SOUTH PACIFIC COMMISSION

Quarantine Advisory Leaflet 8
1984

TOMATO

Latin name:	*Lycopersicon esculentum*
Family:	Solanaceae
Closely related plants:	Peppers (*Capsicum*), Eggplant
Trade commodity:	Fruit
Propagating material:	Seed

Quarantine Risks

Fruit

Trade in tomatoes exists between the countries of the Region and the export to countries outside the Region is of considerable value.

There are at least two fruit flies which infest tomatoes in the Region, *Dacus facialis* and *D. xanthodes*.

There are some important insect pests of leaves, stems and fruits such as:

A noctuid moth (*Anomis flava*)
Corn earworm (*Heliothis armiger confertus*)
Serpentine leaf miner (*Liriomyza sativae*).
Tipworm (*Heliothis assulta*)

It is unlikely that they would be found on clean fruit, and normally treatment should only be recommended if the insects are discovered on inspection. But where countries are free from a specific important pest such as serpentine leaf miner they may wish infested exporting countries to treat the consignments.

There are several fungal pathogens but most are not of quarantine significance and should not be present on export quality fruit. However, it is important to ensure that no stem and leaf trash be included in fruit consignments and that fruit are without blemish.

Important diseases in the field are:-

Bacterial wilt (*Pseudomonas solanacearum*)
Canker (*Corynebacterium michiganense*)
Leaf and fruit spot (*Xanthomonas campestris* pv. *vesicatoria*)

Where a significant local tomato growing operation exists a stringent inspection should be made of fruit from countries where the canker and fruit spot diseases occur.

Several virus diseases occur in tomatoes, some of them seed-borne, but they are not likely to be of quarantine significance with fruit.

Propagating material

Most commercially available seed has been acid extracted against the tomato strain of tobacco mosaic virus; otherwise treatment will be required.

Quarantine Action and Treatments

Mandatory commodity treatments should normally be carried out in the exporting country.

Fruit

Fruit should be inspected and any trash or leaf tissue removed and burnt.

Fruit fly

Fumigate with ethylene dibromide at normal atmospheric pressure with 10 g/m³ for 2 hours at 21°C and above.

With the withdrawal of ethylene dibromide alternative treatments, which leave yet to be devised, will have to be adopted.

Pests other than fruit fly

Fumigate with methyl bromide at normal atmospheric pressure as follows:

g/m³	time (hours)	temperature (°C)
48	2	10 — 15
40	2	16 — 20
32	2	21 — 26
24	2	27 — 32

Propagating material

Where treatment is required EITHER put seed in water at 55°C for 25 minutes and then soak in 10% trisodium phosphate solution for 60 minutes OR soak for 5 minutes in acidulated mercuric chloride (1 g mercuric chloride in 2.5 ml concentrated hydrochloric acid added to 2 litres of water) then dip in skimmed milk solution to neutralize acid.

Seeds should be dried after treatment.

This leaflet was prepared in collaboration with UNDP/FAO-SPC project RAS 83/001 Strengthening Plant Protection and Root Crops Development in the South Pacific and published by the SPC Plant Protection Programme, Box 2119, Suva, Fiji.

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

Leaflets in this series include:

(1)	Banana	(6)	Orchids
(2)	Beans	(7)	Peanuts
(3)	Cabbage	(8)	Tomato
(4)	Citrus	(9)	Taro
(5)	Cucurbits		