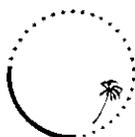


SPC C

# SOUTH PACIFIC COMMISSION



Quarantine Advisory Leaflet 20  
1988

# COCONUT

Latin name:	<i>Cocos nucifera</i>
Family:	Arecaceae
Closely related plants:	<i>Areca catechu</i> — Betel nut <i>Elaeis guineensis</i> — Oil palm <i>Metroxylon</i> spp. — Sago palms <i>Nypa fruticans</i> — Nipa palm
Trade commodities:	Nuts for consumption, handicrafts, logs, copra
Propagating material:	Seed (pollen) <i>clean no. 8410 (c)</i>

## Quarantine Risks

There is no trade in coconuts from outside the SPC region and trade between countries of the region is uncommon. The major trade is the export of copra worldwide, with a small trade in coconuts for consumption. Seed and pollen are occasionally transferred between countries. Handicrafts are taken from one country to another.

### Nuts for consumption

It is unlikely that coconuts would be traded between countries of the region, as most countries are self sufficient. If the trade took place without precautions, further spread of some insect pests, especially whiteflies, scales and mites, would probably occur.

Some insects and mites are of concern because they have a restricted distribu-

tion in the region, and/or are pests of *other* crops, such as:

*Aleurodicus destructor* (whitefly), *A. dispersus* (spiraling whitefly), *Aonidiella aurantii* (California red scale), *Aspidiotus destructor* (coconut scale), *Chrysomphalus aonidum* (Florida red scale), *Dysmicoccus brevipes* (pineapple mealybug), *Icerya aegyptiaca* (Egyptian fluted scale), *I. seychellarum* (Seychelles scale), *Ischnaspis longirostris* (black thread scale), *Laminicoccus pandani* (pandanus mealybug), *Myndus taffini* (cixiid vector of Vanuatu foliar decay disease), *Pinnaspis buxi* (coconut scale), *Tetranychus fijiensis* (red spider mite).

The mite, *Aceria guerreronis*, is a pest of quarantine importance present outside the region.

There are many fungal and nematode pathogens attacking the leaves and stems of coconuts, but only a few are likely to occur in fruit; those of importance in the region are:

*Marasmiellus cocophilus* (lethal bole rot), *M. crinisequi* (horse hair blight), *M. inoderma* (seedling blight), *Rigidoporus lineatus* (white pocket rot).

The nematode, *Rhadinaphelenchus cocophilus* (red ring disease), is not present in the region.

Virus-like diseases are present in the region and many more are present elsewhere. Those caused by viroids are known to be seed-borne.

### **Handicrafts**

Handicrafts may harbour insects, especially those made from fresh leaves; those of particular importance are scale insects, whiteflies and mites (see above), and possibly *Agonoxena* spp. (coconut flat moths), *Brontispa* spp. (hispine beetles) and *Promecotheca* spp. (leaf mining beetles).

### **Logs**

There is at present no trade in coconut

logs between countries of the region, although there are occasional exports to countries outside. Should intra-regional trade develop, logs would need to be treated to prevent spread of insects, such as:

*Coptotermes curvignathus* (termite), *Neotermes rainbowi* (coconut termite), *Orytes rhinoceros* (coconut rhinoceros beetle), *Rhynchophorus* spp. (palm weevils).

### **Copra**

Copra and desiccated coconut could be infested with stored products' pests.

### **Propagating material**

#### *Seed*

The risks associated with seednuts are similar those given under nuts for consumption (see above). Bulk consignments increase the risk, due to the size of the seed and the difficulties involved in growing them long-term in quarantine.

#### *Pollen*

The surface of pollen grains may be contaminated by spores of fungi, bacteria and nematodes. Some insects and mites, because they infest the flowers of coconut, could be collected in pollen samples.

## **Quarantine Action and Treatments**

Mandatory commodity treatments should be given in the exporting country. These should be stated on a phytosanitary certificate, which should accompany the consignment and clearly state its origin.

Because of the importance of coconuts in the economies of most Pacific island

countries, they may best decide not to import any living part of the coconut palm from countries where virus-like diseases, or those of unknown cause, occur.

### **Nuts for consumption**

Remove the husk and also devitalise mature nuts by fumigation with methyl

bromide at normal atmospheric pressure, using 32g/m<sup>3</sup> for 24 hours at 21°C or above.

### **Handicrafts**

Prohibit articles made from fresh leaves. Otherwise, inspect for insects and if present, fumigate with methyl bromide at normal atmospheric pressure with 48g/m<sup>3</sup> for 24 hours at 21°C or above.

### **Logs**

Fumigate with methyl bromide at normal atmospheric pressure using 48g/m<sup>3</sup> for 24 hours at 21°C or above or with sulphuryl fluoride using 64g/m<sup>3</sup> for 16 hours at 21°C or above. (See SPC Quarantine Advisory Leaflet 17: Timber).

### **Copra**

Inspect, and if infested, fumigate with methyl bromide at normal atmospheric pressure using 32g/m<sup>3</sup> for 24 hours at 21°C or above. If consignments are from countries outside the region where khapra beetle (*Trogoderma granarium*) occurs, fumigate using 80g/m<sup>3</sup> for 48 hours at 21°C or above.

### **Propagating material**

#### *Seed*

The guidelines of the APPPC (Informa-

tion Letter 132 (1983) should be followed (see also Field Document 10 (1986), UNDP/FAO-SPC Plant Protection Project, Fiji (RAS/83/001)):

Prohibit imports from areas with diseases of major quarantine importance. Inspect source palms in the field. Collect seeds only from the palm. Remove stalks and calices and partially dehusk.

Fumigate with methyl bromide at normal atmospheric pressure using 32g/m<sup>3</sup> for 3 hours at 21°C or above. Dust with fungicide.

Grow in quarantine for at least 12 months, with frequent inspections after release.

#### *Pollen*

The guidelines in Field Document 10 (1986), UNDP/FAO-SPC Plant Protection Project, Fiji (RAS/83/001), should be followed:

Prohibit imports from areas with diseases of major quarantine importance. Inspect source palms in the field. Remove unopened spathes and surface-sterilise before extracting pollen. Examine for insects, mites and nematodes. Regularly inspect progeny after planting.

*This leaflet was prepared and published by the SPC Plant Protection Service, Private Mail Bag, Suva, Fiji.*

*This leaflet gives general guidance only; quarantine action is subject to the legislation and regulations of individual countries of the SPC region.*

*Leaflets in this series include:*

- |               |                 |
|---------------|-----------------|
| (1) Banana    | (11) Pawpaw     |
| (2) Beans     | (12) Pineapple  |
| (3) Cabbage   | (13) Kava       |
| (4) Citrus    | (14) Carrot     |
| (5) Cucurbits | (15) Mango      |
| (6) Orchids   | (16) Avocado    |
| (7) Peanuts   | (17) Timber     |
| (8) Tomato    | (18) Onion      |
| (9) Taro      | (19) Breadfruit |
| (10) Capsicum | (20) Coconut    |

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