

RFID Asset Tracking for storage boxes with onions

The customer

Since 1951, the Dutch company, Gourmet, has been active in the cultivation, selection, packaging and distribution of a variety of onions, shallots and garlic. By keeping the process in-house from A to Z, Gourmet can respond quickly and properly to the customers' needs.

The challenge

The cultivation programmes at home and abroad enable Gourmet to guarantee to its customers an uninterrupted flow of quality products, accounting together for the storage of over 35.000 cubic boxes. Once they have passed a strict entry check, the products are sorted into the wooden storage boxes according to their quality, size and/or weight. Next, they are stocked by forklifts to dry in the storage rooms.

Previously, a lot number was assigned to each storage box by means of a barcode label, and the boxes were tracked throughout the different warehouse locations using barcode scanners.





It was fundamental to improve the quality by working more accurately, by reducing errors and by gaining more control and insight into the processes. We are now able to achieve these goals thanks to RFID.



Jerry Posthumus Manager Operations







This manual registration and follow-up method was very error-prone and time-consuming. Gourmet needed a system tracking the large product quantities faster and more efficiently throughout the internal logistics chain.

The solution

Aucxis suggested to implement the ATLAS Forklift Solution for the automatic tracing of the wooden boxes by using passive RFID technology. The project consists of the following building blocks:

RFID tags

Identification is possible by mounting two durable UHF tags on each storage box. Localisation is accomplished by cutting floor tags into each row of the storage room. The forklifts pick up the warehouse location as they drive over it.

Fixed RFID detection points

- For the automatic detection of the unique boxes in the tilting machines (where the boxes are filled with the selected product).
- At each entry and exit of a process line to define which product the boxes must be filled with.

RFID equipment on the dozens of forklifts to enable the automatic scanning of the transported boxes and the reading of the floor tags. Each forklift is equipped with 1 RFID reader and 4 RFID antennas.

The generic Aucxis middleware HERTZ ensures the filtering, data processing and connection with Gourmet's WMS.

Localisation of all boxes is done through the reading of floor tags that are grind into the floor for each row of the stockroom. The forklift trucks capture the warehouse location as they pass over it.



The result



Each box is fully traceable throughout the internal logistics chain.



Accurate info in real time

Which box, with which contents, is located where? Control of the stock at all times.



No manual scans needed to process the location and identity data.



Reliable data and insight into the internal cycle of the products lead to process optimisation and quality improvement.



Seamless integration with existing software systems



via scanning of UHF tags by RFID readers on forklifts and fixed detection points.

The future

The RFID solution will develop along with the company's needs and will be further deployed to automatically control the process lines and to phase out the barcode system. This will enable an automatic check that the right boxes are presented, so that the process can be activated. An outdoor RFID gate which scans the load of the outgoing trucks is another possibility.

The insights gained on the logistic routes of the internal forklift traffic will be closely examined; these provide opportunities to adjust routes and to reduce the number of 'empty metres' performed by the forklifts.

=AUCXIS

Aucxis cvba

Zavelstraat 40 9190 Stekene +32 (0)3 790 17 17 info@aucxis.com BTW BE 0429 285 178



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