



# Manual handling solutions for the vegetable industry No. 2



## Vegetable transplanting

### What is the activity?

Planting vegetables while sitting on a tractor mounted transplanter.

### What are the risks?

Planting vegetables while seated on a semi-automated vegetable transplanter attached to a tractor often involves awkward and cramped postures, with workers leaning forward in their seats without back support. Comfortable foot support is often lacking or out of reach of many workers. Workers are at risk of musculoskeletal injuries of the back, shoulder, arms and neck.

Due to the nature of the terrain, especially at the end of rows when the planter is elevated, workers are subjected to random whole body vibration. This may contribute to lower back pain and other back related disorders.

Work is highly repetitive and often undertaken for a long duration in both cold and hot conditions.

Some semi-mechanised planters are not fully effective resulting in workers having to hand plant behind moving tractors. This involves repetitive bending to ground level and sustained bent postures.

When sitting on planters, workers may also be exposed to moving parts such as chains around the legs and feet.

### What is the solution?

The risk of musculoskeletal injuries can be diminished by:

- Replacing the fixed seats with adjustable, cushioned seats with back support and built-in vibration dampening mechanisms
- Providing accessible and adjustable foot supports. This may require consultation with suppliers
- Ensuring the tractor pulling the transplanter is driven at a speed that will reduce vibration levels
- Scheduling regular rest breaks to provide opportunities for workers to prevent the build-up of fatigue in muscle groups caused by sustained fixed postures, repetitive movements of the task, and vibration
- Ensuring that workers wear clothing appropriate to the conditions in cold or hot weather
- Liaising with suppliers with regard to improving the effectiveness of transplanters (especially for different soil conditions) and therefore reducing the amount of hand transplanting
- Consider the use of automated transplanters to eliminate the need for seated workers

Modifications to machinery may need to be in consultation with the manufacturer or engineer.



## Systems of work

Tractor speed should be controlled to ensure workers are able to maintain a comfortable pace of work.

Consider rotating seated workers with manual planters.

## Environment

Install and maintain guards to ensure workers are not exposed to moving parts.

Ensure row ends are maintained reasonably level to reduce bouncing of the tractor mounted planter.

The planter may need to be stored under cover to provide weather protection for seats.

## The activity



## A solution

