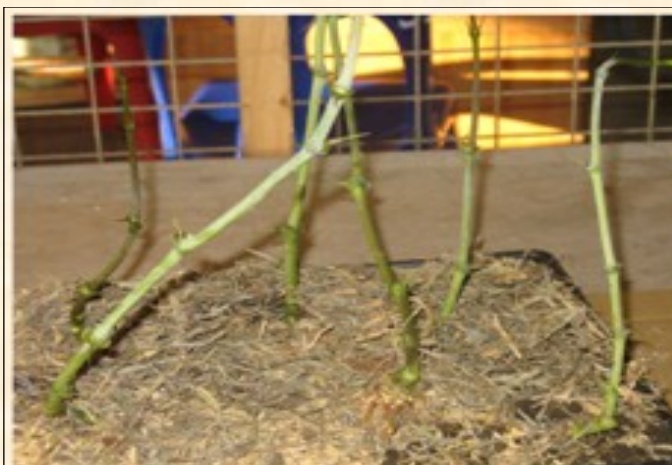


Sprouting in nursery bed

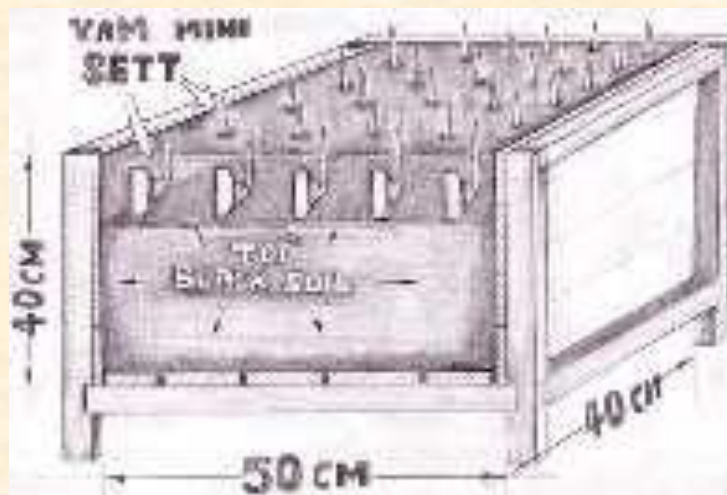
Prepare well drained nursery bed 100 cm wide and 30 cm height as shown in the diagram. Then spread fresh moist sawdust or sandy loam soil 2-3 cm thick. Spread minisettts on the moist sawdust side-by-side close together.

Cover the mini-setts with moist sawdust/soil or mulch. Water regularly to keep the bed moist during dry periods and provide cover during rainy days.



Sprouting in boxes

Place moist sawdust/soil in box (2-3 cm thick), then place mini-setts on the sawdust with cut surface side-by-side close together and cover with sawdust/soil and add water. Water regularly to keep sawdust/soil moist and provide cover during rainy days.



Sprouting time

Mini-setts should sprout within 3-4 weeks. Mini-setts are ready for transplanting as soon as sprouting occurs but when true leaves are not yet developed.

This flier was developed with information sourced from: LAL003 (E) Yam mini-sett Information (Laloki Toktoks Series) and Propagating food crops in PNG (TOT Training Manual).

Our Contact

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PAPUA NEW GUINEA
NATIONAL AGRICULTURAL RESEARCH INSTITUTE

YAM MINI-SETT

A rapid seed multiplication technique



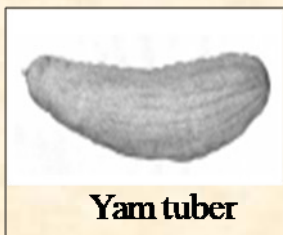
Climate Resilient and Sustainable Agriculture Series



Developed for a EU funded Action in Support of Smallholder Agriculture for Climate Change Adaptation

What is miniset?

A mini-set is a small piece of yam cut from a tuber (mother seed yam) which is prepared specifically for production of planting materials. The technique involves the cutting of 'mother' seed tubers into small setts (mini-sets) of 25-100g which must possess a reasonable amount of peel from which sprouting can occur.



Yam tuber



Yam miniset

Advantages of mini-sett technique

Some of the advantages are:

- Fewer tubers are used as seeds
- More seedlings from single tuber
- Easy for farmers learn and apply
- Crop emergence and establishment are faster and uniform
- Reduces the spread of pest and diseases

Materials required

- Clean, healthy mother tuber
- Blade or sharp knife
- Wood ash
- Bucket
- Water
- Basket or string bag
- Safety gear—hand glove



Wood ash solution

Selecting mother tuber

It is critical to select good quality 'mother' tubers that are healthy, of the proper physiological age and size. Selection should start from the field by identifying and removing diseased plants or tagging strong clean plants for use as seeds. This is because the symptoms of viral diseases are usually not obvious on tubers, and seed selection from the harvest of an entire field may not be effective in eliminating virus infected tubers. Viruses play a very significant role in the degradation of seed tubers and the reduction of their productivity.



Old tuber—NOT good to use as mother tuber



Young tuber—GOOD to use as mother tuber

Cutting and size of minisett

It is important to know the appropriate size to cut to obtain the desired size of seed yam. The bigger the mini-sett size, the bigger the seed yam.. An average mother tuber can give 20—40 minisett.

A sharp knife should be used to cut minisett to avoid dislodging the peel of the tubers, which plays an important role in sprout formation. The mother tuber should first be cut into 2-5 cm rings depending on the circumference of the tuber. Each ring should be cut vertically to produce pieces of the desired weight with each piece possessing a skin area that is sufficient for sprouting.



Freshly cut minisett

Mix 4-5 handfuls of ash in one normal household bucket (4 litres) of water to make wood ash solution, or prepare dry wood ash. Place fresh cut mini-sets into baskets or string bags if wood ash solution is used.

Dip the bag containing mini-sets into the wood ash solution while holding the handle of the bags. If using dry wood ash, then treat individual mini-sets separately. Spread the treated mini-sets under shade for two hours to dry off. Do not place mini-sets in direct sunlight.