Cologne, 2010

MOISTURE COMMITTEE

Cologne, 2010
<table>
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<th>Membership 2007-2010</th>
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<td><strong>Chair:</strong></td>
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<td><strong>ECOM Contact:</strong></td>
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New Members
2010-2013

Todd Erickson  United States
Takayuki Okuda  Japan
Validation of New Species

MOI: Craig McGill and Joseph Ahenda
STA: Jean-Louis Laffont

First species to be validated is Solanum nigrum

Photographer: Harald Hubich (from commons.wikimedia.org)

Steve Hurst. Steve Hurst @ USDA-NRCS PLANTS Database Provided by ARS Systematic Botany and Mycology Laboratory, Russian Federation.
Validation of New Species

Participating laboratories in the Solanum nigrum validation are:

ARDL0100 (Ignacio Aranciaga)
ATML0400 (Patrizia Kotzian)
AUDL0200 (Karen Hill)
DKDL0100 (Ulla Blicher-Mathiesen)
FRDL0200 (Maria Rosaria Mannino)
JPML0600 (Takayuki Okuda)
KEDL0100 (Joseph Ahenda)
NLDL0300 (Gerarda de Boer)
NZDL0100 (Sue Cousins)
USDL0100 (Todd Erickson)
ZADL0100 (Pamela Strauss)
ZMDL0100 (Mable Simwanza)
Validation of New Species

Further species to be validated are:

Passiflora edulis
Cleome gynandra
Carica papaya
Jatropha curcas
Introduction of Rules Changes

Working group on sample size for moisture determination of forest tree and shrub seed (jointly with the FTS Committee),

Working Group Leader: Sergio Pasquini

• is the 200g TSW in 9.1.5.5 appropriate?

• can 10g or 20g of seed rather than 10 intact seeds be cut?

Samples are being prepared for distribution,
Introduction of Rules Changes

Working group on grinding:

Working Group Leader: Gerarda de Boer-Raatgever

• questionnaire on grinding procedures in the laboratories and any problems that can influence grinding results – questionnaire partly completed.
Introduction of Rules Changes

Change wording in 9.1.5.5 from;

The cutting will be carried out on two subsamples each of a weight approximately equal to the weight of five intact seeds from the submitted sample.

to

The cutting will be carried out on a working sample of a weight approximately equal to the weight of ten intact seeds from the submitted sample.

Rules change C.9.1
Introduction of Rules Changes

Increase in moisture test duration for *Lolium* spp. from 1 to 2 hours for the high-temperature oven method.

Rules change C.9.2

- PT round 08-1 for *Lolium multiflorum* indicated there was a difference in the moisture determined depending on which of the two methods permitted (17 hours @ 103°C or 1 hour @ 130°C) were used

- PT round insufficient for a Rules change proposal
Introduction of Rules Changes

Comparative testing undertaken by:

Ente Nazionale Sementi Elette Laboratorio Analisi Sementi [ITDL0300]
Rita Zecchinelli

Forschungsanstalt Agroscope Reckenholz-Tänikon ART [CHDL0100]
Silvia Zanetti

GEVES (Station Nationale d'Essais de Semences [FRDL0200]
Maria Rosaria Mannino

LaRAS (Lab. di Ricerca e Analisi Sementi [ITDL0100]
Enrico Noli

Day, 18 June 2010    Agenda Point (13:30-14:30)
Introduction of Rules Changes

Comparative testing involved testing samples at:

• 1 hour @ 130°C, samples allowed to cool then weighed

• samples returned to 130°C for a further 1 hour, allowed to cool then weighed

• samples returned to 130°C for another 1 hour, allowed to cool then weighed

• 17 hours @ 103°C, allowed to cool then weighed, then another 2 hours @ 103°C.
Introduction of Rules Changes

Tolerance of 0.3% is accepted between 17 hours @ 103°C and the 130°C method

- after 1 hour @ 130°C, only 2 of the 8 samples tested were in tolerance
- after 2 hours @ 130°C, all 8 samples tested were in tolerance
- an ANOVA also indicated that there was a significant difference in the moisture content determined using 17 hours @ 103°C compared with 1 hour @ 130°C but not 2 hours @ 130°C.
Publications

Seed Testing International

ISTA Quality Assurance in Seed Testing Workshop

19 to 23 October 2009 at Massey University, Palmerston North, New Zealand

- covered aspects of quality assurance in moisture testing
- workshop lead by Jette Nydam (ISTA Accreditation Department)
- 17 participants from eight countries
- from seed testing laboratories, seed companies and research organisations.
Day, 18 June 2010  
Agenda Point (13:30-14:30)

Workshops

Thanks to:

Massey University for supporting the workshop

John Hampton and Don Scott for their presentations to the workshop

Nadine Ettel for her help with the workshop planning and preparation.
Workshops

ISTA FTS, Moisture & Storage Workshop on Water Activity

13 to 15 October 2010 in Cemagref, Montargis & Nogent sur Vernisson, France.

“Water activity measurement applied to seed testing.”

Workshop aim: to discuss the potential role of water activity as a new method for use in seed testing.
Proficiency Tests

PT09-2  *Linum usitatissimum* (no grinding)

PT10-3  *Vicia faba* (grinding)
Questions to the Committee

Use of tolerance tables for comparing the results of two moisture meters.

Length of time moisture samples need to be retained after moisture determination.

Positioning of a digital thermometer in the moisture oven.

Grinding of Avena strigosa.
Thanks to:

Moisture Committee members for all their work

ISTA Secretariat, in particular Norberto De Atrip and Ron Don (TCOM coordinators) and Jonathan Taylor, for their assistance to the Committee

Jean-Louis Laffont (STAT) for his statistical help.
Questions

Moisture Committee Meeting 20 June: 19.00-20.30