

## Returning trays and baskets: don't let the Trojan Horse in!

Mice find their way into buildings in many ways, some obvious, some not so obvious. Sealing gaps under doors, in air-bricks and around wall cladding is one obvious way to prevent entry, but you may still unknowingly be providing them with an easy way to get in. The plastic trays and baskets that circulate in the food distribution supply chain are all too often the food industry's Trojan Horse!

Most food manufacturing sites handle trays or baskets of some description. The journey from retailer back to manufacturer may be direct, or it may incorporate intermediate locations. The end-user will probably have little or no oversight of these. Returned trays often contain a variety of food and non-food debris, and sometimes mice. Rarely bought directly into the factory from the delivery vehicle, they are generally stored in open yard areas, often for extended periods of time. Here, they may attract rodents.



A single female mouse, if pregnant, can soon become this...



Trays are typically processed in a reception area of some description. This may incorporate a tray wash. More often than not this area is located inside the manufacturing facility so, unless some physical breakdown and cleaning of the stacks happens outside, trays may actually be wheeled inside the factory containing their four-legged



occupants. Unlike the Trojans these won't wait until nightfall to emerge; they hop off as soon as they are disturbed.

In our experience, staff responsible for de-nesting often regard this state of affairs as normal and acceptable. Once loose, the disoriented mice seek cover. They will run under equipment and into adjacent areas, which may include nearby low and high-risk preparation and packing areas. They will exploit any defect in the building structure, potentially finding their way into wall cavities, false ceilings and roof voids. Once within these they can go anywhere, and what started as a relatively low-risk problem is now a major incident.

What can be done to prevent this? There are no easy, and few cheap, answers but, during the course of our inspections, we have seen some examples of what can be achieved, and we would like to share these with you...

### **Eliminating the problem?**

On establishing that mice are entering the premises on dirty trays, the natural response should be to investigate the problem at source. In an ideal world this would trigger an audit of the supply chain; something that in our experience rarely happens where dirty trays are concerned. In all the years that we have been carrying out independent pest control inspections, during which time we have encountered many incidents of mice being introduced on dirty trays, we have very rarely been asked to inspect tray handling sites. Do these sites not have rodent problems? Of course, many do, and rodent management may be a very low priority for them.

It is critical that the food manufacturer, and their pest control contractor, acknowledge that rodent importation on returned trays and baskets is very likely to occur, and will be beyond their control to prevent. It must be assumed that any returned basket is a potential entry route for mice, and appropriate steps taken to prevent this.

## External storage

Poor tray management on site is often the root cause of the problem, and regulation of the flow of returning dirty trays is essential. A sea of plastic, often spilling over onto soft ground, with extended storage periods and non-existent rotation, is all-too-common. Rodents will inevitably be attracted, in search of food and harbourage.



### To minimise risk:

- It is preferable for all trays to be stored together, rather than in several locations
- They should never be stored on soft ground and, ideally, there should be no earth embankments or stone filled gabions around the storage area
- They should NEVER be stored against any factory wall; mice climb very well and will find the weak spots of the building
- A system of rotation should be established to ensure that individual stacks of tray and baskets are not left for longer than is needed
- Damaged trays should be stacked neatly in preparation for collection
- Rodent control measures must be located around the storage area, though it should be recognised that this is likely to be of very limited benefit

## Bringing trays inside

It is not unusual to see dirty trays brought straight into the premises. Only once inside are they de-nested. This practice significantly increases the risk of bringing mice in and must be avoided at all costs. De-nesting and pre-cleaning of dirty trays should be carried out before they enter the building.

Segregated outbuildings and canopies can be modified for this task. With a little imagination, and often at relatively low cost, a stand-alone tray reception facility can be created. This should provide cover for staff and will help to better manage the flow of returning trays. Critically, it will create a designated building that can be modified to enhance the capture of mice during the de-nesting operation.



Temporary or semi-permanent buildings, such as that shown in the photo, above, offer one solution, creating a building that is detached from the main factory. Trays may be de-nested inside, and held prior to transfer into the factory.

A more permanent solution is to build a dedicated facility to handle and wash returned baskets. The photos below show the basket handling facility at Roberts Bakery in Northwich. Here, dirty trays are pre-cleaned in an external canopy area before manual loading onto a conveyor. The automated system tips and turns them, with a conveyor and elevator track taking them to the washer. Only then do the cleaned trays pass down and into the bakery.





## **But what if you don't have the space, or the money?**

You may have no alternative but to de-nest dirty trays inside the production building. This procedure must be regarded as the absolute last resort, as it will almost certainly result in mice being imported. If there really is no choice then consideration must be given to modifying the tray intake area so as to eliminate any chance for mice to move further into the building.

## **Sensible precautions would include:**

- A thorough survey by you, and/or your pest control contractor, of the area where the incoming trays are to be de-nested. Is the building fabric in excellent condition? Eliminate every potential point of entry which could result in penetration of mice further into the building.
- Installing a metre high barrier, ideally fabricated from stainless steel, in the tray intake area. This should have an outward facing (towards the dirty trays side) overhang. This will prevent mice from having the run of the entire area and encourage/ force staff to pass trays over the barrier a small number at a time, so reducing the risk of rodent transferral. Once trays have been pre-cleaned and passed over the barrier they must remain within the factory, not be wrapped and stored outside. It must not be possible to bypass the barrier, or you may find the night shift simply wheeling large numbers of trays around it!



- Reducing the number of internal doors to adjoining areas. The ideal scenario is to block all of them up completely, effectively turn the intake area into a self-contained, externally-accessed, room.
- Keeping the area as clean and tidy as possible; this will reduce the opportunity for mice to seek cover. Back-stops and barriers will help keep walls clear, and protect rodent monitoring and control devices.

## ....and if mice do get in?

Rodenticides are often the first-choice control technique in tray intake areas. However, rodenticide bait is likely to be of little interest to a disoriented mouse. Even if they do consume bait these products take several days to kill. Bearing in mind that the prime objective is to negate the risk of mice penetrating further into the building, it may be worthwhile reviewing whether a fast-acting physical control technique, such as electric or break-back traps (typically housed within a protective outer cover), might be more effective.

The (hopefully) clean and tidy wall-floor junctions of the de-nesting area, which we have already highlighted are essential to deny mice cover, should provide an ideal location for these. This should allow the capture of disoriented mice quickly, effectively and most importantly, before the problem spreads to other areas.





Given the turbulent nature of most tray-handling areas it is very likely that accidental activation of traps will occur. To ensure that they remain effective, they must be checked regularly, ideally at least weekly. This can be done by either the pest control contractor or trained site personnel. Even better, introduce remote monitoring technology and you'll know the instant that any device is activated, either accidentally, or by mice.

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