

Recommendations on netting and management of fruit bat damage to orchards in Mauritius

An extract from a report written following a multi-stakeholder workshop held on the 15th and 16th August 2017 at the Farmers Training School, FAREI, Wooton, Mauritius

The recommendations also include related issues such as improving lychee productivity and efficiency of orchard management, cost-benefit analyses, and longer-term directions for diversification of incomes, including fruit export markets.

1. **Nets and netting:** Provision of white, 40% UV-treated small mesh-size nets. Good quality and well-maintained nets will last 10 years. Nets constructed over frames, which can be retracted in the event of extreme weather, are best. Assistance with the materials and/or construction of such frames is needed, and should go hand-in-hand with optimized pruning of orchards.
2. **Pruning of fruit trees:** there is substantial potential for orchards of any size to increase their productivity through improved pruning management. Very old trees may be rejuvenated, and smaller trees pruned as to maximum 4m (ideally 2m) to increase surface area exposure to sun and more efficient harvesting.
3. **Equipment and training:** Assistance with equipment hire or purchase, potentially through cooperatives, would provide increased access to appropriate equipment. A series of training events on model orchards would be important. For the development of high-yield orchards for export, training visits for Mauritian orchard managers to Australia would be very beneficial.
4. **Model orchards:** Two types of model orchards would be beneficial: a) existing orchards which have been modified to improve production and ease of netting; and b) new orchards planted to specifications that provide optimum production, ease of harvest and netting. Such model orchards also serve as training and demonstration venues from which FAREI and collaborators can facilitate peer-to-peer exchange and collaboration.
5. **Development of export markets for tropical fruit:** There is potential for Mauritius to diversify its agricultural production to include lychees at much larger scale and for export. To do so, development of new orchards designed as recommended in this report, to include bat netting, will be essential. Furthermore, overseas importers are concerned about ethically-sourced food, which includes labour guidelines, and environmentally friendly practices including non-lethal damage control of wildlife.
6. **Backyard growers:** addressing backyards growers' reluctance to net trees, and their largely negative perception of bats requires NOT education or sensitisation, but peer-behaviour incentive measures. This is achieved through different strategies such as social marketing, which develops social peer norms as a way to change people's perceptions and practices. Specialist advice to design such a strategy is available.
7. **Continued dialogue and collaborative action:** The workshop generated a very positive sense of cooperation and willingness to work together, which is essential for the continuation of what promises to be a successful and productive way forward. It is essential that communications and dialogue continue. Open training events (e.g. for pruning) can serve to facilitate this.