



# Manual handling solutions for the vegetable industry No. 10



## Manual handling of vegetable carton and crates

### What is the activity?

Manual holding and carrying of cartons and crates when moving from one location to another.

### What are the risks?

Large cartons and crates of vegetables can be difficult to hold and carry, simply due to their size.

Cartons and crates without handles such as polystyrene boxes or cartons with only small aeration holes can be difficult to grip. Cartons or crates that are difficult to hold often result in awkward hand and wrist postures and require greater force to support the containers when lifting or carrying.

Sharp edges on cartons or crates, including handles, can result in localised damage from compressive forces on fingers.

Some collapsible plastic crates require significant impact force from palms or fists to assemble and disassemble.

The manual handling risk associated with holding and carrying cartons and crates is exacerbated by the need to lift above shoulder height or below knee level, to reach forward or to handle heavy items.

### What is the solution?

The risk of musculoskeletal injuries can be reduced by selecting a crate or carton of a size that is easy to handle. The width of the carton (less than 50cm across the body) should allow the elbows to be supported against the trunk. The length should be less than 30cm to enable the carton to be carried close to the body.

Containers should have handholds that are:

- Wide enough for the palm and deep enough for the knuckles (approx. 11cm wide and 5cm deep. Add 2.5cm for use of gloves)
- Located towards the top of the load for stability

Sharp edges should be avoided by using rounded handles or folded back cardboard cut out (where packing allows).

Where handles or handholds are not able to be used, the best grip on a carton can be achieved where the worker can reach the bottom front corners of the load when carrying at hip height.

Selection of collapsible plastic crates with handholds should ensure that they are assembled and disassembled with a minimum of impact force while being robust enough to be handled mechanically. Crates that can be interlocked provide a more stable load for transport but may introduce difficulties when manually stacking.



## Systems of work

For guidance on lifting cartons or crates above shoulder height or below knee level, see *Health and Safety Solution No. 9 Stacking boxes of vegetables on pallets*.

If the assembling of plastic crates requires excessive impact force and is repetitive and high paced, this job should be rotated until more suitable crates are obtained.

Put aside any crates that may have cracks or splits.

The layout of the packing shed and work areas should be designed so that workers can do their tasks without bumping into one another.

## Environment

Food safety standards should always be considered in relation to solutions used.

## The activity



## A solution

