Annual Meeting of Representatives of the National Designated Authorities for the Implementation of the OECD Schemes for the Varietal Certification of Seed Moving in International Trade

DRAFT SUMMARY RECORD OF THE 7th MEETING OF THE TECHNICAL WORKING GROUP ON VARIETAL IDENTITY AND VARIETAL PURITY

Held at the OECD Conference Centre, Paris, France
10 June 2009

This document was prepared by the Co-ordinating Centre and the Secretariat, in consultation with the Bureau of the Schemes.

The document is circulated to the TWG members and observers for information and ACTION, where applicable, and to all Delegations and National Designated Authorities for INFORMATION and approval at the 8th TWG Meeting to be held in November 2009 in Paris.

The delegates are invited to send their written comments on the Draft Summary Record by 9 July 2009.

Contact: Katarina.Djermanovic@oecd.org

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Executive Summary

The 7th Meeting of the OECD Technical Working Group took place on 10 June 2009 in Paris, France. The primary purpose was to consider matters relating to varietal identity and varietal purity in relation to the OECD Seed Schemes.

The experts agreed on the following:

- The characters to be used for assessing varietal identity and varietal purity for 72 species.
- The experts made some progress on the text of Part I of the Guidelines (Control Plot Tests) and it was agreed that a small sub-group of experts from France, the Netherlands, UK, UPOV and the Co-ordinating Centre would update the text again for discussion and approval at the TWG meeting in November 2009.
- The experts had a lively discussion on the eligibility of varieties for OECD listing and it was clear that some topics will require further discussion. The Co-ordinating Centre agreed to prepare a one page summary of topics for discussion at the TWG meeting in November 2009.
- The experts discussed a paper from Canada that gave details of the use of tolerances for determining whether seed lots tested for purity and germination could be considered to be satisfactory. It was agreed that France, the Netherlands, UK, UPOV and the Co-ordinating Centre would take this into account when revising the Guidelines for Control Plot tests.
- The experts also discussed a paper that sought to give more coherence between the Rules and the Guidelines for Control Plots and Field Inspection. The experts agreed to a change to Rule 2.2 of the Schemes, but the text of the other two proposed new Rules were not agreed. The Co-ordinating Centre was asked to do further work on them in time for discussion at the next TWG meeting.
- The UK paper on “Choosing a sampling scheme for cereal crop sampling” which suggested that the reject numbers currently being used by the Schemes for field inspection do not take into account the heterogeneity of the crop was discussed. Further data on wheat will be available by mid-July and this issue will be discussed again at the TWG meeting in November 2009.
- The French paper which proposes the use of biochemical and molecular techniques to determine varietal identity whenever morphological traits are inconclusive was discussed at length. It was agreed that Canada, UPOV and the Co-ordinating Centre would develop a revised proposal for discussion at the TWG meeting in November 2009.
1. Opening statement

The Chair, Mr Peter Johnston, welcomed the experts and the observers to the meeting.


The expert from UPOV pointed out that the paper for agenda item 10, “The Role of Biochemical and Molecular Techniques in Describing/Identifying Varieties” had been prepared solely by France but UPOV would be happy to present its position on the topic. The Draft Agenda was then adopted without any additional items.


The Secretariat confirmed that the Draft Summary Record of the 6th TWG Meeting had been published on Olisnext in March 2009.

The Chair proposed that the Draft Summary Record be recommended for approval at the 2009 Annual Meeting.

4. REVISION OF POST-CONTROL AND FIELD INSPECTION GUIDELINES


The Co-ordinating Centre introduced the revised paper which had taken into account the changes to the text agreed at the last TWG meeting and also areas of commonality noted from the replies to the second questionnaire on Harmonisation of Post-Control Procedures and Standards.

The proposed text changes to paragraph 10 of the Part I of the Guidelines were agreed and it was also agreed to revise the text of paragraph 43 (first sentence), to read as follows: “Recording of the control plots should start when plants reach growth stages at which varietal characteristics can be observed to check varietal identity and varietal purity.”

There was a lengthy discussion of paragraphs 53 -72 of Part I of the Guidelines and the following points were made:

- The French expert, supported by a number of other experts, noted that it would be impossible to examine 2000 plants for Basic seed lots of hybrid varieties of maize (as required by paragraph 62.3) and suggested 200 plants to be examined. The expert from Hungary felt that 400 plants should be examined because it was Pre-control of the Certified category.

- It was noted that the role of the post control plots is primarily to check varietal identity and the varietal purity of the seed lot was mainly determined by the field inspection. In addition, post control tests can be used as a valuable means of ensuring the integrity of the whole certification process.
• The meeting was reminded that varietal identity was not based on reject numbers; if 50% or more of the plants exhibited different morphological characters the identity of the variety was incorrect. There should be a specific paragraph included on varietal identity.

• The emphasis on the use of reject numbers was inappropriate for some species, because the size of plots and/or the number of plants required to be examined was impractical. It was also noted that it would be better to apply reject numbers only to the final Certified generation.

• Overall, there was an agreement regarding the text of the Guidelines in terms of post control of the final generation (C1 or C2). However, a ‘new’ text is needed for the post control of Pre-Basic and Basic Seed. The Chair felt that it might be better to remove these categories from the Guidelines.

• It was agreed that a small sub-group made up of experts from France, the Netherlands, UK, UPOV and the Co-ordinating Centre would revise the text, reassessing the role of pre-control, post control and the use of reject numbers and produce a revised document for discussion and agreement at the next TWG meeting.

**Action:** The subgroup agreed to revise the text taking into account all aspects of the discussion and produce a revised paper for discussion and agreement at the TWG meeting in November 2009.


The UK again raised the issue of the use the phenol test for wheat which it wishes to see included in Part III. The Netherlands had been against its inclusion. It has been agreed to ask the ISTA Committee to arbitrate on this issue.

The expert from ISTA confirmed that the phenol test is included in the international rules for seed testing and that some countries use the test and may wish to continue to use it.

It was agreed that the Secretariat would ask ISTA for a final decision on the issue.

**Action:** The Secretariat to formally ask ISTA for a final decision as to whether or not phenol test for wheat should be included as an additional test in Part III of the Guidelines for Control Plot Tests and Field Inspection of Seed Crops.

4.2 Draft revised Guidelines, Part IV

4.2.1 Species description sheets [TAD/CA/S/RD(2008)12/REV2]

Mr White (Co-ordinating Centre) confirmed that, following the comments raised at the last TWG meeting, the varietal purity characters for the 36 species included in the paper have been revised. These species were considered now as ready for approval and publication.

Three corrections were made to UPOV publication dates/references.

The experts then agreed to recommend to the Annual Meeting the publication of the varietal purity characters on the OECD website.
4.2.2 Updating description sheets for other species, Plan for action [TAD/CA/S/RD(2008)13/REV2]

The Co-ordinating Centre confirmed that the varietal purity characters for a further 18 species (as well discussed at the last meeting of the TWG), had been revised.

The expert from UPOV confirmed that there is a UPOV Guideline for chick pea and reference to it was added to the description sheet.

It was agreed by the experts that the characters for these 18 species are also satisfactory for recommendation to the Annual Meeting for publication on the OECD website.

4.2.3 Description sheets for other species [TAD/CA/S/RD(2009)1]

The Co-ordinating Centre confirmed that during January and February 2009 varietal purity characters had been received from Australia (7 species), United States (5 species), New Zealand (3 species) and Kenya (3 species). The paper had been developed from the varietal purity characters submitted for these species.

The experts agreed that these 18 species are also satisfactory for recommendation to the Annual Meeting for publication on the OECD website.

The Co-ordinating Centre reported that the Czech Republic had submitted a list of varietal purity characters for the species Bromus marginatus Nees Ex Steud on 5 June 2009. After the meeting the Italian observer agreed to produce a list of varietal purity characters for Oryza sativa L. (rice) which is an important species in Italy.

**Action:** The Co-ordinating Centre agreed to circulate the varietal purity characters for these two species in a paper in time for discussion and approval at the next meeting of the TWG.


The Co-ordinating Centre confirmed that, following extensive discussion of the responses to the questionnaire, the areas of common approach noted in the responses had been incorporated into the latest revision of the Guidelines for Control Plot Testing.

**Action:** The Chair asked the subgroup to take into account the responses to the questionnaire during their revision of the Guidelines for Control Plot Testing.


Mr Flack (Co-ordinating Centre) reminded the meeting that the draft paper on the replies to the questionnaire on the eligibility of varieties had been discussed extensively at the last TWG meeting and that, after having received inputs from Member countries, the Co-ordinating Centre prepared a new document that identifies areas for further clarification.

The Co-ordinating Centre gave a brief overview of the new paper and noted that it was important to define the purposes of the officially recognised description. Was it just a tool of certification or did it also perform other functions?

For each species it would be possible to define the set of characters that would be obligatory to include in the description. The source of the description and its verification may be obtained by officially conducted
trials or produced by other testing bodies or by the breeder. The descriptions could be adopted after a process of verification, if required.

Defining the character state could be achieved by viewing a single plant or by recording separately the individuals in a large sample for analysing the variation in the population.

The standard sample sets the benchmark for the variety, but its source is different in some countries. It was suggested that it could be a part of the sample submitted for DUS testing i.e. the definitive sample, or it could be drawn from a high category seed lot which had been verified against the definitive sample, or it could be a sample supplied by the breeder.

The Canadian expert reported that the Canadian description included, in addition to the morphological characters, information on the name of the breeder, the registration number of the variety, the date of registration and information on the breeding pedigree.

The Chair noted that it was up to the TWG to agree on alignment. It was proposed that the Co-ordinating Centre revise the paper in order to add corresponding rules and definitions by taking into account the experts’ statements and commonalities pulled out from the two documents.

**Action:** Co-ordinating Centre to revise the paper for further discussion by the TWG, by adding rules and definitions according to the commonalities found in the two papers and statements made by experts.


The Chair confirmed that the experts, having discussed at their last meeting the proposal to introduce a new rule 7.1.2 in all schemes making the use of Reject Numbers at a risk probability of 95% mandatory in post control plots, had concluded that it was too early to decide on the issue and he invited the Canadian expert to introduce his new paper on tolerances.

The Canadian expert noted that tolerances were used in Canada to report seed test results. The CFIA monitors seed in the market place by sampling and testing each year approximately 600 Certified seed lots (MPP) and 400 common non-certified seed lots (MPN). Both kinds of seed are required to meet a specific standard set out in the Seed regulations. When comparing CFIA’s monitoring results against the standard which the seed is expected to meet, tolerances are applied. Only seed that is below the standard and out of tolerance (BOT) is considered to be in non-compliance. Seed that is below the standard but within tolerance (BWT) is considered in compliance with the standard. The majority of seed lots meet the standard (M) without application of tolerances.

The Canadian expert explained that part of the reason for talking about tolerances was because when the varietal purity standard was very low, e.g. Certified seed of three-way cross hybrids of Maize (95%), the use of reject numbers would actually permit a varietal purity standard of only 91% to be considered to be satisfactory. For higher generation seed it was sensible to use a reject number because the seed was being used to produce further seed and in the case of self pollinated cereals the varietal purity standards were high.

The ISTA expert reminded the meeting that tolerance depended on the number of seeds tested, testing less seeds would have a big effect on the results. ISTA also commented that for the seed tests its tolerance tables had been developed by Miles in 1963. Confidence tolerance limits and confidence intervals were available for both 99% and 95%. The Canadian expert confirmed that CFIA used 95%.
The UK expert confirmed that it produced a similar report on seed testing and asked whether, in relation to varietal purity, Canada was thinking of replacing reject numbers with tolerances or applying tolerances on top of reject numbers? Canada confirmed that it did not apply tolerances as yet but reminded the meeting that 6 out of the 12 countries surveyed in the questionnaire did not apply reject numbers in post control plots.

The Co-ordinating Centre considered that the Canadian tolerance levels were in fact a different face of reject numbers. Reject numbers were a tolerance figure applied to the sample size.

ISTA agreed, within the control plot one was looking at the entire plant population but in seed terms one was only looking out 200 seeds out of 5000 seeds. The Co-ordinating Centre concluded that the basis was exactly the same because reject numbers were based on the number of plants examined.

The Chair asked the sub-group on the Guidelines to further develop this aspect. At this time, it was not appropriate to recommend a change to rule 7.1.2 of the Schemes.

**Action:** France, the Netherlands, UK, UPOV and the Co-ordinating Centre to take this discussion into account when revising the Guidelines for Control Plot Tests.

### 8. **Draft Amendment to the Rules for Acceptance of Varieties** [TAD/CA/S/RD(2008)14/REV1]

The French expert introduced the paper which had been revised by the Co-ordinating Centre and sought to give more coherence between the Rules and the Guidelines for Control Plots and Field Inspection regarding the registration of varieties; the revised proposal included changes to Rule 2.2 and reads as follows:

2.2. For all varieties, the tests must establish that the variety is distinct and that its generations used for fodder production have sufficiently uniform and stable characters. An **officially recognised description** of the variety including the essential physiological and morphological characters, and in the case of hybrid varieties the descriptions of the parental components, must be available. This description constitutes the reference to be used by Designated Authorities to check the varietal identity and control the varietal purity during field inspections of seed crops and post-control plots.

Mr Flack (Co-ordinating Centre) confirmed that it had been agreed at the last TWG meeting to introduce the term “officially recognised description”. The final sentence had been added during the revision of the paper.

After a lively discussion the experts agreed to the revised wording of Rule 2.2.

The Chair pointed out that Rules 2.3 and 2.4 were new and he invited the Co-ordinating Centre to add a few comments.

The Co-ordinating Centre confirmed that Rule 2.3 dealt with the fact that the description had to exist and should be held by or on behalf of the National Designated Authority. Rule 2.4 sought to identify and authenticate the distribution of officially recognised descriptions when they were sent from one National Designated Authority to another NDA. The description might be transmitted electronically or by post.

Several experts did not see the need for a specific signature if the description were to be sent from their email address, it was official because they had sent it out.

The New Zealand expert proposed that Rule 2.3 be dropped and Rule 2.4 be stopped at the end of the first sentence.
The Co-ordinating Centre felt that it was an important principle to state that the NDA held the officially recognised description, as in Rule 2.3. It might be better to separate 2.4 into two separate Rules, 2.4 being the first sentence and 2.5 the second sentence.

The Co-ordinating Centre was invited to do further work on Rules 2.3 and 2.4 taking into account the experts’ statements.

Action: The Co-ordinating Centre, taking into account the experts’ statements, to reconsider the wording for Rules 2.3 and 2.4 and produce a revised paper for discussion at the next meeting of the TWG in November 2009.


The UK expert introduced the paper, which was already distributed as a Room Document at the last meeting of the TWG in January 2009. Having been asked to leave it with the ISTA statisticians, he had tried but failed to secure the services of an ISTA statistician.

The basic difference between UK and the OECD Seed Schemes was that the UK use of reject numbers takes into account the fact that crops showed some level of heterogeneity whereas the OECD Schemes assumed a homogenous distribution of varietal impurities.

The ISTA expert confirmed that the ISTA statisticians were not able to work on this OECD project due to a very busy agenda. Also ISTA needed more information on the issue.

The UK expert confirmed that there would be data available on wheat by mid July and the data on spring barley had been reviewed by the UK statisticians group and found to be valid. He felt that the issue could be taken forward once the data on wheat had been verified.

Action: The Chair asked that the Co-ordinating Centre look at the data once it becomes available to determine whether any changes to the Schemes Rules are necessary. It will also be necessary to revisit paragraphs 124 to 135 of Part II of the Guidelines on field inspection of seed crops.

10. The Role of Biochemical and Molecular Techniques in Describing/Identifying Varieties [TAD/CA/S/RD(2009)8]

The ISF expert confirmed that although the paper had been prepared by France, the ISF General Assembly had adopted the principle of the use of DNA-based markers for variety identification on 27 May 2009 in Antalya, Turkey (see Room Document No.1 ISF View on Intellectual Property).

ISF concludes that “DNA-based markers can be used for identification of varieties, for determining genetic conformity between initial and putative essentially derived varieties, for improvement of the management of reference collections and planning of DUS trials and, for those DNA markers that are fully predictive of the expressions of DUS characteristics, to simplify the testing of these characteristics”.

The French expert stated that at present NDA’s had to operate under the techniques accepted at the time of registration of the variety, and it was important for the OECD Schemes to be able to use new techniques to help to identify the seed before certification took place. At present biochemical and molecular techniques are not recognised by the Technical Committee of UPOV and being able to use
these techniques would improve the certification procedures by introducing total transparency into the OECD system. French companies were not accepting these techniques because they were not included in the variety registration testing protocol.

In response to an observation that UPOV did not accept characteristics such as disease resistance and herbicide tolerance, the UPOV expert clarified that such characteristics were acceptable, provided the characteristics fulfilled the necessary requirements, as set out in document TG/1/3 “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants”. For example, several UPOV Test Guidelines for vegetable species included disease resistance characteristics. UPOV Document TGP/12 “Guidance on Certain Physiological Characteristics” which was planned for adoption by the UPOV Council in October 2009, provided guidance on such characteristics.

With regard to the use of molecular techniques to examine characteristics such as disease resistance, the UPOV expert reported that such a possibility had been approved in principle, in an “Option 1(a)” approach, provided certain assumptions were met. The UPOV documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. set out the situation in UPOV with regard to the use of molecular techniques in DUS testing.

The UPOV expert also reported that the UPOV “Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction (BMT Guidelines)” were agreed at the last meeting of the UPOV Technical Committee and were planned to be adopted by the UPOV Council in 2010. He explained that the purpose of that document was to provide guidance for developing harmonized methodologies with the aim of generating high quality molecular data for a range of applications. The BMT Guidelines were also intended to address the construction of databases containing molecular profiles of plant varieties, possibly produced in different laboratories using different technologies.

The UK expert noted that the UK was only allowed to use for certification those characters that were used in the National Listing process.

Several experts supported the use of the new techniques but noted that these should be used in special circumstances and that the normal tests must still be carried out. The use of the new techniques would be additional. The expert from Canada pointed out that the OECD definitions in the Scheme Rules clearly allowed for these new techniques to be used.

The South African expert suggested incorporating into the proposal the following sentence:

“In addition, the National Designated Authority may use protein or biomolecular profiles to check varietal identity compliance whenever the morphological traits are not conclusive”.

The Chair concluded that the proposal, given the variation of statements from experts, could not be approved as it currently reads and he asked the experts from Canada and UPOV to assist the Co-ordinating Centre in developing a revised proposal for discussion and approval at the next TWG meeting.

**Action:** Canada, France, UPOV and the Co-ordinating Centre to develop a revised proposal for discussion and approval at the next TWG meeting in November 2009.
11. **Topics for future discussion**

The Chair stated that several topics were still under discussion.

The US expert noted that the varietal purity characters for the following three species had still not been described: *Vicia benghalensis* – Portugal; *Bromus catharticus* Vahl – France; *Panicum maximum* Jacq. – Brazil.

The UPOV expert agreed to provide details of those UPOV Guidelines that were under revision so that the variety purity characters for the 72 species that were being recommended for publication on the website could be reviewed each year.

12. **Next meeting of the TWG**

The Secretariat confirmed that the 8th Meeting of the TWG will take place on 4 November 2009 OECD, back-to-back with the next Extended Advisory Group Meeting.

The Chair thanked all the experts and the observers for their active participation.
7th Technical Working Group Meeting
on Varietal Identity and Varietal Purity
Held at OECD Headquarters, Paris on 10 June 2009

List of Participants

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<th>Members</th>
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<tr>
<td>Afrique du Sud/South Africa</td>
<td>Mr. Eddie GOLDSCHAGG</td>
<td>Manager, Seed Control</td>
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<tr>
<td></td>
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<td>National Designated Authority for Seed Certification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SANSOR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P.O. Box 72981</td>
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<tr>
<td></td>
<td></td>
<td>Lynnwood Ridge 0040</td>
</tr>
<tr>
<td></td>
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<td>Pretoria</td>
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<tr>
<td></td>
<td></td>
<td>South Africa</td>
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<tr>
<td></td>
<td>Tel: +27.12.349.14.38</td>
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<tr>
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<td>Fax: +27.12.349.14.62</td>
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<tr>
<td></td>
<td>Email: <a href="mailto:seedcert@sansor.co.za">seedcert@sansor.co.za</a></td>
<td></td>
</tr>
<tr>
<td>Australie/Australia</td>
<td>Dr. Lindsay COOK</td>
<td>Australian Seeds Authority Ltd</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P.O. Box 187</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lindfield NSW 2070</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>Tel: +61.2.94.16.29.43</td>
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<td></td>
<td>Fax: +61.2.94.16.41.09</td>
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<tr>
<td></td>
<td>Email: <a href="mailto:lcook@aseeds.org.au">lcook@aseeds.org.au</a></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>Mr. Michael SCHEFFEL</td>
<td>National Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canadian Food Inspection Agency (CFIA), Seed Section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>59 Camelot Drive</td>
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<td></td>
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<td>Canada</td>
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<tr>
<td></td>
<td>Tel: +1.613.221.75.18</td>
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<tr>
<td></td>
<td>Fax: +1.613.228.61.41</td>
<td></td>
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<tr>
<td></td>
<td>Email: <a href="mailto:michael.scheffel@inspection.gc.ca">michael.scheffel@inspection.gc.ca</a></td>
<td></td>
</tr>
</tbody>
</table>
Chili/Chile
Mr. Enzo CERDA
Chief Seed Division
Agricultural and Livestock Service
Paseo Bulnes 140
P.O. Box 1167-21
Santiago
Chile
Tel: +56.234.515.61
Fax: +56.269.72.179
Email: enzo.cerda@sag.gob.cl

États-Unis/United States
Mr. Perry BOHN
OECD Seed Schemes Program Manager
USDA/AMS
801 Summit Crossing Place
Suite C
Gastonia, North Carolina
United States
Tel: +1-704-810-7262
Fax: +1-704-865-1973
Email: perry.bohn@usda.gov

France
M. Bernard FABRE
Deputy Director of the Official Service for Control and Certification of Seeds and Plants
44, rue du Louvre
75001 Paris
France
Tel: 00.33.1.42.33.78.45
Fax: 00.33.1.40.28.40.16
Email: bernard.fabre@gnis.fr

Hongrie/Hungary
Mr. Gabor POLGAR
Deputy Director
Central Agricultural Office
Keleti K 24
1024 Budapest
Hungary
Tel: +36.1336.94.60
Fax: +36.1336.90.96
Email: polgarg@ommi.hu
Kenya

Mr. Chagema John KEDERA
Managing Director
Kenya Plant Health Inspectorate Service (KEPHIS)
P.O. Box 49592
Oloolua Ridge, Karen
00100 GPO Nairobi
Kenya

Tel: +254 20 353 61 71
Fax: +254 20 353 61 75
Email: director@kephis.org

Nouvelle-Zélande/
New Zealand

Mr. Peter JOHNSTON
Senior Adviser
Ministry of Agriculture & Forestry
25 "The Terrace"
P.O. Box 2526 Wellington
New Zealand

Tel: 00.64.4.894.05.19
Fax: 00.64.4.894.07.31
Email: peter.johnston@maf.govt.nz

Royaume-Uni/
United Kingdom

Mr. Gerry HALL
Head of Cereal Certification for Scotland
SASA (Science and Advice for Scottish Agriculture)
Roddinglaw Road
Edinburgh EH12 9FJ, Scotland
United Kingdom

Tel: 0044.(0).131.244.8856
Fax: 0044.(0).131.244.8966
Email: gerry.hall@sasa.gsi.gov.uk

CE/EC

Mr. Rüdiger ALTPETER
Principal Administrator
Directorate General for Agriculture & Rural Development
European Commission
130 rue de la Loi
L 130 DGAGRI - 6/78
B-1049 Bruxelles
Belgium

Tel: +32 2 295 33 98
Fax: + 32 2 2969636
Email: ruediger.altpeter@ec.europa.eu
CE/EC
(Continued)
Dr. Päivi MANNERKORPI
Head of Sector
Directorate-General for Health & Consumers
Rue Breydel, B 232, 03/05
B-1040 Brussels
Belgium
Tel: +32 2 299 37 24
Fax: +32 2 296 93 99
Email: paivi.mannerkorpi@ec.europa.eu

International Seed Federation (ISF)
Mr. Marcel BRUINS
Secretary General
International Seed Federation (ISF)
Chemin du Reposoir 7
CH-1260 Nyon
Switzerland
Tel: +41 22 365 44 20
Fax: +41 22 365 44 21
Email: m.bruins@worldseed.org

Association internationale d'essais de semences/
International Seed Testing Association (ISTA)
Mr. Ronald DON
ISTA TCOM Coordinator
International Seed Testing Association (ISTA)
Zurichstrasse 50
8303 Bassersdorf
Switzerland
Tel: +41.44.838.60.00
Fax: +41.44.838.60.01
Email: ista.office@ista.ch

International Union for the Protection of New Varieties of Plants (UPOV)
Mr. Peter BUTTON
Technical Director
International Union for the Protection of New Varieties of Plants (UPOV)
34, chemin des Colombettes
1211 Geneva
Switzerland
Tel: +41(22) 338 8672
Fax: +41(22) 733 0336
Email: peter.button@upov.int
Co-ordinating Centre

Mr. Stephen FLACK
Senior Technical Officer
NIAB - OECD Co-ordinating Centre
Huntingdon Road
Cambridge CB3 OLE
United Kingdom

Tel: 00.44.1223.3422.38
Fax: 00.44.1223.277.707
Email: stephen.flack@niab.com

Mr. David WHITE
Seeds Consultant
NIAB - OECD Co-ordinating Centre
Huntingdon Road
CB3 OLE Cambridge
United Kingdom

Tel: +44 (0) 1353 740 672
Email: DavidWhiteUK06@aol.com
<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
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</thead>
<tbody>
<tr>
<td>Germany</td>
<td>Mr. Hermann FREUDENSTEIN</td>
<td>Head of Section International Variety and Seed Affairs</td>
<td>+49 511 9566645</td>
<td>+49 511 56 33 62</td>
<td><a href="mailto:hermann.freudenstein@bundessortenamt.de">hermann.freudenstein@bundessortenamt.de</a></td>
</tr>
<tr>
<td>Austria</td>
<td>Ms. Charlotte LEONHARDT</td>
<td>Head of Institute for Seed</td>
<td>+43 (0) 50 555 34800</td>
<td>+43 (0) 50 555 34808</td>
<td><a href="mailto:charlotte.leonhardt@ages.at">charlotte.leonhardt@ages.at</a></td>
</tr>
<tr>
<td>Brazil</td>
<td>Mrs. Graziele DOS PASSOS LIMA</td>
<td>Federal Inspector&lt;br&gt;COORDENAÇÃO DE SEMENTES E MUDAS (CSM)&lt;br&gt;Ministry of Agriculture, Livestock and Food Supply - MAPA&lt;br&gt;Esplanada dos Ministérios,&lt;br&gt;Bloco D, Anexo A, 3º Andar, Sala 338&lt;br&gt;CEP: 70043-900 Brasilia - DF</td>
<td>+55 (61) 3218 2630</td>
<td>+55 (61) 3224 5647</td>
<td><a href="mailto:graziele.lima@agricultura.gov.br">graziele.lima@agricultura.gov.br</a></td>
</tr>
</tbody>
</table>
**Brésil/Brazil (Continued)**

Mrs. Fernanda PEREIRA SOARES  
Federal Inspector  
Ministry of Agriculture, Livestock and Food Supply - MAPA  
Esplanada dos Ministérios,  
Bloco D, Anexo A, 3º, Andar, Sala 336  
CEP: 70043-900 Brasília  
Brazil

Tel: +55 (61) 3218 2630  
Fax: +55 (61) 3224 5647  
Email: fernanda.soares@agricultura.gov.br

**Bulgarie/Bulgaria**

Mrs. Irena KANCHEVA  
Chief Expert  
Executive Agency for Variety Testing, Field Inspection and Seed Control  
125 Tsarigradsko Shosse Blvd. Block 1  
1113 Sofia  
Bulgaria

Tel: +359.2.870.80.27  
Fax: +359.2.870.65.17  
Email: irenakancheva@yahoo.com

Ms. Pavla NIKOLOVA  
Junior Expert  
Executive Agency for Variety Testing, Field Inspection and Seed Control  
125 Tsarigradsko Shosse Blvd. Block 1  
1113 Sofia  
Bulgaria

Tel: +359.2.870.03.75  
Fax: +359.2.871.36.35  
Email: p_nikolova@iasas.government.bg

**Canada**

Mr. Dale ADOLPHE  
Executive Director  
Canadian Seed Growers Association  
P.O. Box 8455  
202-240 Catherine Street  
K1G 3T1 Ottawa  
Canada

Tel: 1.613-236-0497 (Ext. 224)  
Fax: 1.613-563-7855  
Email: adolphed@seedgrowers.ca
Canada

(Continued)

Mr. Randy PREATER
Program Manager
Canadian Seed Growers Association (CSGA)
P.O. Box 8455
202-240 Catherine Street
K1G 3T1 Ottawa
Canada

Tel: 001613.236.0497
Fax: 001613.563.7855
Email: preaterr@seedgrowers.ca

Chili/Chile

Mr. Guillermo APARICIO
Chief Sub-Department Seed Certification
Seeds Division
Agricultural and Livestock Service
P.O. Box 1167
Paseo Bulnes 140
Santiago
Chile

Tel: +56.234.515.67
Fax: +56.269.72.179
Email: guillermo.aparicio@sag.gob.cl

Danemark/Denmark

Ms. Merete BUUS
Head of Division on Seed Certification
Danish Plant Directorate
Danish Ministry of Food, Agriculture and Fisheries
Skovbrynet 20
2800 Kongens Lyngby
Denmark

Tel: +45 45 26 37 20
Fax: +45 45 26 36 10
Email: meb@pdir.dk

Ms. Tine Vilbrad JORGENSEN
Seed Expert
Danish Plant Directorate
Ministry of Food, Agriculture and Fisheries
Skovbrynet 20
2800 Kongens Lyngby
Denmark

Tel: +45 45 26 37 22
Fax: +45 45 26 36 10
Email: tvj@pdir.dk
<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Title</th>
<th>Organization</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Espagne/Spain</td>
<td>Mr. Juan José PEINADO</td>
<td>Head of Section</td>
<td>Ministerio de Medio Ambiente y Medio Rural y Marino</td>
<td>C/ Alfonso XII, 62</td>
<td>00 34 91 347 67 34</td>
<td>00 34 91 347 67 03</td>
<td><a href="mailto:jpeinado@mapya.es">jpeinado@mapya.es</a></td>
</tr>
<tr>
<td></td>
<td>Mr. Thomas BOCKHAUS</td>
<td>Director of Supply Planning</td>
<td>A DuPont Company</td>
<td>6900 NW - 62nd Ave. 50131 Johnston, Iowa United States</td>
<td>1-800.247.6803</td>
<td>1-515.254.27.24</td>
<td><a href="mailto:tom.bockhaus@pioneer.com">tom.bockhaus@pioneer.com</a></td>
</tr>
<tr>
<td>Finlande/Finland</td>
<td>Mrs. Ritva VALLIVAARA-PASTO</td>
<td>Senior officer</td>
<td>Finnish Food Safety Authority Evira, Seed Certification Tampereentie 51 32200 LOIMAA Finland</td>
<td>Tel: +358 20 7725 320 Fax: +358 20 7725 317 Email: <a href="mailto:ritva.vallivaara-pasto@evira.fi">ritva.vallivaara-pasto@evira.fi</a></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Inde/India

Dr. Muthusamy BHASKARAN
Director
National Seed Research and Training Centre
(Central Seed Testing Laboratory)
Govt. of India Ministry of Agriculture
Department of Agriculture & Cooperation
G.T. Road, Collectry Farm, P.O. Industrial Estate
221 106 Varanasi, U.P.
India
Tel: +91.542.23.70.222
Fax: +91.542.2370298
Email: dir-nsrtc-up@nic.in

Mr. Harish PRASAD
Director (Seeds)
Government of India
Ministry of Agriculture
Department of Agriculture & Cooperation
Room No. 150 A
Krishi Bhawan
110 001 New Delhi
Email: dirrfs@krishi.nic.in

Italie/Italy

Mr. Pier Giacomo BIANCHI
Head General Affairs
Ente Nazionale Sementi Elette (ENSE)
Via Ugo Bassi, 8
Milan 20159
Italy
Tel: +39 2 69 01 20 26
Fax: +39 269 01 20 49
Email: pg.bianchi@ense.it

Moldavie/Moldova

Mr. Andrei MIHALACHI
Chief of Central Laboratory
SE “State Centre for Certification of Seed Material”
Mesterul Manole, 4, str.
Chisinau – MD-2044
Republic of Moldova
Tel: +373.22.47.60.35
Fax: +373.22.47.37.38
Email: mihalachi.andrei@gmail.com
Nouvelle-Zélande/ New Zealand

Mr. Selwyn H. MANNING
Chairman
New Zealand Seed Quality Management Authority
C/- Barenbrug Southern Limited
2547 Old West Coast Road - RD1
7671 Christchurch
New Zealand

Tel: 00.64.3.318.85.14
Fax: 00.64.3.318.85.49
Email: shm@bsl.co.nz

Pays-Bas/Netherlands

Mr. Max SOEPBOER
Senior Specialist Seed Policy
N A K
(Dutch General Inspection Service
for agricultural seeds and seed potatoes
Randweg 14
8300 BC Emmeloord
Netherlands

Tel: +31.527.635.400
Fax: +31.527.635.41
Email: msoepboer@nak.nl

Marien VALSTAR
Ministry of Agriculture, Nature and Food Quality
P.O. Box 20401
2500 EK Den Haag
Netherlands

Tel: 31 70 378.5776
Fax: 31 70 378.6156
Email: m.valstar@minlnv.nl

Mr. Chris VAN WINDEN
Account Manager Propagating Material
Ministry of Agriculture, Nature and Food Quality
P.O. Box 20401
2500 EK Den Haag
Netherlands

Tel: +31.70.378.42.81
Fax: +31.70.378.61.56
Email: c.m.m.van.winden@minlnv.nl
Pays-Bas/Netherlands

Ms. Patricia VAN BENTUM
Agricultural Counsellor
Permanent Delegation
12-14 rue Octave-Feuillet
75116 Paris
France

Tel: +33 1 45 24 99 71
Email: patricia-van.bentum@minbuza.nl

République Tchèque/
Czech Republic

Mr. Daniel JURECKA
Director of Plant Production Section
UKZUZ (Central Institute for Supervising and Testing in Agriculture)
Hroznova 2
656 06 Brno
Czech Republic

Tel: +00.420.543.548.210
Fax: +00.420.543.212.649
Email: daniel.jurecka@ukzuz.cz

Russie/Russia

Mrs. Irina LUNYAKA
Head of Testing Laboratory for Variety and Seed Control
FSI "The Krasnodar Reference Centre of the Federal Service for Veterinary and Phytosanitary Surveillance"
Soviet Farm "Solnechniy"
P.O.: 1-Otdeleniye, 47
350062 Krasnodar
Russian Federation

Tel: +7.861.226.70.23
Fax: +7.861.226.22.43
Email: ista@krc.kuban.ru

Mrs. Irina SEMERYAZHKO
Main Specialist of Technical Support Department
FSI "The Krasnodar Reference Centre of the Federal Service for Veterinary and Phytosanitary Surveillance"
Soviet Farm "Solnechniy"
P.O.: 1-Otdeleniye, 47
350062 Krasnodar
Russian Federation

Tel: +7.861.226.70.23
Fax: +7.861.226.22.43
Email: ista@krc.kuban.ru
Suède/Sweden

Mrs. Eva DAHLBERG
Senior Administrative Officer
Swedish Board of Agriculture
55182 Jönköping
Sweden

Tel: +46.36.155.176
Fax: +46.36.71.05.17
Email: eva.dahlberg@sjv.se

Mr. Ulf NYMAN
Head of Certification
Swedish Board of Agriculture, Seed Division
P.O. Box 83
268 22 Svalöv
Sweden

Tel: 00.46 36 15 83 02 (direct)
Fax: 00.46.36.15.83.08
Email: ulf.nyman@sjv.se

Turquie/Turkey

Mr. Eyup KOKSAL
Section Director
Ministry of Agriculture and Rural Affairs
General Directorate for Agricultural Production and Development –
(Seed Department)
Eskisehir yolu 9.km Bakanlik Kampusu 3 Nolu Kapi
TUGEM - B Blok
06100 Lodumlu / Ankara
Turkey

Tel: + 90 312 286 6935
Fax: + 90 312 286 6442
Email: eyup.koksal@tarim.gov.tr

Mr. Kamil YILMAZ
Director
Ministry of Agriculture and Rural Affairs
Variety Registration and Seed Certification Centre
P.Box:30
06172 Yenimahalle/Ankara
Turkey

Tel: +90.312.315.88.74
Fax: +90.312.315.09.01
Email: kyilmaz@tagem.gov.tr
Turquie/Turkey (Continued)

Ms. Sibel KAPLAN
Chief Commercial Counsellor
Permanent Delegation
9, rue Alfred Dehodencq
75116 Paris
France

Tel: +33 1 42 88 50 02
Fax: +33 1 45 27 28 24
Email: sibel.kaplan@mfa.gov.tr

Community Plant Variety Office (CPVO)

Mr. Carlos GODINHO
Vice-President CPVO
Community Plant Variety Office (CPVO)
European Union
3 Boulevard Maréchal Foch
B.P. 10121
49101 Angers cedex 02
France

Tel: +33.2.41.25.64.13
Fax: +33.2.41.25.64.10
Email: godinho@cpvo.europa.eu

Association of Official Seed Analysts (AOSA)

Dr. Brent TURNIPSEED
AOSA Representative
SDSU Seed Testing Lab
Association of Official Seed Analysts (AOSA)
South Dakota State University
Box 2207-A, Ag Hall 227
SD 57007 Brookings

Tel: +1.011.1.605.688.4590
Email: brent.turnipseed@sdstate.edu

International Seed Federation (ISF)

Mr. Piero SISMONDO
Director Seed Technology and Trade
International Seed Federation (ISF)
Chemin du Reposoir 7
CH-1260 Nyon
Switzerland

Tel: +41 22 365 44 20
Fax: +41-22 365 44 21
Email: p.sismondo@worldseed.org