

PROTECTION OF FRUITS

FROM BIRDS AND BATS

The Mauritius Fruit Bats are unique in the world and exist only in Mauritius. They also play an essential role in preserving forest cover and in particular the tiny amount of unique endemic forests that remains (less than 1.5%). Bats are extremely prone to strong climatic events, which can increase the risk of extinction. This is why the Mauritian Wildlife Foundation wishes to protect both bats and the interests of all local fruit growers. The best way to do this is to net our fruit trees. The guidelines below are useful for orchards, but can be applied to backyard trees also.

Subsidy

The government has provided subsidies to backyard farmers and orchard owners to alleviate the cost of netting trees.

Please contact the Food and Agricultural Research and Extension Institute (FAREI) on 433 4378/433 9350 for more details.

Timing

It is important to net your trees at a suitable period, that is, when the fruits are at an immature green stage (before the litchis reach around 2 cm and mangoes reach around 5 cm diameter).

Net width

Choose the width of your net according to the size of your tree (See 'How to net a tree'). Note: your options of width of netting may be limited by the availability of these netting sizes on the market in Mauritius.

Net colour

There is some indication that black, being less reflective, works better than white nets.

Mesh size

A human finger should not be able to pass through the mesh size.

Net Lifting

Lifting your net a minimum of 50 cm above the canopy will prevent bats and birds from eating the fruits through the net.

Net Sealing

Sealing your net is crucial to prevent animals from entering under the net and getting trapped in it and thus eating more fruits.

Other useful actions

Spraying your trees against fungal diseases (dark brown spots on fruit skin) helps prevent a lot of damage to your fruits since this disease also breaks open the skin.

Pruning (keeping your trees below 6 m) makes it easier to place a net, to pick fruits from your tree and bats are less likely to land on low trees if you decide not to net your tree. Some orchards plant a high density of trees kept lower than 2 m in height.

Storage After the fruiting season, remove nets carefully, rinse in water, dry well, fold and store in a dry place. You may reuse the same net for 5 or more years.

Other:-

Should you need more information about the steps to net a tree or where to obtain your nets, view the

MWF website:
www.mauritian-wildlife.org



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HOW TO NET A TREE

1

Materials needed to net a tree

- Netting of suitable size (that covers the whole tree)
- 2 long poles with forks at the ends
- short metal/wooden rods to distance the net from the tree
- Duct tape, plastic bottles and heavy objects such as rocks

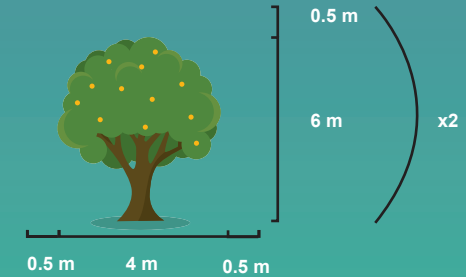
2

Calculate length of net needed

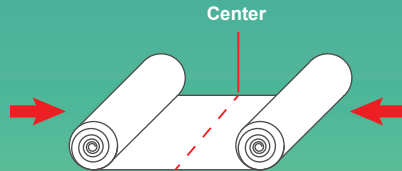
$(\text{Height of tree} + 0.5) \times 2$
 $+ \text{width of tree} + (0.5 \times 2) = \text{length of netting.}$

For example:

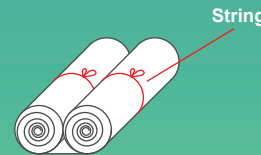
$(\text{Height } (6 \text{ m}) + 0.5) \times 2 = 13 \text{ m}$
 $13 \text{ m} + \text{Width } (4 \text{ m}) + (0.5 \times 2) = 18.0 \text{ m}$
 Width and Length needed: 18.0 m



3



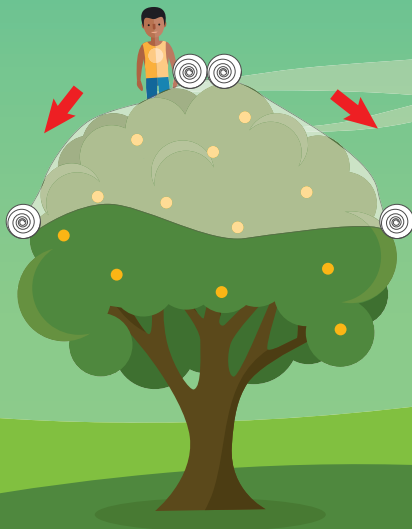
Roll half the net from one side and half from the other side so that both rolls meet in the centre of the net.



Attach a knot with a string around both ends of the rolled net.

MORE TIPS

- You can also use a few long poles which start off the ground and that are a minimum of 0.5 m longer than the tree's highest point to net your tree.
- You can test whether the tension on the net is sufficient in repelling bats by placing an object weighing about 1 kg on the net. The weight should not sink into the net, but stand on it or fall off.



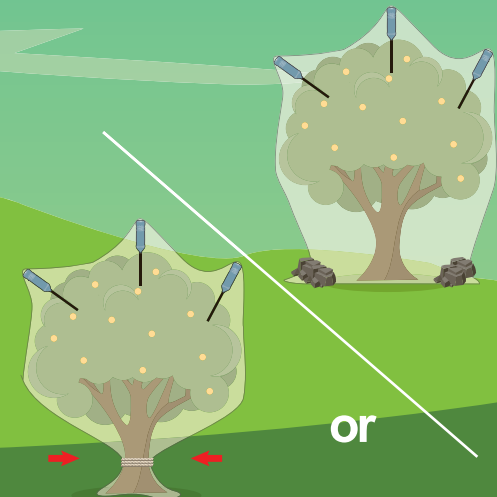
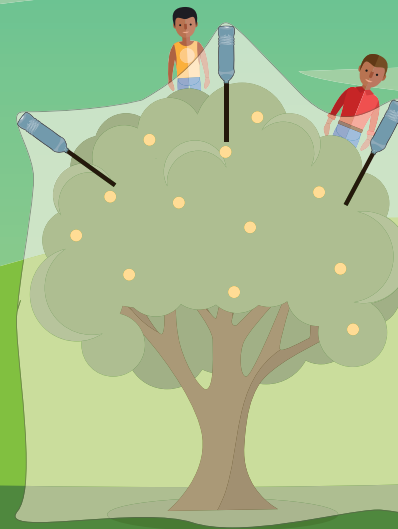
Methods to place the rolled net on top of the tree:

Method 1:

- Attach one long piece of strong nylon rope to both ends of the rolled net.
- 1 person holding one end of the rope by its extremity must throw the net up, to the highest point on the tree.
- The person on the tree should ensure the net is placed centrally on the tree or move the net with a rod to make sure of the latter. The two extremities of the still rolled net should fall on to the bottom of the tree canopy.

Method 2:

- Place each end of the rolled net on rods with forks at their end. 2 or more persons should simultaneously move each end of the net up the tree to its highest point (top central part).



With one person at the highest climbable point on the tree, place the rolled net on the top central part of the tree canopy.
 Then untie the ropes holding the net rolled for the net to unroll and cover the whole tree canopy.

CAUTION

- Netting a tree can be risky. Please assess health and safety risks and your skills at climbing and netting before deciding to net a tree.
- There are some people providing netting services for a fee.

The person(s) on the tree can then stick wooden/metal/PVC rods on the top of the highest tree branches reachable throughout the tree's upper surface and attach them firmly to tree branches using duct (packing) tape, ropes, raffia and leaving a sufficient space of around 0.5 m between the net and the tree canopy.

Ensure the net is tensioned over the poles which will prevent bats or birds that land on the net from collapsing into the net and eating the fruits or damaging the netting. Seal the ends of the net around the tree trunk with strong ropes or seal firmly to the ground with some heavy objects (such as heavy rocks, bricks etc) all around the tree to stop animals from getting under the net.