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**ECONOMIC COMMISSION FOR EUROPE**

COMMITTEE ON TRADE

Working Party on Agricultural Quality Standards

**Specialized Section on Standardization of Seed Potatoes**

Thirty-ninth session

Geneva, 15-17 March 2010

Item 10 of the provisional agenda

Demonstration trials

**DEMONSTRATION TRIALS PROTOCOL**

Submitted by the delegation of Switzerland\*

This note presents a draft technical protocol for demonstration trials for consideration by the Specialized Section. The note has been prepared on the basis of the proposals by the delegations of France and the Russian Federation, and reflects the discussion at the October 2009 meeting of the Extended Bureau in Belgium and Luxembourg.

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

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\* This document was submitted late due to delayed inputs from other sources.

## **I. BACKGROUND**

The discussion of comparative trials at the October 2009 meeting of the Extended Bureau resulted in the following conclusions (document GE.6/BUR(2)/2009/8):

"16. The Extended Bureau agreed that the main purpose of comparative trials, which should probably be called "demonstration" trials, is to harmonize the application of the Standard, to show how to carry out crop inspection and how to keep records. The trials are not meant to compare varieties. Demonstration fields could be sown using local seeds and could be visited as part of promotional workshops.

"17. The delegation of Russia has offered to host a demonstration trial in 2011. This activity would help the national producers understand better how the Standard is used in practice. The demonstration trials are also a good tool for sharing experience and for training inspectors.

"18. The delegations of Denmark, France (rapporteur), Russian Federation, Switzerland and the United Kingdom have volunteered to prepare a technical protocol for demonstration trials for the next meeting of the Specialized Section. Several countries have offered to visit their national demonstration fields."

The main purpose of the demonstration trials, which could be organized in the form of workshops, is to:

- Discuss and harmonize the methods of controlling plants in the field composed of plots under potatoes of different origin
- Discuss and harmonize the methods of testing seed lots on the basis of practical results
- Enable experts from different countries to work together on the same material and under the same conditions.

## **II. TECHNICAL ASPECTS**

It is proposed to organize workshops on the basis of annex VI of the UNECE Standard for Seed Potatoes, taking into account the recommendations of the EU technical protocol of comparative trials. A working group composed of UNECE experts could help the host country prepare the workshop.

For the first workshop, it would be preferable to start with a limited number of samples and potato varieties. The host country could provide the majority of samples taken from both imported and nationally produced lots. UNECE member countries could also send a limited number of their samples.

For the first year, the numbers could be limited to about 10 varieties and 100 samples (10 samples per variety) of certified (class A) potatoes, of which:

- 6 national and imported varieties, the samples of which are taken on the national territory of the host country; that is, 60 samples of 320 tubers, each of the size 30-40mm;
- 4 free varieties: Bintje, Désirée, Kenebec and Nicola, the samples of which are taken from lots traded in UNECE member countries; that is, 40 samples of 320 tubers, each of the size 30-40mm.

### III. CALENDAR

Subject to the approval of the project, the calendar for its implementation could be as follows:

Summer 2010	Select a host country
November 2010 - March 2011	Collect and send samples to the place of trial
March - April 2011	Observe the samples and prepare the seed for planting
April - May 2011	Plant seed on the trial field
June - July 2011	Hold field visit, control, workshop

### IV. PRACTICAL ASPECTS

#### 1. Collecting and sending samples

Host country: Take 40 samples from the national production in 2 -3 production zones  
Take, with the authorization of breeders, 20 samples from imported (class A) potatoes

Foreign countries: Send samples to the host country, preferably before March, accompanied by a phytosanitary certificate or a plant passport.

Objective: Have all the samples at the place of trial by end-March.

#### 2. Preparation of samples after delivery

For each sample received, the organizer of the workshop:

- (a) Draws up a list with the number, variety, quality category and class, and the sender code
- (b) Visually checks the quality of the received samples
- (c) Splits each sample into 2 sub-samples:

- 110 tubers for planting in the test field
- 200 tubers for laboratory tests.

(d) Destroys samples unacceptable from the sanitary point of view (rot, germination)

(e) Writes a report on the quality of the received material.

### **3. Preparation of sample (110 tubers) for planting in the trial field**

- Samples should be stored at 2° C to 4° C and relative humidity of 85% to 90%
- Tubers to be pre-heated 3 weeks before planting to 7° C for 9 days followed by 12 days at 15° C
- During the storage period, the tubers should be inspected at least twice and damaged tubers and those affected by wet rot or dry rot removed.

### **4. Preparation of the trial field**

- Trials shall be carried out in conformity with the UNECE Standard for Seed Potatoes
- Trial design: Samples of the same variety to be grouped together with Basic seed samples preceding Certified seed samples. Groups to be arranged in alphabetical order and in order of maturity as far as this is known
- A plan of the trial field with a number for each sample should be established
- Replication: One plot for each sample. Number of tubers per plot: 100
- Number of rows per plot: 4. Distance between the rows: 1 m. Distance between plants in rows: 30 cm. Length of row: 8 m
- Method of planting: By hand
- Establish a protocol on the following characteristics of the trial field:

Place of sowing

Soil type

Cropping over previous 3 years

Date of planting

Climatic conditions: Daily maximum and minimum temperature (°C) and rainfall (mm) Irrigation

Fertilizer applications

Chemical treatments

Control of weeds.

## **5. Testing samples in laboratory**

In principle, the samples should originate from the lots already checked by the national certification services. This part of the trial may therefore be optional.

The purpose of the laboratory test should be: (a) to measure the differences between field observations and the results of the laboratory tests, and (b) to define more accurately the methodology of laboratory tests on the basis of the established protocols.

To check if the seed meets the requirements of annexes I and IV of the Standard, specific tests could be made on 200 tubers upon the request of the host or other UNECE member country.

## **6. Questions for the March 2010 meeting of the Specialized Section**

Can we organize the first trial (and workshop) in 2011?

What country could host the trial?

What countries would like to participate in the trial?

How many and which varieties should be used for the trial?

What types of laboratory analyses should be carried out?

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