air dampers for independent, efficient and Precise Air Delivery for each bin

•Standardized high air-flow rate for each bin.

•DPC - Dryer Process Controller managed two-level, speed controlled air intake fans for each line, operating according to the number of bins in drying mode, determining the optimum air intake of the drying line.

•Higher efficiency compared to conventional "single fan" designs that rely on VFDs to reduce the fan speed, creating inefficiencies.

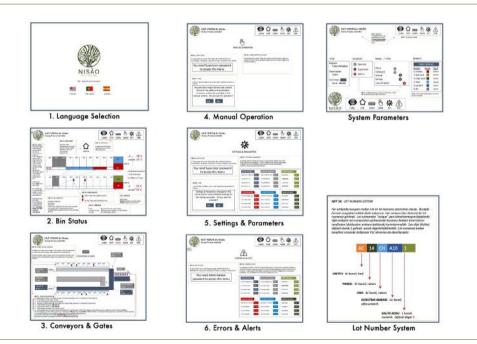
Advanced Technology



NutVision Drying lines come with a DPC - Drying Process Controller unit, a user friendly touch screen computer designed by Nisão - NutVision that monitors and manages all components of the line including conveyance, heaters, fans, gates, sensors, and even the room fresh air / exhaust systems to ensure that optimum drying parameters are set throughout the entire process. You can start the filling and drying of a bin with one single touch and the DPC will take care of all required steps in a perfect sequence, all the time. After a long harvest day, you can confidently leave the drying process and go home, knowing that Nisão - NutVision´s DPC will stop each of your drying bins at their individually set drying times (*that you determine*), sending you a confirmation message in every step of the way.

(All functions of the drying line can also be manually controlled)

- •Automated, computer controlled loading gates,
- •Individual drying time registers for each bin,
- •Auto shut-off timer programmable for each bin,
- •Integrated moisture level sensors on each bin upper and lower.
- •Bin full/empty sensors, visual and audio warning, email notifications,
- •Humidity, temperature, CO and CO2 sensors gathering real-time information of the drying room as well as the outside.
- •Integrated conveyor and gate controls, that allow single button control for the entire nut flow
- •Visual and Audio warning system for the operator
- Integrated Lot numbering for product Traceability



Various Multi_language Operating and Setting Menus of DPC - Drying Process Controller

Advanced Structure

Nisão - NutVision Advanced Drying Lines are built to last with the highest level of quality materials and advanced technologies found in the industry today.

 Highest quality electrical materials
 Heavy galvanized steel structure for resistance to corrosion

•Painted exterior

•Two-levelled walk platforms with handrails and reinforced steel non-slip surface. •Vibrator controlled, "easy discharge system"

•"Safe drop" walnut delivery shoots with air flow canals

•Integrated tandem heaters, (two for each line), managed by DPC - Drying Process Controller

•Discharge Gate sensors for each bin. •Bin filling warning alarm. With real-time data collected from over 130 sensors **Nisão - NutVision Drying Process Controller** continuously makes minor adjustments to the drying parameters that maximizes the process efficiency, practically providing an **autonomous drying process** that will run by itself 24 hours a day, without monitoring, and stop when it is set to do so. **Reliably and conveniently**.



Flexible bin design



130 Sensors collecting data for DPC



DPC - Drying Process Controller on second level platform

Advanced Efficiency & Superior Product Quality

Effects on Taste & Energy Efficiency

One of the key elements that differentiates NutVision Drying Lines from others in the market is that they are designed to

operate in lower temperatures

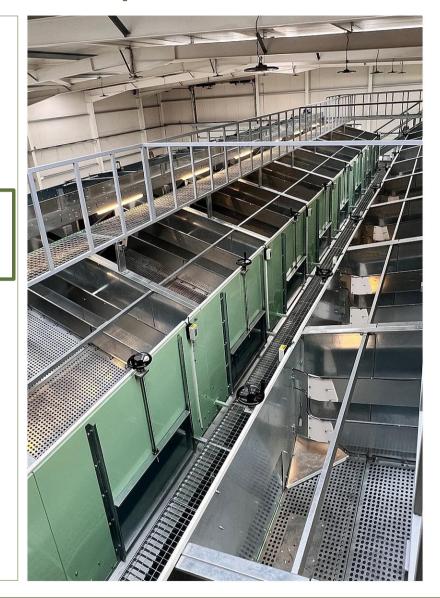
while maintaining short drying cycles, superior taste and energy efficiency.

High temperature drying of walnuts is known to reduce product nutrient content and its health benefits. It also causes loss in flavor and aroma, and often create rancidity.

By monitoring climatic information inside and outside the drying room, NutVision Drying Line can select the most energy efficient source of fresh air for the fans, minimizing the need to use burners.

NutVision drying lines are controlled by our own DPC - Drying Process Controller, that analyzes information received from 130 sensors and continuously adjusts the drying parameters.

Our Individual Fan and Tandem Heaters Design ensure maximum efficiency throughout the entire drying process regardless of the number of drying bins in dry mode.



Advanced Walnut Sizer

With NutVision Advanced Sizer: CALIBRATE, WEIGH, BOX, LABEL AND REPORT FASTER, MORE ACCURATELY AND WITH A LOT LESS LABOR

Sorry, forgot to mention its built-in Lot Numbering capability

WHST ON-

Advanced Walnut Sizer With our experience as a walnut grower, we have designed our in-shell sizing system to deal with the challenges growers face in sizing and focused on achieving the following goals:

Main Features:

- Calibration in 5 Sizes with speeds up to 5 tons/hr
- Integrated with NutVision Drying Lines
- Lot Numbering for each box
- Integrated weighers giving real-time product weighing during calibration
- Filling stops when box reaches to set weight or a new box is placed
- Touch-screen SWC Sizing Weight Controller that registers each box, by size, variety and lot number,
- Internal holding capacity for continuous operation during box changes
- Integrated label printer for customizable box label printing
- Operation Reporting

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GOSTOP	GOSTOP	GOSTOP	GO STOP	GO STOP
212.70	215.25	181.15	190.50	222.17
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MANUEL

100.00

Line 4 35-40 Line 5 40-45 System Parameter Menu

RIBA	NUTS Ribatejo	NUMBER OF BOX	10	1	2022
PRODUCT	CHAND	.ER			
CALIBRE	34-36				
LOTE	TS02210	CHA03			
DATE/HOUR	30/01/202	23 14:34:2	20		
GROSS WEIGHT 21	2.70	NET WEIGHT	17	7	.70
Box labeling M		WEIGHT	±,		./0





In-shell Bagging

FAST BAGGING & SHIPMENT PREPARATION

Achieving Storage Space Efficiency and maintaining the flexibility of last-minute packaging model changes requires a very fast in-shell bagging line. NutVision In-shell bagging line has been designed with the target of preparing :

Bag 20 ton (800 25 Kg bags), in less than 3 hours

Main Features:

- 2 independent weighers
 A total of 6 loading conveyors
 Integrated replenishment elevator
- Pneumatic bag holder clampsFoot pedal controlled product release
- •Silo fill sensor controlling elevator
- •Painted platform with ladder
- •External floor bunker

- •Integrated bag transport conveyor
- •Empty walnut separator (optional)
- •Up to 6 bags of 25 kg per minute
- Integrator sewing machine
- •Bag head lead for easy closing
- •Metal detector (optional)
- •PLC touch screen controller,
- •Filled bag counter



Filling & Bag Closing



Adjustable empty separator

Main Platform

Retail Packager



Retail Packager

FLEXIBILITY, ACCURACY, SPEED

NutVision retail packaging units are designed to give you flexibility of meeting even the most demanding retail clients with super efficient, customizable and accurate packaging with an integrated metal detector.

From 150 gr to 1,000 gr, for Kernel and In-shell

Main Features:

- Stainless Steel design for kernel as well as in-shell packaging,
- Product feeder bunker with wheels, Stainless Steel,
- Z-type elevator, food grade materials, auto start-stop functionality according to product level in upper bunker,
- Filler multiplexer for two operator use,
- Foot pedals for discharge of product,
- Adjustable from 150 to 1,000 gr,
- 10 or 14 weigh heads ensuring very high accuracy and redundancy of operation,
- Metal detector and separator shoot,
- Touch-screen computer controlled



10 or 14 weighing heads, Stainless Steel



Stainless Steel bunker, food grade Z Elevator



Filler multiplexer for two operators

Storage

We design our systems, thinking as a grower, with the aim of maximizing product quality and the cost effectivity of your entire operation. Storage space requirements and warehouse size is an important component of your investment when building your processing facility.

> NutVision Sizing and Bagging lines are designed for: Maximize Storage Efficiency Minimize Labor Requirement

While most sizing systems require growers to store their nuts in metal silos and eventually in bags that require expensive metal structures and very large storage space, we favor storage in stackable boxes separated by size, variety and lot numbers.

Up to 5 times more space efficient storage

Storing in stackable boxes is up to 5 times bore space efficient than storing in bags.

Warehouse Space Needed for storing 100 tons of in-shell walnut. < 80 m2

Storing in Stackable Boxes	& Fast Bagging
Box dimensions	: 1.20 x 1.0
Storage area occupied	: 1.20 m2
Storage/box	: 210 kg
Storage in stack of 8 boxes.	: 1,680 kg
Unit space usage	: 1,680/1.2
	1,400 kg/m2



Conventional storage in bags, on pallets



Space efficient storage in stackable boxes



HARVESTING SYSTEMS

With our Walnut and Almond grower background, we have a principle of offering our clients only the high performance products and systems that we use in our own agricultural operations successfully. That is why, **NutVision** is a proud partner of **Monchiero** that brings more than 50 years of expertise in nut and fruit harvesting systems.

NutVision offers **full Monchiero line of products**, with **technical support** and **spare parts** in:





EXCLUSIVE TECHNOLOGY FOR HARVESTING FRUIT





SELF PROPELLED FRUIT & NUT HARVESTERS - 20240

MONCHIERO

20240 – Self Propelled Harvester

The new 20240 ensures unprecedented collection capacity and great reliability thanks to the John Deere – Stage V / Tier 5 engine.

The Nexus cab provides a new level of comfort and automatic controls make harvesting easier.

Best choice for large harvesting areas and extensive orchards.

Main Features:

- Gigantic harvest capacity
- Reliable and with low consumption
- 6.5 m ³ hopper.
- 6 Cylinders John Deere Engine
- Super wide tires
- Lateral fan with extra power
- 199 cm Perfect height



Brusher Harvester

Blower Cleaner

Hopper



SELF PROPELLED FRUIT & NUT HARVESTERS - 20145

20145 – Self Propelled Harvester

The 20145 harvester is designed to work on very large orchards and crops with a higher than standard harvesting speed. Equipped with a John Deere – Stage V engine according to the regulations in force in the country of destination).

PERFECT FOR DIFFICULT GROUND

The 20145 model has all the specifications of the 20125 Ferox but has greater reliability and power for uphill and steep terrain.

Main Features:

- Larger hopper
- Increased visibility thanks to Nexus Cabin.
- Ground brushes best technology: No fruit is left on the ground
- Pre-cleaning while harvesting
- Vibrating Screen for fruit cleaning



when product quality and efficiency matters 18

SELF PROPELLED FRUIT & NUT HARVESTERS – 20125 FEROX



20125 – Self Propelled Harvester

Model 20125 totally renewed, it is called 20125 FEROX because it is even more functional and ferociously productive, confirming itself as the ideal partner for harvesting in large orchards.

Powerful, Unstoppable, Extremely Agile, Ferociously Productive

The power and efficiency of the Green Yanmar – Stage V engine guarantee optimal performance in every situation.

Compact, even quieter, it saves fuel, with low UREA consumption, only 2%. (John Deere Tier 3 engine available in markets that allow it)

Main Features:

- More reliability thanks to the new hydraulic system.
- The radiator doubles the power but reduces fuel consumption.
- More Power and efficiency with the YANMAR FINAL TIER 4 engine.
- Enlarged fuel tank.
- Access to the battery easier and more convenient.
- Larger hopper
- Increased visibility thanks to Nexus Cabin.
- Ground brushes best technology: No fruit is left on the ground
- Vibrating Screen for fruit cleaning





NEW NEXUS CABIN





Air Conditioning Air recirculation with automatic control of temperature



Functional Design Rounded profile and curved glasses, to make easier passing through the lower branches.



SilentBlock Suspensions SilentBlock suspensions to reduce to the lowest level all vibrations, throughout the harvest.



Specifically Designed for Harvesting Fruit The first cabin with category IV air filter, in the dried fruit harvesting field. A further evolution of our cockpits design, now

arrived at the third generation.

MONCHIERO REMOTE SYSTEM







The MRS (Monchiero Remote System) allows to share data and parameters of the machine and the harvest itself, with other devices (smartphone, tablet, computers). The MRS collects information about the machines (temperatures, speed levels, location of the machine, etc.); and about its work (amount of harvested fruit, hours of work, etc.). Checking and analyzing the shared information, it's possible to manage the harvesters fleets, planning the work and control the situation in real time.



TREE SHAKERS – VL08

VL08 – Tractor Mounted Tree Shaker

The powerful hydraulic system starts with a huge gear transmission and continues with a powerful hydrostatic pump to shake even the largest shafts. A TELESCOPIC ARM THAT MAKES YOUR WORK EASIER

The telescopic boom can work under the lower trees without hitting them with the tractor. At the same time it gives the ability to move forward without the need to approach and move away from the trees every time. The operator can proceed linearly stopping at each tree.

The head can move to adapt to bended tree, to avoid working on the angle of the pads, that can damage the trees. The operator doesn't have to do that manually for every tree, because the VLO8 is doing that automatically. The power level of the shaking head can be adjusted directly by the driver, on the armrest mounted display.

Main Features:

- Work with automatic sequence operations
- Balance and versatility
- Dedicated technology
- An additional cast iron pump is dedicated to the services
- A telescopic arm that makes your work easier
- The head maximum opening is 60 cm, to accommodate even big trees, there's no need to change shaker once the trees are growing.



programmable joystick for self sequenced actions



optional front brushes to avoid trampling of fruits

FAST EFFECTIVE GENTLE ON TREES

VL08 SHAKER

when product quality and efficiency matters 22

MONCHIERO

SUPER FAS

TREE SHAKERS – 30140

30140 - Self Propelled Tree Shaker

The electro-hydraulic telescopic arm allows you to reach even the highest branches; it is equipped with a vibrating gripper in high resistance steel suitable for shafts of all sizes. John Deere 4.5 | 135hp Tier III engine (or Tier IV engine).

For large orchards where speed is essential

The 30140 can be equipped with a swiveling head with three 800 mm diameter cutting discs mounted on a hydraulic arm. Can also become a powerful ally in your **pruning challenges**. The hydraulic arm can work on many different heights and inclinations in order to reach any branch that's need to be cut.



Pruning disks Optional

Main Features:

- Radiator with air flow proportional to the need.
- Engine water temperature control.
- Hydraulic oil temperature control.
- Less fuel consumption and more power available.
- 4 wheels drive synchronized with double hydrostatic pump at 420 bar.





Multifunctionals – PU250 NUT CLEANER

Rem OSed

PU250 - Nut Cleaner

Equipped with a 42 HP water-cooled Yanmar engine, it is efficient and practical thanks to electronic control and adjustment of functions via display and joystick. the PU250 can clean the fruit harvest from leaves, stones, branches and debris.



Dimensions for closed/folded mode: Height: 2,30 m, Width: 2,32 m Length: 3,60 m

Pre-cleaning at the orchard

Main Features:

- The 3.78 m belt for direct trailer loading is adjustable in height by a winch, hydraulically foldable through the joystick and re-foldable for transport; moreover, it can rotate to assume different positions.
- The hopper (2800 l) discharge conveyor with fan for cleaning leaves and debris is adjustable in speed, like the large final sieve for the elimination of waste and fine debris, and the roller separator for branches and stones.

significantly reduces the volume of transported harvest material

PU250 NUT CLEANER

when product quality and efficiency matters 24

Multifunctionals – RF19 BLOWER



RF19 - Blower

The RF19 is an high performance blower, compact and powerful. The large spiral allows to generate an huge air flow.



well balanced for inclined orchards

Main Features:

- Double speed multiplier, to regulate the air flow as needed.
- Hydraulically adjustable wings to adjust the flow direction.
- Foldable for ease of transportation.
- Well balanced on hydraulic lifting for stability during operation





front brushes to avoid trampling of fruits (optional)



5050 – Self-propelled Pruning Tower

The machine allows faster and more accurate pruning: from their location in the baskets, the operators can easily move forward, up and down as needed, exactly in the most convenient position to carry out their work.

The operator has got the complete control of all the functions of the machine from the commands console situated on the basket.

To accelerate work and solve, as you move on any pruning need at whatever level, without a second passage, the 5050 model allows to connect pneumatic scissors directly to the machine so that two or more operators can work at ground level, while two operators are working from the baskets.

Main Features:

- Yanmar 42 hp low fuel consumption engine,
- Hydrostatic transmission 4x2
- Max pruning height and width: 7 m and 9 m.





5050 allows to connect pneumatic scissors directly to the machine



The operator has got the complete control of all the functions of the machine from the commands console situated on the basket.

when product quality and efficiency matters 26

Multifunctionals – PO230 Pruner



PO230 – Pruner

Ideal for fruit plants, it allows to cut branches up to 25 cm in diameter, and has got a working width of 2,3 m.

The arm is equipped with spring release, to avoid damages on branches or on the chassis in case of collision.

Pruning higher and smarter

Main Features:

The swiveling head is equipped with three 800 mm diameter cutting discs and is mounted on a hydraulic arm that can be connected to a tractor.



Prune fast and higher





CHESTNUT HARVESTER 498

Designed to facilitate the harvesting of chestnuts in well-leveled and prepared soils. The transmission to the belt, the screen, the star valve and the side fan is completely hydraulic.

The patented shrink disk is rubber coated, so that the opening of the curls is carried out with great efficiency and at the same time, with extreme delicacy. The cleaning phase has improved, in order to allow high hourly yields and reliability over time.

Main Features:

- Suction tube: ø up to 140 mm
- Max hose length (ø 120 mm): 50 m
- Patented loop opening device
- 4-stage cleaning system
- Hydraulic leveling system kit with pipes and couplings (optional)
- Side collector kit (optional)

Specialized machines for chestnut professionals

From the harvest to the calibration of the chestnuts: Monchiero offers a complete range of specialized machines, practical in use and capable of ensuring optimal yields.







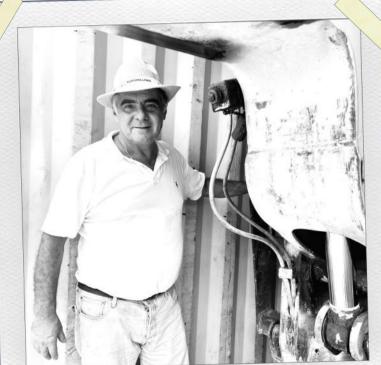
when product quality and efficiency matters 28

What our clients say about us



When it comes to the performance of our products and services, we prefer to let our clients speak on our behalf:

"GONUTS- Sociedade Agrícola, S.A. is owned by a group of farmers from Ribatejo, Portugal who started planting walnut orchards in 2017. Their facilities are a few km from Santarém, in Alcanhões. Between 2017 and 2022 these producers planted a total of about 330 hectares of Chandler, Howard with combination of several pollinator varieties, with the contribution of Fruts of Life, Lda in the person of Mr. Murat Badem who, is a connoisseur of the market in its various dimensions. Under the exceptional contribution of Mr. Murat Badem supporting us in the implementation of various activities, that company has provided us several tens of thousands of trees of exceptional quality and adjusted to the environment.



João Pedro Sanches santarém, Aug '22 GONUTS, following the very positive experience of partnership with Mr. Murat Badem, has now contracted his company, Nisão, Lda, to put together necessary specifications to launch an international tender for the assembly of washing, shelling, drying, grading and packing lines for walnuts. GONUTS was also advised by NISÃO in the choice of Monchiero equipment for harvesting processes. Thus, GONUTS is equipped with technologically advanced equipment that guarantee efficiency and superior quality of final products of walnuts with shell and kernel in a variety of packing formats and logistic solutions.

We also highlight not only the exceptional quality of the equipment supplied by NISÃO and related processes, with special emphasis on the drying and calibration line, but also the support in assembling the equipment and development of all critical work and training methods. The global project management shared with NISÃO allowed that in nine months GONUTS was equipped with a complete industrial unit ready to perform the first campaign of 2022."



João Pedro Sanches President of the Board of Directors, GONUTS SOCIEDADE AGRÍCOLA, S.A.



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