OECD SEED SCHEMES AN INTERNATIONAL SEED VARIETAL CERTIFICATION SYSTEM

Document prepared by the Organisation for Economic Co-operation and Development (OECD)

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1. The OECD Schemes for the Varietal Certification of Seed promotes the use of certified agriculture seed that is of consistently high quality. These seeds are produced and officially controlled according to a set of harmonised procedures put in place in the 61 participating countries.

2. The varietal identity and purity is evaluated during field inspection and additionally there are pre- and post-control plots. It means that inspection is done only visually. OECD Seed Schemes do recognise that there are occasions where these traditional techniques limit the certainty of the varietal determination, and in certain cases varieties of some species cannot be identified with certainty using these traditional techniques. In these specific circumstances, it might be beneficial to use non-field based tests, which must be seen as supplementing and not replacing the more traditional techniques.

3. There were not possibility to use during seed certification process a biochemical and molecular techniques and to reject lot in accordance on those results. Participating countries use some methods but just to get additional information.

4. The OECD 2019 Annual Meeting approved the Revised draft proposal for the revision of Part III of the Guidelines for Control Plot Tests and Field Inspection of Seed Crops.
Summary
- General overview of the OECD Seed Schemes
- The eight Schemes
- The main instruments of the Schemes
- The goal of the OECD seed schemes
- BMT techniques
- Changes during OECD seed schemes 2019 AM
General overview of the OECD Seed Schemes

Mission Statement: The OECD Seed Schemes facilitate the international trade of quality seed by applying harmonised seed varietal certification standards and procedures.

Mission Vision: Globally harmonised seed varietal certification supporting the wider development of a productive, sustainable and resilient agriculture and food system

Quality seeds for world needs

General overview on the OECD Seed Schemes

8 Seed Schemes

- Grasses and legumes;
- Crucifers and Other Oil or Fibre Species;
- Cereals;
- Fodder Beet and Sugar Beet;
- Subterranean Clover and Similar Species;
- Maize;
- Sorghum;
- Vegetables.
General overview on the OECD Seed Schemes

Main Instruments of the Schemes

- OECD Seed Schemes Rules and Regulations 2019
- OECD List of Varieties (online)
- Guidelines for Control Plot Tests & Field Inspection of Seed Crops
- Guideline for authorization of certain activity

All of them are available from the official website:
http://www.oecd.org/tad/code/seeds.htm
The goal of the OECD seed schemes

• The OECD Schemes for the Varietal Certification of Seed promotes the use of certified agriculture seed that is of consistently high quality.

• These seeds are produced and officially controlled according to a set of harmonised procedures put in place in the 61 participating countries.

Implementation: keystones of OECD Certification

Control of seed production (varietal identity and purity):

Seed producing fields  Post control on plots
Changes during 2019 OECD AM

- The Annual Meeting of the Seed Schemes has agreed to develop a procedure how to approve biochemical and molecular techniques.
- The key principles:
  - reproducibility of data production between laboratories and detection platforms (different types of equipment);
  - repeatability over time;
  - discrimination power;
  - accessibility of methodology.

"7.4.5 Other controls as appropriate

- Where field inspection and control plot testing have been fully implemented and still left some doubt as to the varietal identity of a seed lot, the National Designated Authority is entitled to make any other supplementary tests as recorded in the Annex to Part III of the Guidelines for control plot tests and field inspection of seed crops, as being appropriate to the variety concerned and to obtain any supplementary information required for the certification of each seed lot in support of the certification decision for the seed lot concerned including internationally recognised biochemical and molecular techniques performed by an officially recognised laboratory as referred to in Rule 7.4.2.1.

- 7.4.5.1 The National Designated Authority may authorise non-official laboratories to carry out the analysis. If the National Designated Authority decides to use this procedure, it must define its scope (activities, species, categories and persons concerned). The National Designated Authority shall satisfy itself of verifications and other requirements, and take all measures which guarantee equivalent operations by an authorised laboratory or by an official laboratory."
The list on biochemical and molecular techniques

- Annes III „BIOCHEMICAL AND MOLECULAR TECHNIQUES TO ASSIST WITH DETERMINING VARIETAL IDENTITY” of Guidelines for control plot tests and field inspection of seed crop.
- The Annex (list of Biochemical and Molecular Techniques methods) would act as a stand-alone document
- The list will be updated in the regular basis to ensure that new methods are included

Annex

- Part III additional testing methods for varietal identity and varietal purity

<table>
<thead>
<tr>
<th>Glycine max (soyabean)</th>
<th>Seed coloration due to peroxidase activity in seed coat</th>
<th>UPOV</th>
<th>Ad. 4b: &quot;Seed coloration due to peroxidase activity in seed coat&quot; to the UPOV Technical guidelines for the conduct of tests for Distinctness, Uniformity and Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMO Detection, Identification and Quantification</td>
<td></td>
<td>ISTA/ EURL</td>
<td>Internal methods validated with reference to EURL validation studies and to the standards ISO 22560, ISO 22570 and ISO 22571</td>
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OECD Label

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