

## Pruning fruit trees

### Task Description:

In pruning the worker performs a number of different working postures. When pruning fruit trees the worker either work on the ground or on a ladder. Sometimes working with arms above shoulder height, sometimes bending/twisting the back or reaching out. Some of the tools used are not ergonomically designed and therefore cause strain on the joints.



Pruning on the ground, reaching far out.



Pruning from a ladder, reaching far out.



Pruning with a secateurs that is not adjusted to the workers hand.

**Comments**

### from the employee:

- ❑ 'The working height is often inappropriate'
- ❑ 'Working on a ladder is instable'
- ❑ 'After pruning, I often have aches in my hands and arms'

### MSD risks:

- ❑ Pruning high growing branches involves working with the arms above shoulder height.
- ❑ The strain on the hands is very high.
- ❑ Working on a ladder involves risk of strain injuries.
- ❑ Pruning implies working in outer position.

### Exposed areas:

- ❑ Arms / hands
- ❑ Upper / lower back

### Solutions:

- ❑ Installation of apple pruning vehicle with functions such as adjustable height, gaining better work postures.
- ❑ Pruned window shaped trees improves work postures when picking apple, since more apples grows lower on the trees and allows picking standing on the ground.



Apple pruning vehicle with adjustable height.



Apple trees pruned in a way to improve work postures when picking.



Apple pruning with a secateurs that is ergonomically designed. Using two hands increase the power and divide the strain on both arms and hands.



Apple pruning using a secateurs where one of the handles is rolling. This decreases the strain on the fingers and hand.

**Comments from the employer:**

- *'The workers suffer less from aches and pain after pruning trees from the vehicle'*
- *'Adjustable working height when pruning trees from the vehicle is safer and more comfortable than working from a ladder'*

**Comments from the ergonomist:**

- *'An adjustable working height from a vehicle is a good solution when pruning trees. The vehicle allows the worker to prune in a more upright posture with arms below shoulder height and closer to the body'*
- *'Ergonomically designed hand tools give less strain on fingers and hands'*

*Photos: Sara Kyrö Wissler, Rosmari Emanuelsson, Sweden, 2009*