

## SOUTH PACIFIC COMMISSION

Quarantine Advisory Leaflet 2  
1984



# BEANS

Latin names:	<i>Phaseolus vulgaris</i> — Garden kidney, haricot and dwarf beans <i>Vigna unguiculata</i> — Cowpea
Family:	Fabaceae
Closely related plants:	Various other <i>Phaseolus</i> and <i>Vigna</i> species and other legumes including pigeon pea ( <i>Cajanus cajan</i> ).
Trade commodities:	Fresh whole pods free of leaves usually immature, dried beans free from pod for consumption, processing or sowing.
Propagating material:	Seed

## Quarantine Risks

The major trade in fresh beans is to countries outside the region. There is also some trade in dry beans and peas.

### Fresh beans

Insect pests attacking the pods, leaves or stems include: Bean pod borer (*Maruca testulalis*), Lima bean pod borer (*Etiella zinkenella*), Pod borer (*Etiella grisea drososcia*) and Serpentine leaf miner (*Liriomyza sativae*). They are not present in all countries of the region.

Most other insects are not likely to be found on fresh beans although a visual inspection of all consignments must be made and if live insects are found treatment is necessary.

The most serious pathogens are the widely distributed rust fungus *Uromyces appendiculatus* and the bacterium *Pseudomonas syringae* pv. *phaseolicola* (halo blight) which has a more limited distribution. These are widely distributed outside the region and therefore countries free of them should prohibit imports from infected areas. There are no virus diseases of quarantine importance with fresh beans.

### Dried beans

Dried whole beans as well as beans in various processed forms are traded. Dried whole beans can be used as seed and therefore extra precautions may need to be taken. There are no facilities within the region to devitalise large quantities of seed.

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The major concern with dried beans as well as other commodities of this type is the spread of serious storage pests especially khapra beetle.

All imports should be inspected and may warrant treatment against storage insects.

Those countries which do not have rust should not import dried whole beans from those that do, nor should imports be made from countries with halo blight unless certification of freedom from this

disease can be obtained. The restrictions for rust and halo blight would not be warranted for processed (non-viable) bean seed.

Viruses are not considered to be a quarantine risk.

### **Propagating material**

Seed for sowing should be treated as for dried whole beans and fumigated with methyl bromide. Imports from countries with rust and halo blight should comply with the recommendations given above.

## **Quarantine Actions and Treatments**

Mandatory commodity treatments should normally be carried out in the exporting country. All consignments of beans should be inspected on arrival; any trash or leaf tissue should be removed and burnt.

### **Fresh beans**

If leaf miners and pod borers are a risk, fumigate with methyl bromide at normal atmospheric pressure as follows:—

g/m <sup>3</sup>	time (hours)	temperature(°C)
48	2	10 — 15
40	2	16 — 20
32	2	21 — 26
24	2	27 — 32

**Dried beans** (including whole, crushed or split beans and beans for sowing)

### *From khapra beetle countries*

Fumigate with methyl bromide at normal atmospheric pressure at 80 g/m<sup>3</sup> for 48 hours at 21°C and above.

### *From other countries*

Fumigate with methyl bromide at normal atmospheric pressure at 48 g/m<sup>3</sup> for 24 hours at 21°C and above.

An alternative treatment for bagged beans might be 1.5 — 4.5 g (3-7 pellets) of phostoxin per m<sup>3</sup> with an exposure time of 4 days followed by 2 days aeration.

### **Propagating material**

Treat seed for sowing as for dried beans.

*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 |             |