



Food Manufacture

# Palletising

## Lesson 3

Master the role of palletising in food manufacture, paying particular attention to the importance of health and safety, by completing this course.





Product must be stacked onto a pallet in a secure way to prevent any dangerous loads. The two best ways to stack product are:

- Column stack
- Interlocking stack





**A column stack  
is when boxes  
are stacked in  
columns  
directly on top  
of each other.**



Column stacking boxes should be stacked in columns with edge to edge and corner to corner to allow the strongest stacking strength. Then stretch wrap or banding can be used.





Column stacking a pallet is one of the best ways to protect the boxes against compression and keep box strength during transport.





Interlocking stacks are when boxes are stacked like bricks, the footprint of the box is switched on every layer so the boxes are interlocked.







When using interlocking stacks if the products inside the boxes are rigid then the pallet will be very stable. However if the products inside the boxes are not rigid then the box strength will be reduced and the product could get damaged.





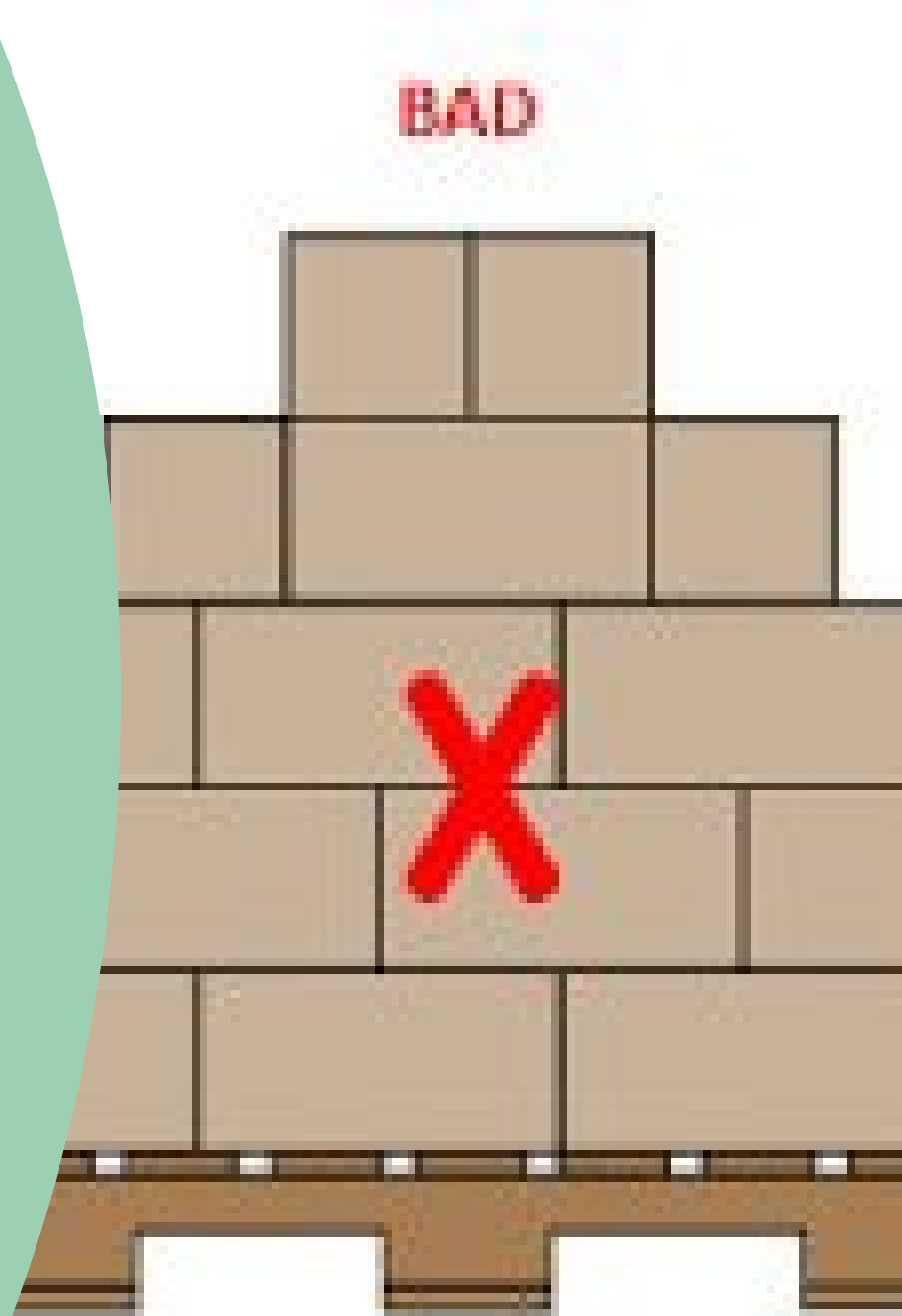
# **Column stack v's Interlocking stack**

- Column stacking weight is evenly distributed at the strongest point of each box.
- Interlocking stacking weight is unevenly distributed at the weakest point in each box.
- Column stacking improves box performance by 25-30% and also increases the amount of boxes stacked per layer.





A pyramid stack is when boxes are stacked in a pyramid type shape with less boxes on the top layer. This is not a stable shape and can result in damage to the top layers.





The maximum weight on a pallet can vary depending on the size and type of pallet.





**The maximum  
height of  
stacked boxes  
on a standard  
pallet is 220cm.**



**The boxes must not overhang over the edges of the pallet as this can cause damage and make the stack unsafe.**



**Food factories  
will have a  
standard pallet  
stack plan for  
each type of  
box used.**

It will state the numbers of boxes per layer, the maximum number of layers and indicate the most secure stacking method to use.





# Revision Activity 3

**Name a benefit of using the column stacking method to stack a pallet?**