

# Citrícola Lucato

Taking control and optimising operations with GS1 standards



## Challenge

For more than 50 years, Citrícola Lucato (Lucato) has been a pioneer in the citrus industry, supplying the tastiest oranges and tangerines to all of Brazil. The company's packing house is equipped with the latest equipment and is located in the most modern industrial park in Brazil. Yet, Lucato wanted to make additional improvements to its management of produce, from field to retailers.



## Solution

Lucato decided to implement GS1 identification standards and barcodes to uniquely identify its produce as well as shipments traveling to retailers. Each barcode on produce contains the identifier—the GS1 Global Trade Item Number® (GTIN®) and other valuable information—encoded in a barcode. When scanned, Lucato collects information to better manage and control numerous processes throughout its supply chain.

## Benefits

- Achieved visibility of produce as it travels from Lucato's packing houses to retailers.
  - Reduced returns due to the misidentification of produce during packaging and shipping from 771 volumes (logistics units for sending bulk fruit) in 2015 to only 13 volumes in 2019—a 98% reduction in volumes returned.
  - Increased speed and accuracy of recalls, if needed.
  - Improved consumer safety with optimised processes for produce management and monitoring.
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## A quality food supply chain

At Lucato, all fruits are selected electronically to ensure uniformity in size, colour and flavour, as well as to provide high-quality fruit juice. Production capacity exceeds 30,000 tons of citrus of various varieties each year.

Fruits are packaged using automated processes without any manual contact, and the packages are labelled with GS1 standards that provide the needed information for traceability. Finished products are kept in cold storage with computerised control and are delivered to customers on-time, with no delays.

Fruits are treated in accordance with food safety standards. Lucato follows best practices for food handling and hygiene, based on Hazard Analysis and Critical Control Point (HACCP). The company is certified by SGS—a global leader in inspection and verification services—and audited by the quality systems of major retail chains in Brazil.



## Innovations in packaging

With its vertical organisation structure, Lucato has full control of orchard production, harvesting, transportation, processing, storage and distribution. For monitoring produce at stores, Lucato uses its own teams that are responsible for checking the quality of all items at points of sale.

Lucato also offers packaging varieties for added value. Lucato was first to launch premium packages in 2010 and continues to offer packaging innovations to customers. In 2018, the company had an exclusive launch of the Disney line of limes and oranges with a new package called Handle Bag with an ergonomic shape that offers carrying convenience for consumers.



In short, Lucato is well prepared to meet the demands of the citrus market and its national distribution channels.

## Improved control and information flow

Lucato wanted to improve its control and information flow, as well as optimise processes as produce traveled from field to table. The company implemented GS1 standards to give it increased visibility for better managing its operations.

All Lucato farms now have improved controls in place via a “digital field notebook” in the cloud that automates spraying equipment and GPS registration. Traceability information is also available in the cloud, where retail customers and consumers can access the latest product information about Lucato’s produce.

The pest management system is run by an online application generating data for remote and real-time check ups. This helps Lucato managers make informed decisions about how to best combat pests and diseases. With up-to-date information and increased flexibility, Lucato can minimise losses and reduce the use of pesticides.

Throughout the harvesting process, workers scan barcodes on packages, capturing valuable information, step-by-step to the packing house.

Produce is uniquely identified with the GTIN along with other information like the lot/batch number, production date and expiration date—all encoded in a GS1-128 barcode that is printed on the produce container. These containers are packed in logistics units, such as boxes and pallets. When shipping produce to customers, these logistics units are uniquely identified with a Serial Shipping Container Code (SSCC) that is encoded in barcodes and applied on shipping labels.

With multi-level identification in place, Lucato can track produce from field to retailer. In recall situations, all records are available immediately.



## Quality control

For monitoring chemical residues, the Lucato monitoring system checks and guarantees the safety of the products it sells, adhering to the guidelines defined by the Brazilian legislation. In all, about 40 samples are collected each year from retail customers for monitoring.

Upon receipt of goods in the packing house, the quality inspection process is performed on all lots. The objective is to evaluate the visual quality of fruits and any results from handling in the field. Then, the batch is placed on the production line for automated inspection to check the condition of fruits.

After the automatic separation process all fruits go through another quality inspection, now as finished products, evaluated according to the technical sheets of the retail customer.

Within the quality control process, samples are collected for all batches of processed packages, for storage and shelf testing in order to monitor the expiration date. To ensure certification requirements are met, a Lucato sector is responsible for analysing all claims submitted by consumers. These claims are registered via an internal application online for reporting problems and solutions for improvement.

Finally, Lucato conducts a microbiological analysis of fruits throughout the year to check the sanitation conditions of the production line. In partnership with the Sylvio Moreira Citriculture Center, the company runs bi-monthly microbiology checks on all water used in the fruit-washing process, chlorine application rafts and other equipment.

## Improvements each year

Since the beginning of using GS1 standardised identification, Lucato has realised a significant reduction in returns due to misidentification during packaging and shipping.

Lucato reports additional data, to include:

- In 2015 at the beginning of the Identification process, 771 volumes were returned on 19 occasions. There were 1,150 deliveries throughout the year for 1,035,000 volumes.
- In 2016, only 185 volumes were returned on 9 occasions. There were 1,765 deliveries throughout the year for 1,124,560 volumes.
- In September 2016, Lucato was audited by GS1 and put an action plan in place for resolving issues. The results improved with return volumes reduced to 94 on 3 occasions. There were 1,941 deliveries that year with 1,247,982 volumes.

Since 2015, Lucato has participated in the Healthy Vegetables Group that brings together responsible and conscious companies in the production of fruits and vegetables. These companies use production processes based on the requirements of good agricultural practices and delivering safe, quality food to the market.



- In 2018, only 70 volumes were returned on 1 occasion only. This was especially impressive since the company's operations even more complex than years past due to the greater number of customers served. There were 2,121 deliveries that year with 1,395,424 volumes.
- In 2019, the company's complexity increased, reaching 75 stock keeping units (SKUs) and a growing number of customers. Even with these new challenges, there was only 1 return occasion (like 2018), but the number of returned volumes decreased to only 13. That year the company delivered 2,322 total orders with 1,589,584 volumes.

Between 2015 to 2019, there was an 98% reduction in returned volumes while sales and shipped volumes had grown by 54%. These results have had a clear impact on Lucato's revenue and margin.

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