
Citrus Harvesting

4 Picking Supervision

Learner Guide



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Introduction

Supervising picking starts with good pre-harvest practises. You need to be sure that the orchards are clean and ready for the harvest. This is critical in avoiding contamination and injuries while the fruit is picked. Good orchard sanitation practices throughout the year contribute to good quality fruit.

Before picking starts, the supervisor must know every day what **picking method** is going to be used. The supervisor must also know what restrictions the **weather conditions** place on picking. It is then also the responsibility of the supervisor to put together the **picking team** and to make sure that the members of the team have the **equipment** they need, and that the equipment is clean and in good working order.

While picking is taking place, the supervisor must check that the pickers are adhering to **good picking practices**, and that the fruit is not getting injured or damaged. The supervisor then needs to make sure that the fruit is **transported** to the packhouses in the right way.

Citrus Picking Methods

The picking method that is to be used depends on whether you are picking fruit for export, juice or the local market.

Picking Export Fruit

Picking export fruit means that pickers will use clippers to remove the fruit from the tree, and that special care must be taken every step along the way to make sure that the fruit is not injured, damaged or contaminated.

Good practices for export picking are described in detail in the Picking Practices module. Make sure that you are familiar with this module.

Selective Picking

It is also possible that the supervisor will be told to do selective picking. The manager will for instance tell the supervisors to only pick fruit that has a certain colour according to colour charts, or to only pick export fruit.

In this case you must make sure that you are very clear on what is required. This information must then be communicated to the pickers. Give the pickers very specific instructions, and, if possible, provide them with pictures of exactly what you are looking for.

It is a good idea to have those pictures stuck on the side of the picking trailer or bin while they are picking, because then they can look at the pictures often to refresh their memories.

Snap Picking

The other method that can be used is snap picking. Always remember that **export fruit is never snap picked**, because it is very easy to tear the fruit at the stem end when it is snapped off the tree. Snap picking is used when juice fruit is picked and when the orchard is being stripped after the export fruit has been picked.

Climatic Conditions

Citrus fruit must **never be picked while the fruit is wet**. The oil glands in the rind of the fruit becomes turgid and fragile when fruit is wet, and in very cold, humid conditions. When the fruit is handled in these conditions, the oil glands in the rind rupture, causing oleocellosis. Fruit can therefore not be picked during or just after it rained, or in the early morning when there is dew on the fruit. As a general guideline, harvesting should only take place when the temperature is between 13 and 30°C, and the relative humidity is not higher than 70%.

Lemons should also never be picked during and for at least two days after a cold front – especially if the cold front was accompanied by rain – because this lead to higher incidences of peteca.

summary

Weather Conditions for Picking

- ❖ Fruit must be dry
- ❖ **Temperature** – 13-30°C
- ❖ **Humidity** – below 70%
- ❖ **Lemons** – not for at least 2 days after cold front, especially if it rained

Your Picking Team

Pickers are usually seasonal workers that may or may not have done citrus picking before. A picker must be fit, and ready to work hard.

Fruit Injuries

Pickers are normally paid per bag that they pick, and they will therefore always try to pick as fast as possible. Because they want to pick quickly, there is the greater danger that they will cause damage and injuries to the fruit.

It is the supervisor's job to check that this does not happen. Remember that injured or damaged fruit cannot be exported, and that every fruit that is lost in this way, costs the farm money – it is your wages that they are picking off the trees.

Health, Safety and Personal Hygiene

You also need to make sure that pickers protect their own health and safety and that they are aware of all possible dangers that equipment might pose.

Make sure that all the pickers keep their nails short and that they wash their hands regularly.

You must also be familiar of the standard operating procedures for emergencies for your farm, so that you can apply them without hesitation if an injury to one of the pickers in your team should occur.

Picking Teams

It is recommended that there should never be more than 20 pickers in a picking team.

If there are more than 20, the team becomes too difficult for one supervisor to monitor, and the danger of injury and bad picking practices increase.

If there are too many pickers, it will also be difficult for the pickers to get to the trailer or bins to empty their picking bags, and there is a greater danger of fruit being damaged as the pickers crowd around the trailer.

Picking Equipment

Picking Bags

To start with, each picker will need a picking bag. It is important to check that the picking bags used by your team are without any tears, rips or holes. Any tear or hole must be fixed with **thread** and never with wire.

Also check that the straps are sturdy and that they won't break when a bag full of fruit is carried.

Picking Clippers

If you are picking export citrus, the pickers must each have a pair of clippers.

Check all your team's clippers before they are given to the pickers, to make sure that they are working well. Check that the spring is not worn out – the clippers must spring open by themselves after being shut. Also check that the finger loop is not loose.

The blades should meet up and not overlap, because if they do, the stems will be torn and not cut through neatly. The clippers must also be clean and sterile before picking starts.

Gloves

In some cases, each picker also needs a glove. Gloves are made of strong material that won't catch easily on twigs and thorns.

Before giving them to the pickers, make sure that there are no tears or holes in the gloves.

information

Picking Gloves

Although it was for a time considered best practice to use gloves while picking, it has now been found that it can have a negative impact on hygiene, due to their propensity to become damp and collect pathogens and other dirt. It is therefore now considered best practice to pick with bare hands that are washed regularly, and a soft touch.

Ladders

If the trees in the orchard are too tall for the pickers to reach the fruit at the top, they need to use ladders.

Ladders can be made of wood or aluminium, and can have two or three legs. Make sure that the ladders are sturdy, free of splinters and burs, and clean.

Picking Trailers and Bulk Bins

In the orchard, the pickers empty their picking bags into either picking trailers or bulk bins. Picking trailers are normally attached to a tractor, and have a capacity of 2 to 3 tons. Some trailers may also have removable bodies that can be loaded onto a truck for transport to the packhouse. Trailers are normally serviced before the picking season starts to make sure that they are in good working order.

Bulk bins are made of wood or plastic. Both types of bins are normally transported on low-bed trailers. Bulk bins have a capacity of 350 to 400 kilograms.

Before wooden bins are used, check that there are no splinters, broken planks, screws or nails sticking out of the wood that can cause injury or damage to the fruit.

Plastic bins must be whole, clean and dry. Bin liners are used to protect the fruit against pressure injury, which leads to oleocellosis.

Daily Picking Supervision

It is the responsibility of the supervisor to look after and care for the people working under him. There must be ablution facilities for the picking teams in the orchard and they must have access to drinking water. Remember that a happy team is a productive team, and one that cares about the product.

At the start of every day, make sure that every picker has the equipment that she or he needs. Also make sure that the pickers' nails are short and that they don't have any open injuries or sores – these must be covered with plaster.

The trailer must be parked in the orchard where the pickers do not have to walk too far to empty their bags. They should not be picking more than two rows away on either side of the trailer.

While the fruit is being picked, check for the following:

- ❖ **Fruit are placed, not dropped, into bags**
- ❖ **Fruit that fall on the ground is not picked up**
- ❖ **Low-hanging fruit is not picked**
- ❖ **Pickers are not running with bags containing fruit**
- ❖ **Bags are emptied gently**
- ❖ **There are no long stems on the fruit**

Before putting any fruit into a picking trailer or bulk bin, check that there is no fruit waste or plant material, like leaves or stems or twigs, in the trailer. Fruit waste can cause contamination, and twigs or stems can injure the fruit. Also make sure that plastic bins are dry, especially if it has been raining.

Be careful not to overfill picking trailers and bins, because this will cause injury to the fruit. If the fruit is particularly vulnerable to pressure injury, as is the case with certain citrus types and in certain weather conditions, picking trailers should only be filled halfway, and bins should be filled to one plank-width from the top.

information

Pre-Sorting

It is important to remove damaged and clearly infected fruit during picking. Look for fruit that is decayed, stung, injured, squashed, burst or puffy and remove them from the trailers or bins.

Monitoring Picking Injuries

It is very good management practice to monitor injuries to the fruit. The following method is a quick and effective way to pick up how many injuries, which are not visible to the naked eye, are being caused to the fruit.

Fill a string bag with fruit coming in from the orchard. In a large bucket, mix 5 grams of indigo carmine, a blue dye, with 10 litres of water. Place the string bag with the fruit into the bucket, and leave it for 5 minutes.

When you take the fruit out, you will be able to see injuries to the fruit. This practice does not damage the fruit – uninjured fruit can be replaced in the bins and sent to the packhouse.

If you find that there are too many injuries to the fruit, you can speak to the pickers and instruct them to be more careful.

skills

Please see the skills sheet on **Monitoring Picking Injuries**.

Transport to Packhouse

Once a bin has been filled, it must be covered with tarpaulin in the orchard. If it is not immediately transported to the packhouse, it must be placed in the **shade**, out of direct sunlight.

If bins are transported on a truck, they are stacked 2 to 3 high. Here it is especially important that the bins must not be overfilled – if they are the fruit on the top will be squashed and will push down on the fruit below. Picking trailers are also covered with tarpaulin once they are filled, and normally transported to the packhouse immediately.

During transport, care must be taken that the fruit is not unnecessarily bounced around in the bin or trailer. It is important that farm roads are repaired before the picking season and the tyre pressure of the trailers must be adjusted, to ensure as smooth a ride as possible for the fruit.

The tractor must not drive too fast on dirt roads, again to protect the fruit against damage, and to prevent dust from getting onto the fruit.

active learning

Watch the DVD clips, read through the learning material and do workplace research to gather the knowledge and information to complete the assignments below.

Activity 1 – Mind Map and Information Leaflets

Work as a group to draw a mind map explaining the important aspects that must be supervised during picking. For each aspect that you identify, design a small information leaflet for the picking team that can be used to remind them during the daily briefing of the important points that may increase yield and maintain fruit quality.

Activity 2 – Research Report

Do research by consulting other resources or asking workplace experts to gather information about pre-sorting in the orchard. Explain the concept in a brief ½ page summary.

Activity 3 – Workplace Logbook

You have to complete the tasks associated with monitoring picking injuries as part of your practical learning. Please ensure that your workplace supervisor or team leader observe you while completing this tasks and sign off your logbook.



Activity 1 – Mind Map and Information Leaflets

Work as a group to draw a mind map explaining the important aspects that must be supervised during picking. For each aspect that you identify, design a small information leaflet for the picking team that can be used to remind them during the daily briefing of the important points that may increase yield and maintain fruit quality.

Attach examples of your information leaflets below.



Monitoring Picking Injuries

Requirements

- String bag**
- Bucket** (minimum 20 litre capacity)
- Clean water**
- Indigo carmine**

Method

1. **Fill a string bag with fruit coming in from orchard**
2. **Put 10 litres of clean water in the bucket**
3. **Mix in 5g of indigo carmine**
4. **Place string bag with fruit into bucket**
5. **Leave it for 5 minutes**
6. **Remove fruit and inspect for injuries**

