

Crate Washing - Safety & Hygiene

Good hygiene is paramount in the food industry. This is why production plants and distribution companies are legally obliged to put in place hygiene procedures appropriate to their operations e.g. HACCP systems. These systems are designed to ensure that the food produced and distributed is of good quality and is safe for consumption at all times.

I have carried out a search of the various guidelines and “best practice” recommendations that apply to food distribution and they all have certain elements in common. They are all concerned with the problem of maintaining bio-security to prevent the spread of various diseases. We have seen recently the results of breaks in bio-security where TB was spread between crèches in Cork by an infected child minder and where an outbreak of Foot and Mouth occurred in the UK from the lack of maintenance of procedures at a research institute.

Good hygiene in the distribution chain is an integral part bio-security as the distribution chain extends into all retail premises and even into end-user outlets.

The use of returnable and re-usable crates for delivery is seen universally as the link in the chain that is the most important in protecting and maintaining bio-security. These crates will travel repeatedly from the distributor to various outlets and end-user premises. They can pick up infections from the actual food product delivered as well as from handling and storage during the distribution process. These infections can be carried into the distributor’s premises and even into the producer’s premises if the crates are used for collection from producers. All the recommendations and guidelines refer to cleaning, sanitizing and drying of food delivery crates after every use.

Regular cleaning breaks the “cycle of infection” carried by the crates as they travel continually between distributor and retailer or end user. Proper drying ensures that any bacteria left on the crate do not multiply after sanitizing

“Best practice” in the food industry recommends that these crates are washed, sanitized and dried between each trip from the distributor to the retailer or end-user.

Why is this level of hygiene necessary?

We know that bacteria travel from place to place on equipment and particularly on people’s hands. The crates can pick up bacteria from the food transported, from general handling, in the customer’s premises and during storage. This applies particularly when procedures and practices used are not good and where hygiene routines are not ideal. As some of these areas are not directly in the control of the distributor it is essential that good practice is in place to ensure that infections are not carried back into the distributor’s premises and from there into the food supply chain in general. The “best practice” recommendation of washing and sanitizing crates between deliveries is an essential element of breaking the “cycle of infection” and preventing the possibility of cross-contamination from these crates. Regular washing and sanitizing of the crates ensures that there is no build-up of either physical soil or bacteria on the crates. Regular inspection of the crates ensures that worn or damaged crates are removed from the stock of crates before they cause problems.

Ideally crates should be washed immediately after every use. They should not be accumulated for a period and should not be stored in the open until washing takes place. This increases both the physical and bacterial load that needs to be removed by the washing process.

There are several essential elements in a thorough cleaning routine

- All crates should go through this process between deliveries. Visually clean crates will have bacteria on them when they are returned from trade. Some of these bacteria can be pathogenic – due to handling by unwashed or contaminated hands or from food. Unwashed hands can carry E.coli, Staphylococcus aureus and Enterococci
- The physical soil should be completely removed from all crates. This soil can come from the food delivered or from soiled surfaces at the delivery outlet. If this soil is not removed bacteria will grow on it and mould can also develop on food residues. Some moulds produce poisonous toxins during growth.
Mould can also grow on labels that are not removed from crates and contamination can be present on residues of adhesive from these labels.
Mould can be particularly bad if crates become wet and are stored outside.
Mould on the crates will cause slimes that contaminate the water in the washing machine and make efficient washing more difficult.
- When all the physical soil is removed the crates should be sanitized using a food-approved chemical. This will kill bacteria on the surface of the crate.
- After sanitizing it is necessary to dry the surfaces of the crate thoroughly. The presence of moisture is an essential growth factor for bacteria. Bacteria will survive in dry conditions but will not multiply. Bacteria will grow if any moisture remains on any part of the crate. Drying crates at ambient temperatures may not be sufficient to remove moisture from all cracks and joints in the crate. Bacteria can double in numbers every 15 minutes at ambient temperature. One bacterium can increase to more than 12 million in 12/14 hours.
- After cleaning and drying it is important to wrap the crates completely in a protective wrapping to prevent cross-contamination from a number of sources.
 - From the pallet used to transport the washed crates – particularly if wooden pallets are used.
 - To prevent any physical cross-contamination from the environment. Dust carries bacteria and mould. Birds carry bacteria and mould on their bodies and pathogens in their droppings
 - Rats and mice are incontinent. Rat urine causes “Weils” disease – this disease is fatal quite often. Rats and mice carry bacteria on their bodies
 - Flying insects carry bacteria on their bodies
- Washed and wrapped crates should be stored indoors in a safe dry area until required for use. Washed and wrapped crates should never be stored outside where they can be contaminated by rainwater

Summary

Regular routine washing and drying of crates means that the crates will be easier to clean at each wash.

Labels will be removed at each wash

Food residues will be removed from crates at each wash

Bacterial numbers will be reduced at each wash and will not increase if the crate is properly dried and stored until use

The crates can be inspected at each wash and damaged or badly scuffed crates removed from circulation

Dried crates will be wrapped in a protective film after each wash

The end result will be that the food distributor uses clean dry crates for each delivery of food.