

**TRACEABILITY APPLIED
IN THE WOODEN CRATE INDUSTRY**

I. SCOPE

The present guide describes how traceability should be implemented in the wooden crate industry. It therefore, does not include the operations performed by fillers once the crates have left the manufacturing plant.

II. GENERAL INFORMATION

II.1. Document development

This document was developed by CEHBois

II.2. Wooden crates production process

Wooden crates for fruit and vegetables are made mainly of poplar. Member State regulations allow the use of other wood species like pine, beech and eucalyptus. The systemic analysis of crate production is as follows:

- Trees cropped
- Logs delivered to the factory
- De-barking
- Cutting into sections
- Peeling (or sawing) to produce laths.
- Plywood production.
- Component production: heads (width), sides (length) and bottoms.
- Component assembly

Dependant on member state regulations and the properties of the wood species wooden crate factories may or may not carry out the whole range of production processes:

- Integrated factories cover the whole range of production process.
- Component producers manufacture either heads and/or bottoms and/or sides.
- Assemblers buy components and assemble them.

Sawn slices and plywood are generally bought from sawmills and plywood producers. However, wooden crate factories (mainly in Spain, but also in South America, Chile and in Eastern Europe) may produce their own plywood and/or sawn wood.

Once the crate has been assembled, it is sent to the filler.

II.3. Industry responsibility

In considering the production processes above. This guide will describe how traceability should be implemented in each step of the wooden crate production process. Each manufacturing company will need to carry out all of the steps related to the production processes under their control.

III. TRACEABILITY INFORMATION

To build a traceability system we will consider the components of the crates as starting materials. Therefore, those components will be individually identified and the information needed to ensure traceability will be transferred to the assembling companies.

Traceability upstream is very difficult as the crate components can be built using wood from several different trees and traceability of the raw materials (Poplar or Pine) is unnecessary provided the wood from the trees is untreated (i.e. is designated for food contact applications).

Each manufacturing plant will decide how to define its production lots and how those lots are identified (number, production date, etc). In this document we will refer to that identification as “lot number”

III.1. Component manufacture

III.1.1. Plywood

a) Process description

The following steps are carried on:

- Debarking
- Cutting into sections
- Peeling into veneers of same dimensions
- Gluing and assembling in warming press
- Cutting

Poplar logs are debarked and cut into pieces of 1 meter long (approx.). Then, each piece goes to a peeling machine, producing long slices of poplar (1mm thick) which are cut into slices. The slices are transferred to a machine where they are warmed, glued and pressed to form plywood. This plywood may be cut to meet the customer’s specification.

b) Incoming information

For the poplar just a copy of each delivery invoice is needed.

c) Internal information

The company producing plywood has to keep a record of the lots produced and the destination of those lots (customer to whom the lot was shipped). This information can be kept in paper or in electronic format.

d) Outgoing information

When the plywood is shipped to the customer, the freight documents will include the plywood lot numbers.

III.1.2. Heads

a) Process description

The plywood, peeled poplar or pine coming from sawmills (depending on the material used) is cut to the specifications needed to build the heads.

Corner pieces are cut to specification and stapled to the plywood, the sawn wood or the peeled poplar (depending on the material used) to form the head.

b) Incoming information

Plywood, sawn wood and peeled poplar: lot numbers

c) Internal information

c.1.- External Head Manufacturers

The company producing heads has to keep a record of:

- Lot numbers produced
- The link between head lots produced and the lot numbers of the materials used (plywood, sawn wood or peeled poplar)
- The destination of each head lot produced (customer to whom the lot was shipped).

This information can be kept in paper or in electronic format.

c.2.- In-house Head Manufacturers

In house manufacture is a continuous process and therefore there is no need to identify individual head lot numbers. However the companies will have to keep record of:

- The link between the lot numbers of the crate produced and the lot numbers of the materials used (plywood, sawn wood or peeled poplar)
- The lot numbers of each crate produced and their destination (customer to whom the lot was shipped).

This information can be kept in paper or in electronic format.

d) Outgoing information

When the heads are shipped to the customer, the freight document will include the head lot numbers.

III. 1.3. Sides

a) Process description

Plywood, sawn wood or peeled poplar (depending on the material used) is cut to specification for the sides of the crates.

b) Incoming information

- Plywood, sawn wood, peeled poplar: lot number

c) Internal information

c.1.- External Side Manufacturers

The company producing sides has to keep a record of:

- Lots produced
- The link between the lot numbers of the sides produced and the lot numbers of the materials used (plywood, sawn wood or peeled poplar)
- The lot numbers of each side produced and their destination (customer to whom the lot was shipped).

This information can be kept in paper or in electronic format.

c.2.- In-house Side Manufacturers

In house manufacture is a continuous process and therefore there is no need to identify individual side lot numbers. However the companies will have to keep record of:

- The link between the lot numbers of the crate produced and the lot numbers of the materials used (plywood, sawn wood or peeled poplar)
- The lot numbers of each crate produced and their destination (customer to whom the lot was shipped).

This information can be kept in paper or in electronic format.

d) Outgoing information

When sides are shipped to the customer, the freight document will include the side lot numbers.

III.1.4. Bottomsa) Process description

The following steps are carried on:

- Debarking
- Cutting into sections
- Peeling
- Sliced at the needed measurements
- Pieces assembling

Poplar logs are debarked and cut into pieces. Each piece goes to a machine which peels the log, producing long slices of poplar which are cut to the bottoms specification. The bottom is then assembled.

b) Incoming information

Copy of the wood delivery invoice.

c) Internal information

The company manufacturing bottoms must keep a record of the lot numbers produced and the destination of those lots (customer to whom the lot was shipped). This information can be kept in paper or in electronic format.

d) Outgoing information

When the bottoms are shipped to the customer, the freight document will include the bottom lot numbers.

III.2. Crate assemblya) Process description

The following steps are carried on:

- Laths printed (sides and/or heads) if requested by the customer
- Assembly of heads and sides (framing)
- Assembly of the bottom to the frame (bottoming)

b) Incoming information

- Side lot numbers if supplied externally
 - Head lot numbers if supplied externally
 - Bottom lot numbers if supplied externally
 - If any of the components have been manufactured internally then the lot numbers of the materials used (plywood, sawn wood or peeled poplar) will be required.

c) Internal information

The company producing crates must keep a record of:

- Lot numbers of crates produced
- The link between the lot numbers of the crate produced and the lot numbers of the components used (heads, sides and bottoms)

- The lot numbers of each crate produced and their destination (customer to whom the lot was shipped).

This information can be kept in paper or in electronic format.

d) Outgoing information

Traceability is maintained either by:

- Marking: The crate can be marked with the name of the Manufacturing company and the date of manufacture. For those companies with GROW license in Spain, France, Germany and Benelux, marking the license number of the manufacturer. In France, an identification number is provided by the authorities which when printed on crates identifies that manufacturer,
- or
- Documents: When the crates are shipped to the filler, the freight document will include the crate lots numbers.

IV. RECALL

Following the process described in chapter 3, the crates shipped to fillers are fully traceable..

If a problem is identified at retail level requiring the recall of crates, using upstream traceability documentation the problem component can be identified and a decision taken on problem crate withdrawal.

The process would be:

- a) If there are no markings on the crate
1. The retailer identifies his supplier.
 2. The supplier (filler), through his records, identifies the company that supplied the problem crates and the crate lot numbers.
 3. The crate manufacturer, through his records, identifies the fillers to whom crates of the same lot were shipped.
 4. If the problem comes from a component of the crate, the crate producer, through his records can identify the lot numbers of the crate components and also the crate lots produced with the damaged component's lot.
 5. The crate producer will contact the fillers that used crates that are to be taken out of the market.
 6. The fillers through his records will contact the customers to whom the crates were shipped with product. They will proceed to take out of the market the problem crates.
- b) If the GROW license and the production date or lot number are printed on the crate.
1. The crate manufacturer can be contacted directly.
 2. The crate manufacturer, through his records, identifies the fillers to whom crates of the same lot were shipped.
 3. If the problem comes from a component of the crate, the crate producer, through his records can identify the lot numbers of the crate components and also the crate lots produced with the damaged component's lot.
 4. The crate producer will contact the fillers that used crates that are to be taken out of the market.
 5. The fillers through his records will contact the customers to whom the crates were shipped with product. They will proceed to take out of the market the problem crates.