

Suggested Guidelines Relating to the International Movement of Cassava Planting Materials

A. General

1. These guidelines are presented as a suggested supplement to existing quarantine regulations of recipient countries. Their implementation is the joint responsibility of the donor and the recipient country.
2. It is recommended that at all times the smallest amount of planting material be imported; the smaller the amount the less chance of its carrying infection, and the greater the ease of inspection and post-entry quarantine.

B. The Movement of Vegetative Propagating Material

1. Cassava material should not be imported from countries where cassava African mosaic disease and brown streak virus of cassava exist into countries free from these diseases.**

2. For importations from all other countries the following procedures are recommended:

a) in the donor country:

- (i) material for export should be selected only from sources which are free from symptoms of: all virus and virus-like diseases
stem borers
mycoplasma
cassava bacterial blight
superelongation
- (ii) material for export should be treated with a combination of an effective fungicide and insecticide. For this purpose the fungicides*** Thiram (25 g a.i./litre) and Chloroneb (20 g a.i./litre) and the insecticides*** Methamidophos (0.8 g a.i./litre) and Carbofuran (1.2 g a.i./litre) have been found satisfactory although these chemicals are not exclusive
- (iii) material for export should be handled with extreme care and all tools and packing material should be either heat or chemically sterilized before contact with the material to be exported

b) in the recipient country:

- (i) any material which on arrival shows evidence of pests or diseases should be destroyed immediately by burning
- (ii) on arrival the material should be retreated with insecticide and fungicide as described in paragraph 2(a)(ii)
- (iii) the imported material should be planted in an isolation area and be subjected to regular and careful inspection for a period of one year
- (iv) if at any time the imported material shows evidence of pests or diseases hitherto unknown in the country it should be destroyed by burning

*This annex was drafted by Drs A Bellotti, C. Lozano and A. van Schoonhoven (CIAT), E. Terry (IITA), and R. Booth (TPI) and subsequently modified by the Workshop.

**The distribution of these two diseases has not yet been mapped, however, cassava mosaic disease has only been reported from India and the African continent, and brown streak is only known in small areas of East Africa.

***For chemical nomenclature see 1972 Ed. Pesticide Manual, Published by the British Crop Protection Council.

3. In addition to the above general recommendations:
 - a) material being exported from a country where superelongation is known to be present should receive a hot water dip (50°C for 30 min) before despatch
 - b) countries without cassava bacterial blight (CBB) importing material from countries where CBB is present should undertake shoot tip indexing *within 20 days of germination*
- C. *The Movement of True Seeds*
- a) *In the donor country:*
 - (i) Seed for export should be selected only from plants free from symptoms of:
 - all virus and virus-like diseases
 - superelongation
 - mycoplasma
 - cassava bacterial blight
 - (ii) the best quality seed should be selected visually
 - (iii) seed should be dusted with a fungicide (e.g. Thiram) and an insecticide (e.g. Malathion) powder at the manufacturers recommended level prior to shipment
 - (iv) seed should be handled carefully and all handling and packing materials should be disinfected and sterilized before use
 - b) *In the recipient country:*
 - (i) seed which is pest-infested or obviously diseased should be destroyed on arrival
 - (ii) imported seed should be planted in an isolation area and be subjected to regular and careful inspection for a period of one year
 - (iii) if at any time the plants originating from imported seed show evidence of pests or diseases hitherto unknown to the country they should be destroyed by burning.

ANNEX 2*

Suggested Guidelines for the Design of Agronomic Trials For Evaluating Promising Cassava Cultivars

These guidelines are intended for the field evaluation of promising material that has already undergone preliminary yield trials.

1. *Design*
The trials should be planted in randomized blocks with a minimum of four replications.
2. *Size of the Plot*
Plots located at the end of each block will have $9 \times 8 = 72$ plants and those located in the middle will have $8 \times 8 = 64$ plants. In other words, the plots at the corners will have one more row than those in the middle (see Fig. 1).
In both cases, the area occupied by the middle 24 plants will be harvested from each plot. If plants are missing at harvest they should not be replaced by border plants. The number missing should be noted.
3. *Land Preparation*
This should be done according to best practices available to farmers in the region.
4. *Cuttings Required*
For those varieties planted at the ends of each block an additional eight cuttings will be required for each replication.

*This Annex was drafted by Drs J.C. Toro and J. Cock of CIAT and subsequently modified by the Workshop.