

CASSAVA PROCESSING TRAINING MANUAL

TRADITIONAL FLOUR

RAW MATERIAL: CASSAVA ROOTS

Process

- Harvest mature roots
- Weigh all raw material

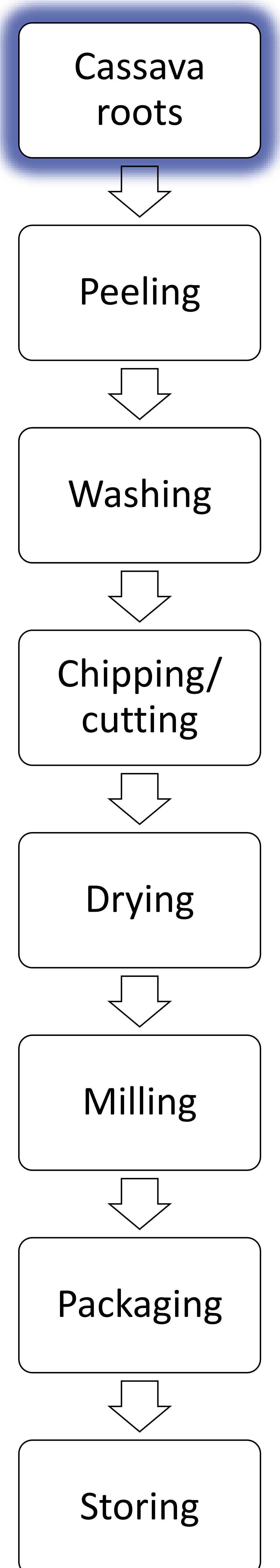
Equipment

- Sharp implements for harvesting
- Calibrated balance/scales for weighing before and after processing

Tips

- Avoid immature, old, diseased, fibrous or woody roots
- Avoid damage during harvesting
- Process harvested roots within 24 hours for best quality and maximum recovery of processed products

Depictions



PEELING

Process

- Top and tail, and peel the roots using a sharp knife/peeler
- Remove the outer brown skin and inner thick cream layer
- Remove any diseased or woody parts from the roots
- Place the peeled roots in clean bowls of water or wash tank

Equipment

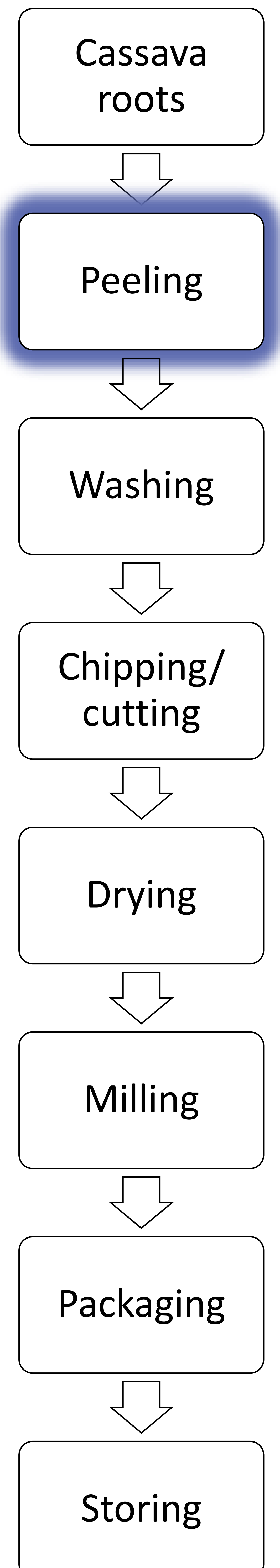
Clean, sharp edge stainless steel knife (sharpen and visually check blades on a regular basis)

- Clean containers or wash tanks/basin

Tips

- Be careful, do not remove too much peel to avoid too much wastage. Weigh all peels and gradeouts
- Grading and peeling can be done at the same time
- Peeled roots should not be left more than an hour in washing water to avoid fermentation

Depictions



PEELING: MOTORISED MECHANICAL

Process

- Top and tail the roots
- Remove any diseased or woody parts from the roots
- Operate peeling machine with batches of topped/tailed roots
- Place peeled roots in clean water
- Manually trim unpeeled areas

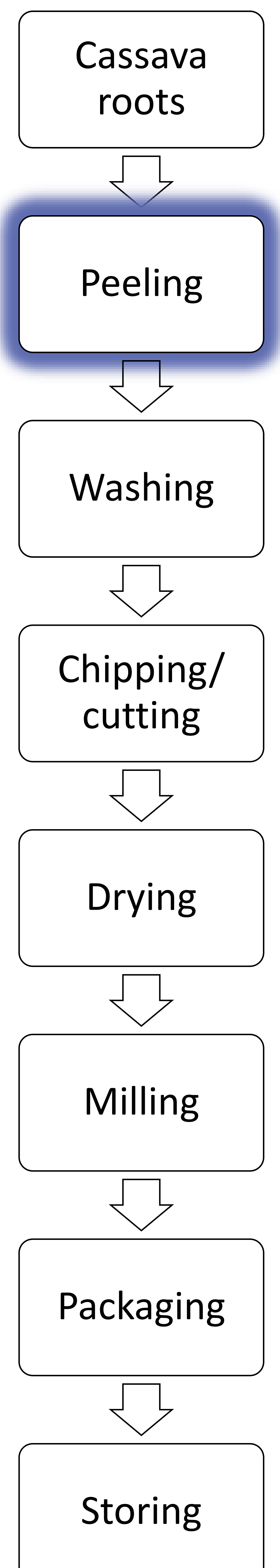
Equipment

- Clean, sharp edged stainless steel knife
- Clean water source
- Peeling machine
- Collection bowl/tank for roots/waste

Tips

- The peeling machine should not remove more waste than manual peeling- avoid wastage! Weigh all peels and gradeouts
- Grading prior to peeling - can be done at the same time
- Do not leave peeled roots for more than an hour in washing water to avoid fermentation

Depictions



WASHING

Process

- Manual or semi-automatic
- Place peeled roots in clean water
- Wash roots until all soil is removed, changing the water 2 to 3 times, or until clean
- Transfer clean roots to clean container or clean surface

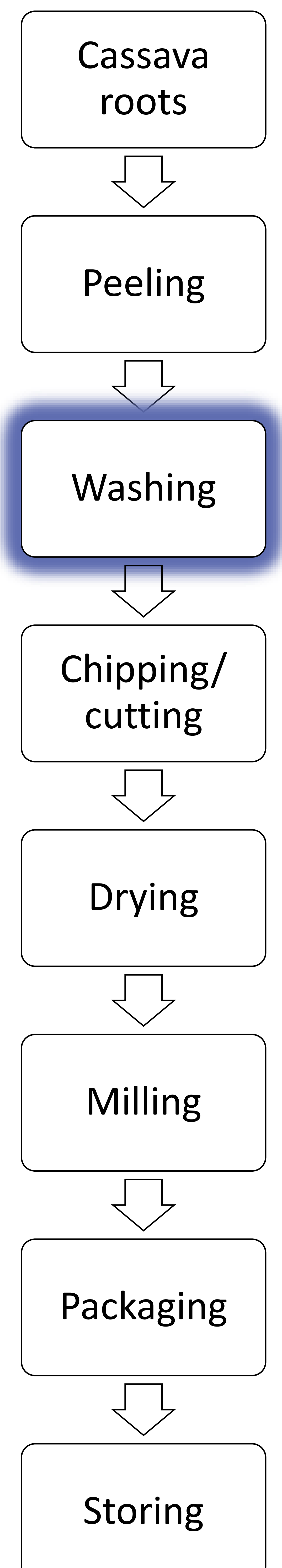
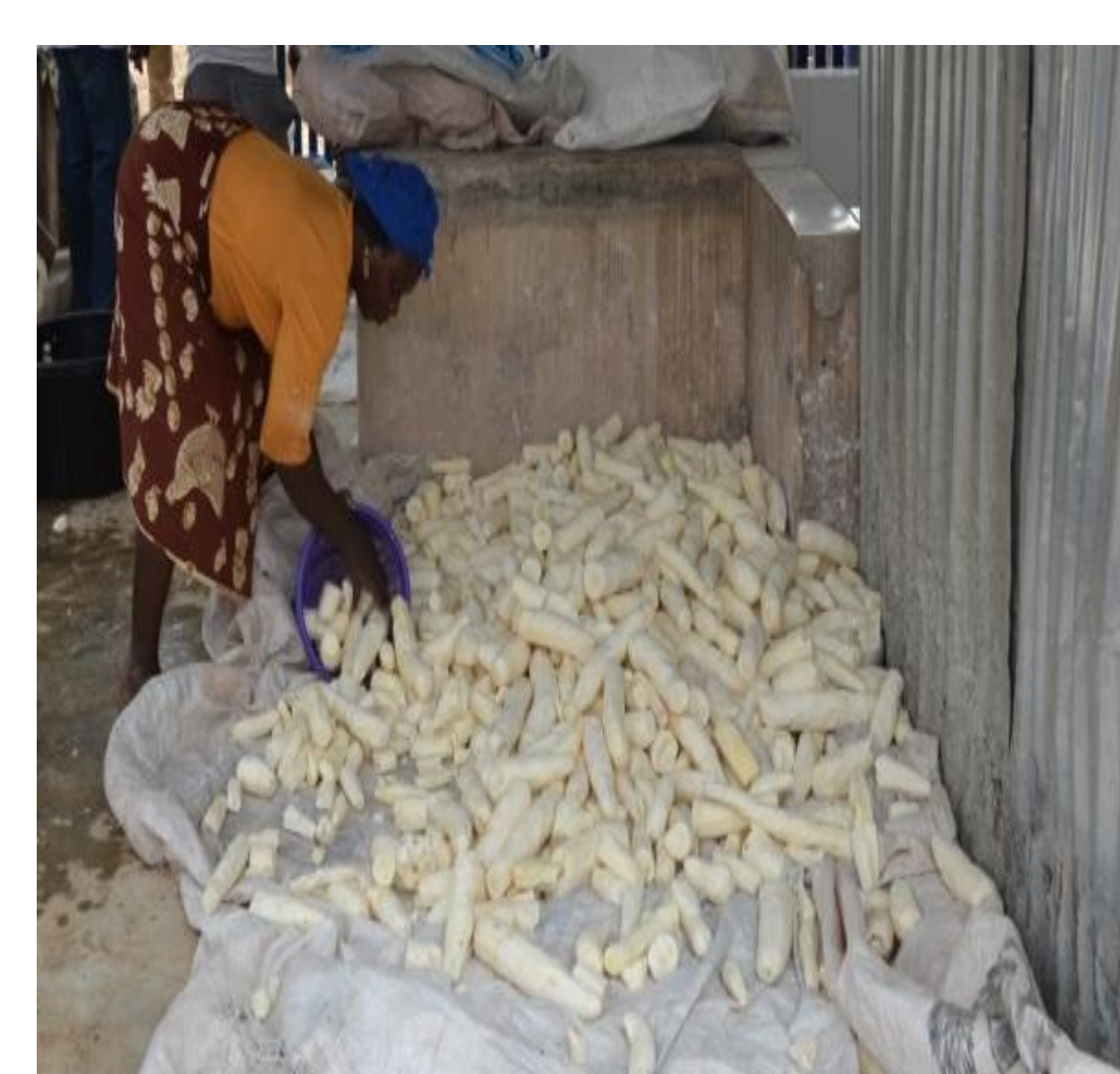
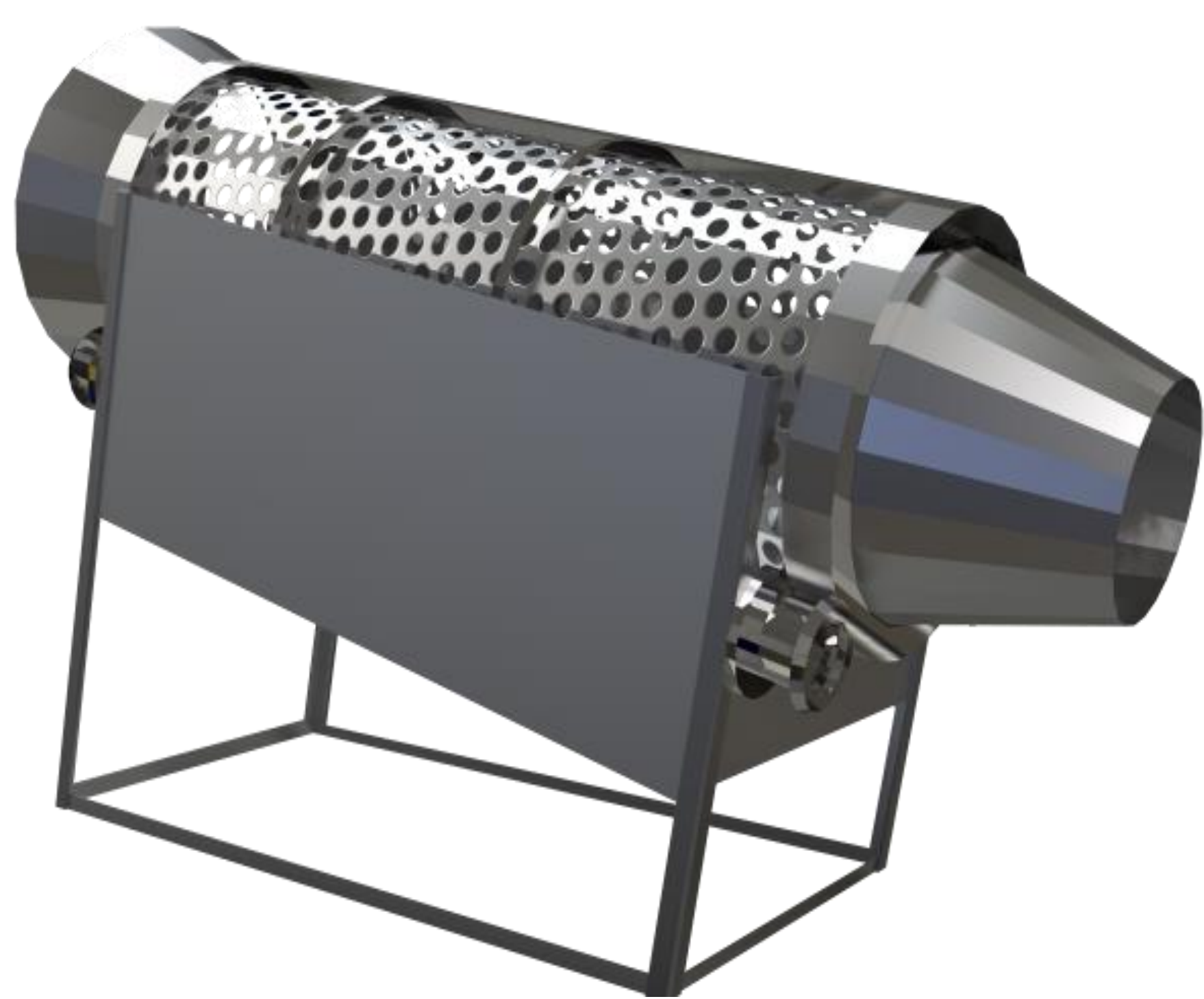
Equipment

- Clean water source
- Basin, wash tank
- Scrubbing brush (optional)

Tips

- Do not leave cassava roots in water for more than an hour to avoid fermentation
- Wash roots soon after peeling to avoid discoloration and maximize whiteness of processed product

Depictions



CHIPPING/CUTTING

Process

- Turn on the chipper and run water through it to clear any surface dirt
- Ensure there is a clean collector to discharge the chips into
- Place chipped/cut roots into a clean container

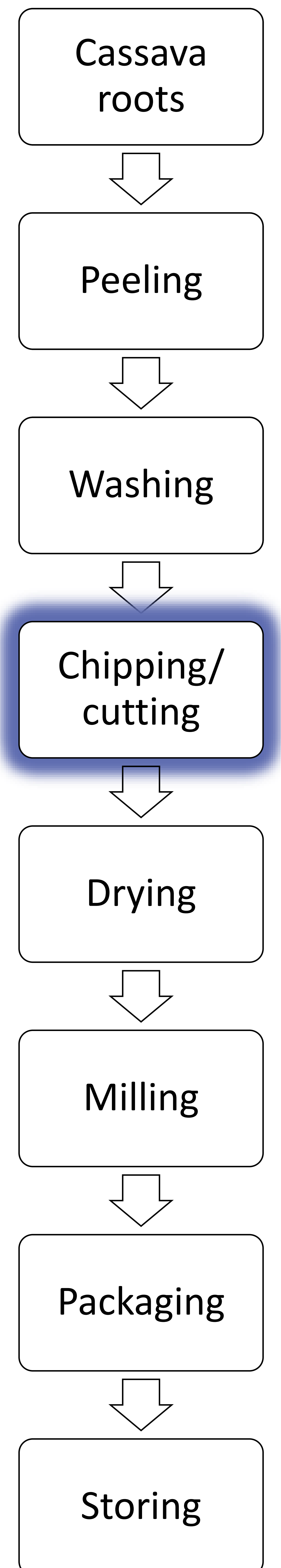
Equipment

- Chipper or knife
- Collector or clean basin
- Small bowls for cassava chips/chunks

Tips

- Ensure equipment is maintained or regularly serviced
- Ensure chipping plate and other material in contact with food is stainless steel
- Clean machine after each use and store in hygienic conditions

Depictions



SUN DRYING

Process

- Place tarpaulin over the drying platform
- Spread product across the tarpaulin (thinly for High Quality Cassava Flour; HQCF). Sifting can take place whilst spreading
- Dry under sun until product is dry to the hand (10-12% moisture content)
- Ensure there is a clean container or bags to load dried product

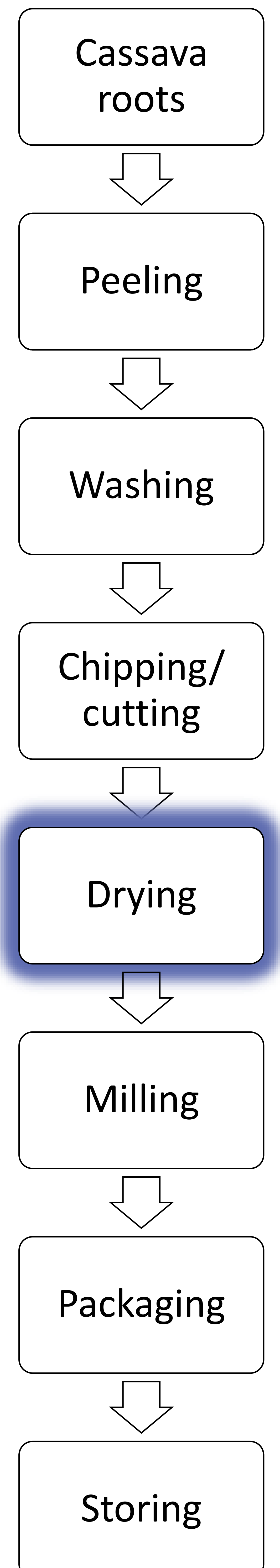
Equipment

- Raised drying platform
- Black tarpaulin
- Sieve (optional)
- Scoop or bowl for spreading/collecting
- Bags or other container for collecting dried product

Tips

- For HQCF load cake maximum 5Kg per square meter
- Ensure drying platforms are maintained in good condition
- Periodically treat wooden platform for termites
- Clean tarpaulin regularly and store in clean condition

Depictions



SOLAR DRYING

Process

- Spread product across the drying surface (thinly for High Quality Cassava Flour; HQCF). Sifting can take place whilst spreading
- Dry until product is dry to the hand (10-12% moisture content)
- Ensure there is a clean container or bags to load dried product

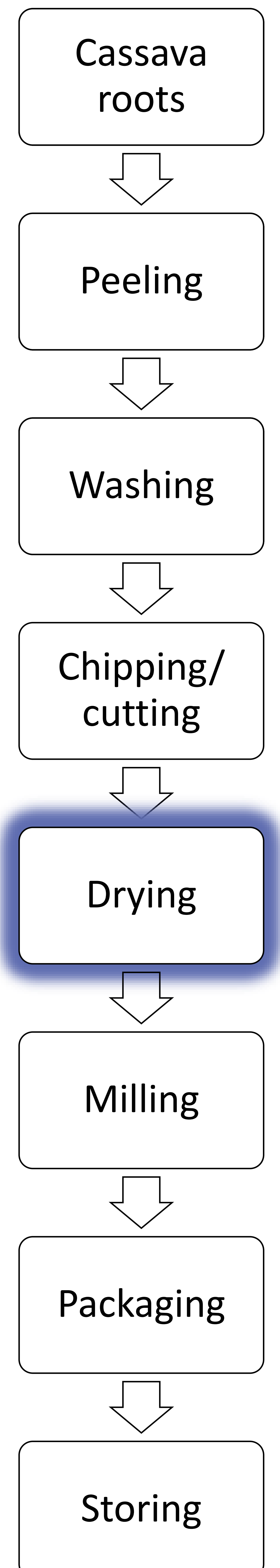
Equipment

- Drying platform
- Sieve (optional)
- Scoop or bowl for spreading/collecting
- Bags or other container for collecting dried product

Tips

- For HQCF load cake maximum 5Kg per square meter
- Ensure drying platforms are maintained in good condition
- Clean solar dryer regularly

Depictions



MILLING

Process

- Switch the mill on
- Pour the dried cassava into the mill
- Ensure there is a clean container or bags to load dried product
- Allow product to cool

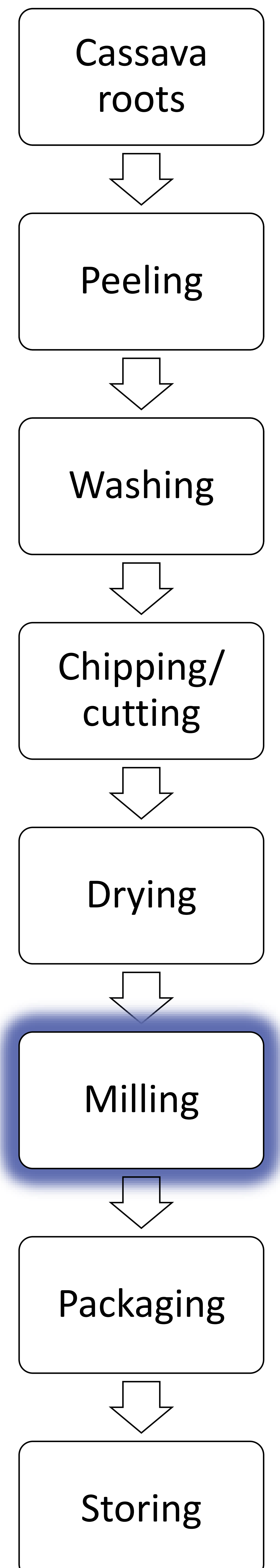
Equipment

- Milling machine
- Mill screen with desired aperture
- Bags or other container for collecting dried product

Tips

- Ensure equipment is cleaned after each use, particularly after milling other products
- Ensure equipment is maintained or regularly serviced
- Store mill in hygienic conditions

Depictions



PACKAGING

Process

- Transfer cooled product into clean propylene or other suitable packaging
- Fill bags to a standard weight and weigh
- Label the bags with the production date
- Seal bags prior to storage and/or seal prior to marketing
- Label packaging prior to marketing

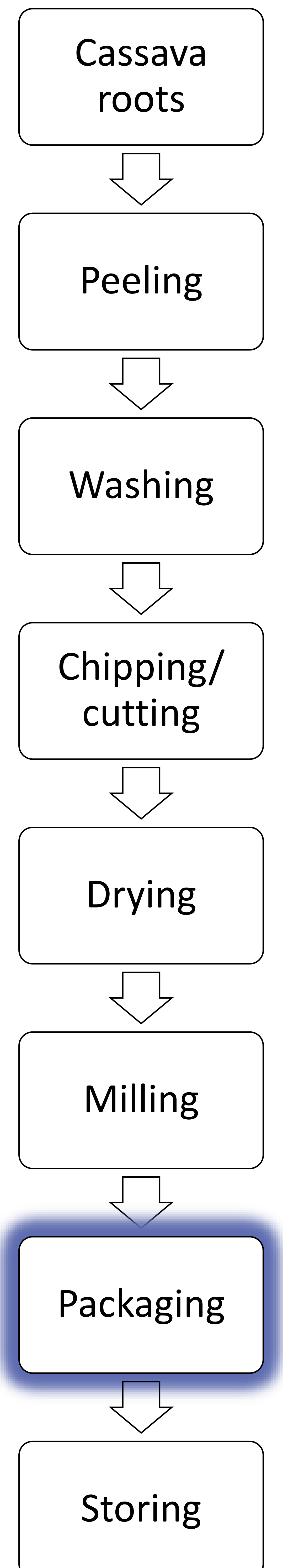
Equipment

- Bags or other packaging
- Stitching machine (optional) or manual stitching method

Tips

- Ensure product is checked regularly
- For High Quality Cassava Flour (HQCF), use polyethylene **lined** bags to prevent moisture ingress into the flour
- For correct stock rotation and quality control, bags should be labelled with the processing date

Depictions



STORING

Process

- Transfer packages onto pallets
- Transfer bags/packaging to a clean, dry and well-ventilated store until marketing

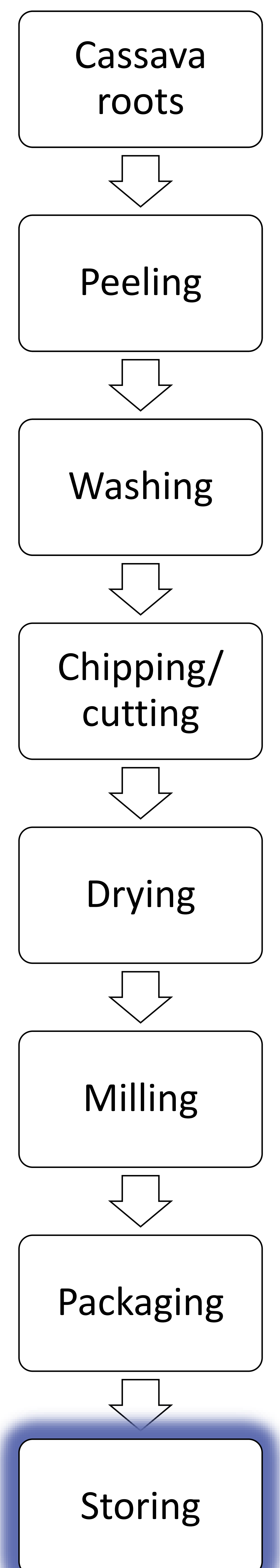
Equipment

- Pallets
- Store room

Tips

- Ensure product is checked regularly
- Store bags off the ground using pallets
- Keep perimeter around the bags accessible for inspection
- Follow 'First in, First out' rule

Depictions



Acknowledgements

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