

HANDLE WITH CARE:

maintaining the quality and value of your sweetpotato roots during and after harvest through better practice





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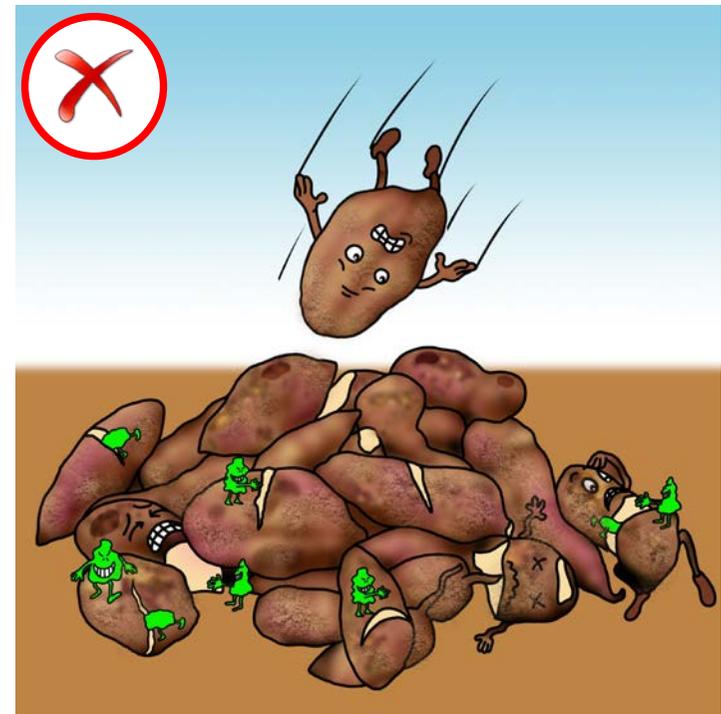
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Why do sweetpotato roots get soft or rot?

- Just like with human skin, when sweetpotato roots get cut, bruised or damaged, diseases can easily enter via the wound and cause rotting.
- Even dropping roots can cause bruising inside them, which damages them, and can cause rotting and/or flesh discoloration, all of which prevent them from keeping well.
- Try and handle sweetpotato roots as gently as you handle eggs.
- Some varieties rot more easily than others. Pay attention and learn which varieties keep best after harvest.



Rough handling of sweetpotato roots causes bruising and damage and can lead to rotting

Before harvesting sweetpotato roots

- Ensure that your sweetpotato crop is not affected by weevils. Weevils feed on sweetpotato roots causing damaging tunnels/holes in the roots. You can help prevent weevils from finding the sweetpotato roots, by hilling-up the soil around the plant whenever you see cracks appearing in the soil. Plant on time so the crop is not exposed to very dry conditions. It is important to practice crop rotation to avoid build-up of weevil populations; don't plant sweetpotato straight after sweetpotato.
- If you are harvesting after the rains have stopped and the crop is mature, you can help protect your roots by using in-ground curing to help maintain the quality of your roots after harvest.
 - In-ground curing is done by cutting the foliage off (de-haulming) the sweetpotato plants 4 to 7 days before you harvest the roots. Experiment by cutting off the foliage of some plants 7 days before harvest, others 4 days before harvest etc. to see which number of days works best for your farm and crop.



- When cutting off the foliage always leave a 15 cm length of stem above ground.
- This helps the roots to produce a thicker skin which protects them from disease and loss during storage.
- In some locations, you may have to guard against thieves after cutting off foliage as it indicates that the crop is ready.
- Note: You should NOT do in-ground curing if it is raining at the time of harvest, as your roots are then likely to start sprouting and their quality will then be reduced.



Harvesting sweetpotato roots

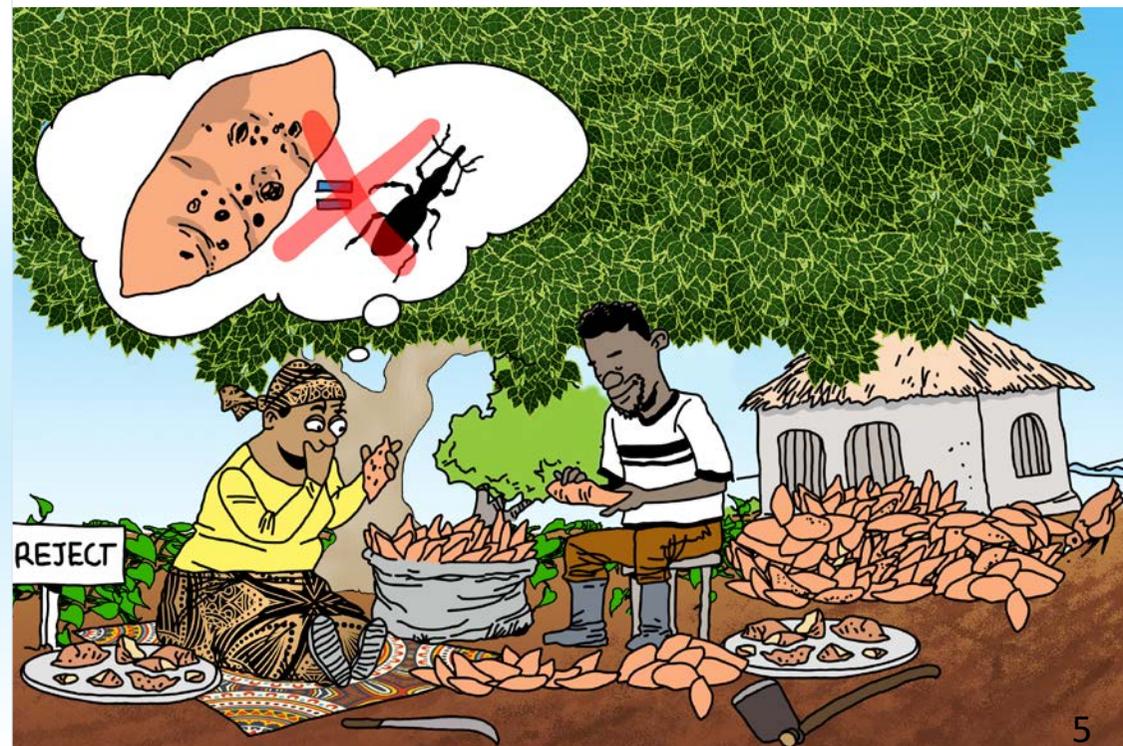
- Harvest sweetpotato roots carefully:
 - using a fork-hoe, hoe, or machete may help
 - using an ox-plough to harvest sweetpotato crops is becoming an increasingly popular method. The oxen must walk between the rows to ensure they don't step on and damage the unharvested sweetpotato roots.
- Try not to throw the roots across the field as you harvest, as they will get bruised.
- Place your freshly harvested roots in the shade or cover them with vines to keep them from getting sunburn, which can happen in a short time on a hot, sunny day.
- *Remember:* broken, bruised or damaged roots do not keep well, and fetch a lower market price.



Sorting sweetpotato roots

- Processors and consumers use sweetpotato roots in a range of ways, and markets typically want sweetpotato roots sorted by size and quality:
 - the size categories used for sweetpotato roots are typically: very large, large, medium, and small
 - the quality categories used are typically:
 - completely undamaged;
 - minor skinning damage;
 - minor cutting damage to root;
 - root broken into pieces.

Note: weevilled portions of roots should not be marketed, eaten, or fed to livestock as they can be toxic.



Transporting roots from the farm

- It is best NOT to wash roots before transport. Excess dirt can be brushed off.
- If there is a choice, jute bags are preferred to woven plastic sacks. Crates are very good for transporting roots in, but can be expensive.
- Transport roots carefully, do not overload sacks, nor the donkeys or bicycles which are transporting them.
- Try and transport the roots during the cooler times of the day (i.e. early morning or late afternoon).
- *Remember:* broken, bruised or damaged roots rot quickly and do not fetch a good price.



Washing sweetpotato roots

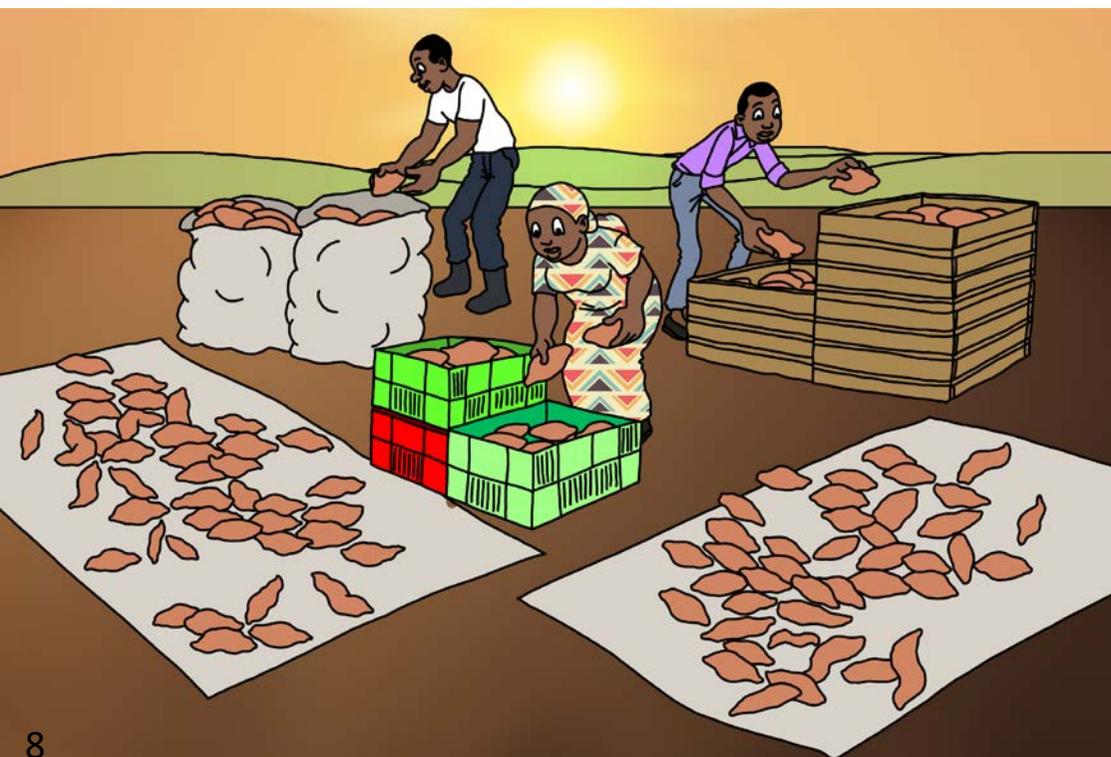
If your market demands washed roots, the roots should be washed at the market or as close as possible to it to maintain their quality:

- Wash them carefully by hand so as not to bruise or damage them. A brush with soft-bristles can help in washing the soil off.
- Dry them before you pack them into sacks. It is best to dry them in the shade where there is a gentle breeze. Try and lay them out on clean mats or sacks so the roots are not touching.
- Remember washing roots will cause some of them to rot more quickly and they will not keep well. It is best not to wash the roots, or to wash them only just before they need to be sold.

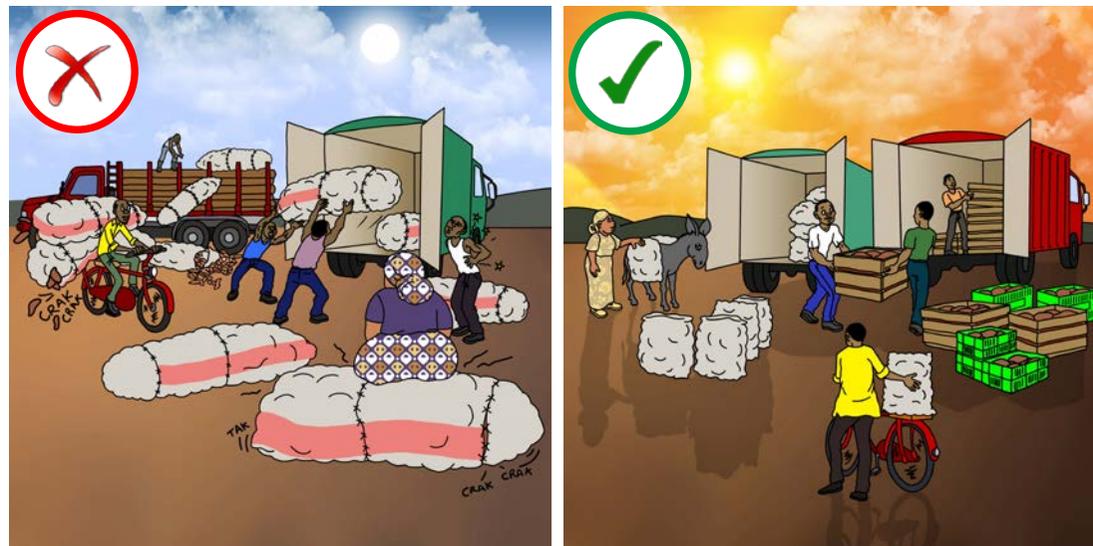


Packing sweetpotato roots

- Packing sweetpotato roots into very large extended sacks will damage the roots through both squashing and poor handling.
- Extended sacks of roots are very heavy, and difficult to lift and load and unload from trucks, which often leads to the roots in them getting broken and bruised.
- Ideally, sacks or boxes of sweetpotato roots should weigh just 50-65 kg.
- Sew or tie the sacks of roots closed to prevent roots from falling out.



Loading and transporting roots to market



- Large extended sacks of roots are very heavy, and difficult to lift, load and unload from trucks, so pack the roots in sacks or crates/ boxes up to a weight of 50-65 kg.
- To protect the health of the people and the roots, each sack or crate should always be lifted and loaded by two people working together.
- Stack the sacks or boxes of sweetpotato roots carefully inside the truck, ensure they will not slide around during the journey.
- Sacks of roots must not be thrown, or dropped from a height as this will damage the roots.
- Standing on or sitting on sacks of roots will bruise and break the roots and lead to rotting.
- Transport of sweetpotato roots is best done during the cooler hours of the day or night to maintain root freshness, quality and value.

Common problems

Extended bags are often used for transporting sweetpotato roots because transporters and markets charge or tax traders on a per bag basis.

This is changing, as governments are realizing that this encourages bad handling practices and leads to valuable food being wasted.



Low root yield may be due to several factors: virus infection; late planting; insufficient crop rotation; poor soil fertility; drought; weevil damage.

- Use of clean planting materials helps to: prevent viruses in your sweetpotato crop; avoid spreading of weevils from old to new fields; and keeps your yields high.
- Rotate your sweetpotato with other crops so pests and diseases do not build up in the soil year after year. Sweetpotato does well following cereals or legumes.
- Staggering the planting of your sweetpotato field can help. It spreads the risk of yield loss due to unreliable rains or prolonged dry spells; reduces labour bottlenecks; and provides a smoother supply of roots over a prolonged period.
- Use varieties that are adapted to your local conditions.