

The RFID solution elaborated by Aucxis provides a real time view on the number of pallet boxes in every cold store



RFID for efficient box pallet management at Veiling Zaltbommel

The customer

Throughout the year, the Dutch Cooperative fruit and vegetable auction market “Veiling Zaltbommel” handles the supply of its 300 member-growers. The products are sold through the Dutch auction clock system and through mediation.

The challenge

Every year 16.000 wooden and plastic pallet boxes filled with hard fruit are supplied to the auction market and stored in 70 ULO (Ultra Low Oxygen) cold stores.

Aucxis was engaged to automate the manual registrations of the in- and outgoing movements and relocations of the pallet boxes at the market's cooling complex, so a correct view, in real time, of the number of pallet boxes in the cold stores could be obtained.

For the concept elaboration, the following aspects were to be taken into account:

- Every pallet box had to be provided with a unique pallet box label with integrated RFID tag.
- The filled pallet boxes needed to be detected by RFID on the forklift trucks.
- Every in- and outgoing movement in every ULO cold store needed to be recorded.
- Aucxis had to develop an all-embracing solution which could be easily integrated into the market's existing processes.

The RFID solution

Aucxis developed a supply input application which enables the market staff to print labels while inputting the pallet box data. During this printing process, the RFID tag in the label is programmed by the printer. This way every pallet box is provided with an RFID label which also comprises information on the grower and a barcode, which is used as a back-up.



every year 16.000 pallet boxes circulate at Veiling Zaltbommel



printed label with RFID tag



100 % accurate data in real time

enhanced efficiency

time savings

cost savings



forklift truck equipped with RFID readers and a Windows terminal

The RFID solution (cont.)

The tags are read and registered respectively by the readers and the Windows terminals integrated at the forklift trucks. In other words, every box pallet movement is registered through the RFID detection from the forklift truck. In the corridors and at the cold store entrances tags have been integrated into the floor. These are read by the forklift truck's reader in order to detect its location. All detection related data are visualised on the forklift truck terminal and are buffered and transmitted to a SQL database via a Wifi network. As this database is replicated to the market's database, all registered data is available in real time in the market's ERP software. Aucxis also developed a WMS package and a web portal for control and reporting.

The result

- ▶ Accurate information regarding the number of pallet boxes in every cold store is available to Veiling Zaltbommel at any moment.
- ▶ The manual registrations of pallet box movements became redundant.

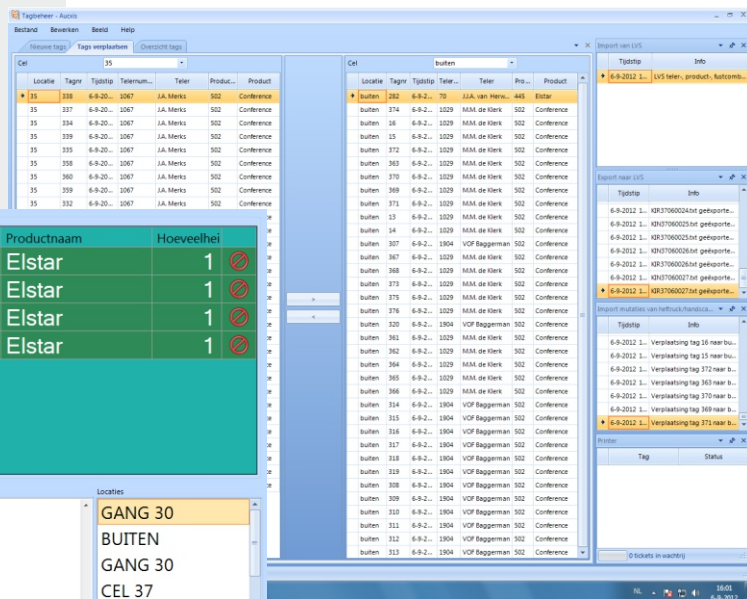
Possible extensions

The unique RFID identification of each pallet box enables the market to consider the implementation of the following functionalities :

- ▶ Tracing of time and place at which the pallet boxes were unloaded (dock shelter, sorting belt, processing belt, ...).
- ▶ Establishing a link between pallet box and preservation conditions in the cold store.
- ▶ Establishing a link to the historical data of the pallet box content (origin, harvest data, spray schedules, ...).

Software screen shots

tag management



RFID tag registration visualised on the forklift truck terminal

