

ISTA Moisture Committee

- **Projects of the past working period**
 - **Membership**
 - **Comparative testing**
 - **Non-orthodox seeds**
 - **Workshops**
 - **Publication of Handbook**
 - **Revision of the Rules chapter**

2004-2010: MOI - membership

- Now and stay

1. **Harry Nijenstein** (chair) (Netherlands)
2. **Jette Nydam** (vice-chair) (Denmark)
3. **Joseph Ahenda** (Kenya)
4. **Olfat H. El Bagoury** (Egypt)
5. **Mark A. Bennett** (United States)
6. **Matt Daws** (United Kingdom)
7. **Gerarda de Boer-Raatgever** (Netherlands)
8. **Ronald Don** (United Kingdom)
9. **Deon Erdey †** (South Africa)
10. **Robert Karrfalt** (United States)
11. **Maria-Rosaria Mannino** (France)
12. **Craig McGill** (New Zealand)
13. **Sergio Pasquini** (Italy)
14. **Maria Angela Tillman** (Brazil)

- Out

- ***Johannes Dornhecker*** (Austria)

- New in

- ***Ruzanna Sadoyan*** (Armenia)

- Especially people from Asia are invited to participate in MOI!

Comparative testing

- Reference method for moisture (Karl Fischer) not available within ISTA organization.
- Find new reference method; goals:
 - Use oil content as a separator for classifying species into 103 or 130°C oven temperature, without need for comparative testing.
 - Use a constant oven temperature method as the new reference method.

Comparative testing-conclusions

- It is not possible to use seed oil content as a separator for classifying species in the low or high temperature oven method.
 - Hardly any statistical significant effects of oil content in this study.
 - Within-species variation in oil content.
 - Within-species variation in oil type.
- The low temperature oven method appears to be a safe method as the new ISTA reference method.



Comparative testing - acknowledgements

- **Comparative study**

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- Jette Nydam
- Craig McGill
- Darja Vouk
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- Maria Laura Fusari
- Maria Rosaria Mannino
- Ulf Kjellstrom
- Gabriele Schillinger
- Maria Angela Tillman
- Harry Nijënstein

- **Extras**

- Ronald Don (equilibration + dispatch of samples, tkw)
- Matt Daws (oil contents)
- Gerhard Schuon (heterogeneity test)
- Prof. Dr. Heinz-Dieter Isengard, University of Hohenheim (KF)

- **Evaluation of results**

- Sylvain Grégoire (STA)
- Maria Rosaria Mannino
- Ronald Don
- Jette Nydam
- Harry Nijënstein

Non-orthodox seeds

- **Assessment of water content in non-orthodox seeds (Deon Erdey)**
 - Water content values differs greatly between the various seed components
 - Determining water content on a whole seed basis only for desiccation sensitive seeds underestimates the desiccation sensitivity.
- **Survey on non-orthodox seed moisture testing (Craig McGill)**
 - For most laboratories there is no demand for testing the moisture of seed of non-orthodox species. Where there is a demand, all the species that the laboratories had an interest in, are tree species.
 - Three issues were raised in relation to testing non-orthodox seed for moisture:
 - Should a minimum number of seeds rather than weight of seeds be specified for testing?
 - Should seed be cut rather than ground, and
 - Should only 'healthy' seed be tested for moisture.
- **Both have been published in STI**

Workshops

- A one-day workshop was held in conjunction with the AOSA meeting in the USA (Jette, June 2006)
- Workshops planned 2007-2010
 - 2007-October : France-Angers-Jette (MOI, PUR, GER)
 - 2008-June : Italy-Verona-Sergio (MOI, FTS, TEZ)
 - 2008-Oct.? : Kenya-Nairobi-Craig (MOI, GER)
 - 2009-....? : Australia-Brisbane-Craig (MOI, TZ, GER)
 - 2009-:Mar/Apr : Brazil-Curritiba-Sergio (FTS, MOI)

Publication of Handbook

1. Table of contents
2. Preface
3. Introduction – Why this handbook?
4. Abbreviations
5. Moisture in seed
6. Methods of moisture testing
7. Sampling and sample preparation
8. Reference method
9. Constant temperature oven method
10. Moisture meters
11. Calculating and reporting of results
12. Glossary / definitions
13. References

2004-2007: Handbook-Acknowledgements

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Maria-Rosaria Mannino

Sergio Pasquini

Revision of the Rules chapter

Main changes

- Replacement of the Karl Fischer method as the reference method for moisture testing.
- New table for moisture testing of tree and shrub seeds.
- New tolerance tables for comparing results from moisture meters.
- Major revision of Chapter 9.

Consequences

- Adding new species is possible again (wg Craig)
- Use these tests for adding and improving tolerances
- Look at need for grinding of some species, grinders, and particle size distribution (wg Gerarda/Harry)

Changes made during the congress in Brazil:



Species (tropical seed questionnaire):

- *Solanum nigrum*
- *Bupleurum rotundifolium*
- *Carica papaya*
- *Sechium edule*