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**ECONOMIC COMMISSION FOR EUROPE**

COMMITTEE ON TRADE

Working Party on Agricultural Quality Standards

Specialized Section on Standardization of Seed Potatoes

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Geneva, 15-17 March 2010  
Item 8 of the provisional agenda

**POST-HARVEST EVALUATION**

Submitted by the United States

This text is submitted by the delegation of the United States for review and approval by the Specialized Section.

This document is being issued pursuant to paragraph 5 of the Working Party's Terms of Reference.

#### **Annex IV. Minimum conditions to be satisfied by direct progeny of seed potatoes**

##### **1. Pre-basic seed**

- (a) The proportion, in direct progeny, of plants of other varieties should be 0 per cent for Pre-basic TC class.

The proportion, in direct progeny, of plants not true to the variety and of other varieties should not exceed 0.01 per cent for Pre-basic class.

- (b) The proportion, in direct progeny, of plants showing symptoms of mild or severe virus diseases should not exceed:

- 0 per cent for Pre-Basic TC class
- 0.5 per cent for Pre-Basic class.

##### **2. Basic seed**

- (a) The proportion, in direct progeny, of plants not true to the variety and of other varieties should not exceed 0.25 per cent.

- (b) The proportion, in direct progeny, of plants showing symptoms of virus disease should not exceed 2 per cent, with not more than 1 per cent showing severe virus disease, for Basic I class seed, and 4 per cent, with not more than 2 per cent showing severe virus disease, for Basic II class seed.

##### **3. Certified seed**

- (a) The proportion, in direct progeny, of plants not true to the variety and of other varieties should not exceed 0.5 per cent.

- (b) The proportion, in direct progeny, of plants showing symptoms of virus disease should not exceed 10 per cent, with not more than 5 per cent showing severe virus, for Certified I class seed and 10 per cent showing severe virus for Certified II class seed. Mild mosaic symptoms of discoloration and no leaf deformation should be ignored in categorizing virus for Certified II class seed.

The tolerances allowed under points 1(b), 2(b) and 3 are applicable only where the virus diseases are caused by viruses already prevalent in countries applying the UNECE Standard for Seed Potatoes.

The incidence of the virus in the direct progeny may be determined by inspection and/or testing of tubers or plants derived from a sample of tubers from the crop, i.e. a post-harvest evaluation. Annex IX describes the principles of developing a sampling regime for this purpose.

**Post-harvest evaluation** (mainly for virus diseases)

The requirement for a post-harvest evaluation may depend on “regulated haulm destruction dates” or for specific reasons defined by the DA depending on local circumstances.

There are two possibilities for evaluation before the sale of the crop:

- a) by grow-out

The grow-out, usually aimed at virus indexing, may be done in field or green house. The evaluation may be visual and/or confirmed by laboratory testing.

- b) laboratory test

A laboratory test on viruses may be done on leaves of a grow-out sample by ELISA (Enzyme-linked immunosorbent assay), PCR (Polymerase chain reaction) or other appropriate technique, on sprouts or sprouted tubers by ELISA or PCR and/or on tubers by PCR.

The post-harvest test for bacterial diseases, e.g. bacterial ring rot and/or brown rot is done by tuber testing, using ELISA, PCR and/or IF (Immunofluorescence test) and additional confirmation techniques (plating, bio-assay)

If a variety mixture and/or chemical damage is observed during a grow-out post-harvest evaluation, the DA shall take appropriate action.

Trueness-to-type can only be assessed in a field grow-out.

The tolerances in the Standard for the post-harvest evaluation are the “Minimum conditions to be satisfied by direct progeny of seed potatoes”.

The DA shall specify the sample size depending on field size, category, tolerance and the desired confidence level (see Annex IX. Sampling tubers for virus testing).

Sampling may be done during the harvest, just before harvest after haulm destruction is complete, or from storage.

Dormancy breaking may be done chemically and/or by temperature treatment.

**Annex VII. Definitions of terms applicable to the standards**

The following definition should be added to Annex VII.

**Post-harvest evaluation:**

The determination of seed-born diseases as an indication of the disease content in the direct progeny of the seed lot.

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