



Economic and Social Council

Distr.: General
11 January 2018

Original: English

Economic Commission for Europe

Steering Committee on Trade Capacity and Standards

Working Party on Agricultural Quality Standards

**Specialized Section on Standardization
of Seed Potatoes**

Forty-fifth session

Geneva, 19 March - 21 March 2018

Item 8 of the provisional agenda

Capacity-building

Draft proposal on capacity-building *

The following document contains the draft proposal on capacity-building in relation to the work of the Specialized Section. It was prepared by the delegation from Germany with Australia, Czech Republic, Finland, Netherlands, United Kingdom, and the United States. The Specialized Section is invited to review the document.

* Submitted on the above date to consolidate various contributions.

Capacity-building in the United Nations Economic Commission for Europe seed potato certification scheme

About the United Nations Economic Commission for Europe

The primary goal of the United Nations Economic Commission for Europe (UNECE) is to encourage greater economic cooperation among its member states.

The Working Party on Agricultural Quality Standards has elaborated a wide range of UNECE standards for food such as fresh fruit and vegetables, meat, eggs, seed potato and others.

UNECE standards aim at harmonizing existing national commercial quality standards in order to facilitate international trade, encourage production of high quality produce and thus protect consumer interests.

Specialized Section on Standardization of Seed Potatoes

The Specialized Section on Standardization of Seed Potatoes, made up of national certification experts, regularly reviews and updates the Standard to reflect changes in production, marketing and certification procedures.

UNECE offers assistance to countries by organizing workshops on the harmonization of national with international standards.

The Specialised Section on Seed Potatoes is willing to contribute to capacity-building for countries with limited experience in seed potato certification, but also to strengthen capacity among countries already participating in the UNECE standardization work by further cooperation.

1. Capacity-building to introduce a seed potato certification scheme

When production of potatoes is taking up in a country (without a seed potato certification scheme yet), the supply of healthy seed potatoes in sufficient quantities will become of increasing importance. At such a stage, the implementation of a certification scheme for seed potatoes will be considered.

Such considerations are usually initiated by the Ministry of Agriculture or the potato (processing) industry, preferably in close cooperation with the seed potato producers and the seed potato consumers (farmers).

Once the decision has been taken to implement a seed potato certification scheme, an action plan should be drawn with the involvement of the stakeholders. Training needs should be identified at this stage.

The UNECE Secretariat should be addressed early on, so the Secretariat or member/s of the Specialized Section can assist the country in identifying the areas of training needed, in organizing a training programme and in selecting experts from member countries.

Each training will be tailor made to meet the specific needs of the trainee.

1.1 General Introduction to the UNECE Standard

The UNECE Standard sets provisions concerning the variety, quality, sizing, packaging and labelling. It provides rules for field inspection, tuber inspection and post-harvest evaluation procedures.

Seed potatoes are classified in three categories: pre-basic category seed, basic category seed and certified category seed. The number of seed potato generations is usually limited. Pre-

basic and basic category seed are intended to produce seed potatoes. Certified category seed are mainly intended for the production of potatoes other than seed potatoes. The Designated Authority (DA) maintains all classification data to provide traceability and the classification is controlled officially.

Countries intending to introduce a seed potato certification system should first of all get acquainted with the main aspects of the Standard.

A training course could cover:

| | |
|---------------|--|
| Annex I: | Minimum conditions to be satisfied in the production of pre-basic TC seed potatoes (<i>Note:</i> probably only relevant at a later stage) |
| Annex II, A: | Minimum conditions to be satisfied by the crop |
| Annex II, B: | Field inspection procedures |
| Annex III, A: | Tolerances for defects and disorders in lots of seed potatoes |
| Annex III, B: | Zero tolerances |
| Annex III, C: | Tuber inspection procedures |
| Annex IV, A: | Minimum conditions to be satisfied by direct progeny of seed potatoes |
| Annex IV, B: | Post-harvest evaluation procedures |
| Annex V: | Label |
| Annex XI: | Summary table of tolerances. |

The general introduction would be part of capacity-building programs 1.2 and 1.3.

1.2 Capacity-building for the Ministry of Agriculture

The Ministry of Agriculture (MoA) might wish to get support in the legislative process to implement a seed potato directive or regulation. (This area cannot be covered by UNECE; the MoA should address MoAs of other countries directly).

The MoA might wish to get support in the decision making process of establishing the DA for seed potato certification. To decide which form of organization would be most suitable for the country, the different aspects of a DA as a government department or agency, an industry organisation, or a private company must be considered. The DA needs to have the official authorization to be responsible for the implementation of the Standard, which may be provided through national law or regulations or by administrative processes.

Capacity-building would cover:

- Forms of organization of Designated Authorities
- Aspects of the different organisational and legal structures
- Legal requirements to ensure the DA is independent, competent, impartial and free from conflict of interest.

Materials:

- UNECE Standard S-1
- UNECE Guide to Operating a Seed Potato Certification Service.

1.3 Capacity-building for managerial staff

The DA has responsibility for ensuring that all of the provisions of the Standard are complied with. It might wish to get support in establishing a service with the appropriate skills and resources for seed potato certification.

Theoretical training should be aimed at managerial staff responsible for the system of field inspection, tuber inspection and post-harvest evaluation.

The following aspects are to be covered:

- Organisational structure of a seed potato certification service
 - stand-alone service or
 - personnel working in several agencies and organisations
 - positions, their activities and scope of authorization
 - other organizations involved, e.g. diagnostic laboratory, a.o.
- Human resources: staff numbers, training and competency
 - Factors determining the number of staff needed, e.g. climate zone, size of crop, distance between crops, number of inspections per crop
 - Training for inspectors and administrative staff
- Setting up a scheme of rules and standards
 - Adoption of the UNECE Standard as the national standard, or
 - Establishing a national standard containing additional requirements or more stringent tolerances, or
 - Standard used as a point of reference in developing a national standard
 - Specification of inspection procedures
- Record keeping and data processing
 - Crop application process
 - Traceability through generations
 - Database
- Certification
- Fees (?)

Materials:

- UNECE Standard S-1
- UNECE Guide to Operating a Seed Potato Certification Service.

1.4 Capacity-building for inspectors

In order to qualify to perform seed potato field inspections or lot inspections, the inspector must have completed the appropriate training. Initially field inspection or lot inspection must be done in collaboration with a "senior/mentor" inspector (mentoring/shadowing process). Prior to doing seed potato field inspections or lot inspections on their own, newly trained inspectors should undergo an evaluation to ensure they are qualified to conduct the inspection by themselves.

In addition to training for field inspection and lot inspection, the DA might wish to get support for the mentoring/shadowing process and for evaluation of the newly trained inspectors.

Practical training will focus on field inspection, tuber inspection, post-harvest evaluation, closing/sealing and labelling. All aspects are closely related.

1.4.1 Field inspection

Field inspection aims to confirm compliance with the Standard for the various classes of seed potatoes and to assess the overall health status of the crop. Annex III in the Standard lists tolerances for defects, diseases and varietal mixtures upon field inspections for all classes of seed potatoes.

An inspector must be familiar with the variety to be inspected to ascertain varietal identity and purity, and with disease expression. Taking an appropriate number of counts to assess the crop properly at the most suitable time of crop development is essential for assigning the appropriate class at the end of the final inspection.

Training on field inspection should cover the following subjects:

- Aim of the field inspection
- Varietal identity, varietal purity
- Zero tolerance pests and diseases (quarantine organisms)
- Regulated non-quarantine pests: blackleg, virus
- Scheduling inspections
- Information available to the inspector
- Field inspection procedures, including the assessment of faults
 - Minimum sample size
 - Walking patterns for random sampling
 - Reasons for termination of field inspection
 - Subsequent inspections and second opinion inspection
- Crops not meeting the standards
 - Corrective actions
 - Downgrading or rejection
- Classification

Materials:

- UNECE Standard S-1
- UNECE Guide to Seed Potato Diseases, Pests and Defects
- UNECE Guide to Seed Potato Field Inspection
- UNECE Guide to Operating a Seed Potato Certification Service, Annex 1: Crop Inspection Training Plots.

1.4.2 Post-harvest evaluation

The aim of post-harvest evaluation is to determine compliance with the Standard or the national regulation of the direct progeny of seed potatoes. Minimum conditions to be satisfied

are specified as tolerances for plants that are not true to type and plants showing virus symptoms. Post-harvest evaluation can be done by visual assessment of grow-outs or by laboratory tests.

Training on post-harvest evaluation includes the following subjects

- Organisms to be tested for
- Tolerances
- Testing methods
- Classification and statistics

Comment: What about off-type?

Materials:

- UNECE Standard S-1
- UNECE Standard S-1, Annex IX.

1.4.3 Tuber inspection, closing and labelling

The aim of tuber inspection is the visual examination of tubers within a lot by an authorized person, to determine compliance with the Standard or the national regulations. Knowledge of the relevant requirements is essential for the inspector.

Containers are sealed officially or under official control, by either the inspector or by other persons authorized by the DA, and each container shall bear on the outside an official label.

Training on tuber inspection should cover the following subjects

- Aim of tuber inspection
- Eligibility of the lot for certification, and other requirements
- Information available to the inspector
- Tuber inspection procedures
- Zero tolerance pests and diseases (quarantine organisms)
- Regulated non-quarantine pests: dry and wet rot, scab, powdery scab, rhizoctonia;
- Other faults: shrivelled tubers, external defects, chilling injury, pest damage, earth and extraneous matters
- Tuber size
- Sampling
- Reports
- Interpretation of results
- Classification
- Closing, sealing and labelling

Materials:

- UNECE Standard S-1
- UNECE Guide to Seed Potato Diseases, Pests and Defects

- UNECE Guide to Seed Potato Field Inspection
- UNECE Guide to Operating a Seed Potato Certification Service

1.5 Training for administrative staff

Training for administrative staff should cover the following subjects

- Varieties accepted for certification
- Registration of crops
- Record keeping
- Issuing reports
- Rejection procedures
- Generating invoices

1.6 Training organization and trainer

Training is best organized by a member country's national Designated Authority for seed potato certification, and can be carried out in cooperation with research institutes and/or universities. The training should be given by experienced staff members who have a good theoretical knowledge of the UNECE Standard and who are familiar with their practical implementation.

To ensure that the national context of the trainee country is taken into consideration by the training programme, interaction among participants should be encouraged and discussions on the best way of implementing the Standard should be stimulated.

In preparation of the training, participants should study the most relevant parts of the Standard and send questions to the trainer beforehand.

1.7 Timeframe

Ideally training is provided over a two-year period. The number and duration of training sessions will be tailor made for each training programme depending on the specific needs of the trainee country.

- First year: theoretical and practical sessions either in the host country (training country) or in the trainee country. The latter being the preferred location, as more persons can be trained, which reduces the costs for the training.
- Second year: in the trainee country, once a certification system has been established.

Theoretical sessions should always be followed by practical application of the newly acquired knowledge. Having gained some experience, practical assignments should be carried out by trainees and results may be compared and discussed.

1.8 Acceptance of varieties, tests on Distinctness, Uniformity and Stability

According to the Standard, varieties shall be accepted for certification under the Standard if an official description and a reference sample can be made available to the DA.

The variety should be distinct, uniform and stable according to the guidelines of the International Union for the Protection of New Varieties of Plants (UPOV) and have a denomination allowing its identification.

Tests on Distinctness, Uniformity and Stability (DUS) assess whether a variety is distinct, uniform and stable. Testing is carried out on the basis of internationally recognized test

guidelines such as those of the UPOV. Each guideline contains a set of mainly morphological characteristics, which are assessed over a number of years. The results of these recordings are included in a variety description.

Training on setting up a variety testing and variety listing and/or plant variety protecting system is best organized by a country with experience in DUS testing. Training on assessment of characteristics for DUS should take place in a country where the same or similar species are tested as the trainee country.

(*Note:* The following chapters need more input.)

1. Capacity-building after the introduction of a certification scheme

Further training needs should be evaluated and a training programme drafted according to the needs, e.g., challenges, obstacles, difficulties in:

- Field inspection
- Tuber inspection
- Post-harvest evaluation
- New methods or techniques
- Training for trainers

2. Capacity-building for experienced staff

- UNECE meetings
- Comparative trials
- Visiting seed potato certification services in neighbouring countries
- E-learning

3. Funding

- Possible financial sources for training

4. Conclusions
