



Activity report
ISTA
Forest Tree and Shrub Seed
Committee
2005 - 2006

ISTA Ordinary Meeting
Zürich, 2006

Chair:	Zdenka Prochazkova	Czech Republic
Vice-chair:	Hugh W. Pritchard	United Kingdom
Members:	Daniel Baskaran	Malaysia
	D.G.W. Edwards	Canada
	Kari Fiedler	United States
	Elena Foffova	Slovakia
	Fabio Gorian	Italy
	Peter G. Gosling	United Kingdom
	Robert P. Karrfalt	United States
	Dave Kolotelo	Canada
	Stefanie Krämer	Germany
	Fatima C.M. Pina-Rodrigues	Brazil
	Beti Piotto	Italy
	Heidi Røsok Bye	Norway
	Moctar Sacande	United Kingdom
	Dale Simpson	Canada
	Victor Vankus	United States

FTS Working Programme 2004 - 2007

A Rules Development

A.1 Introduction of New Methods

	Method name/Subject	Proposed finalisation	Collaboration
1	Tropical tree seed germination (25 species)	2007	
2	<i>Juniperus</i> germination	2007	
3	Comparative tests of <i>Abies</i> germination	2007	
4	Comparative tetrazolium tests of <i>Abies</i>	2007	TEZ

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A.1 Introduction of New Methods

1 Tropical tree seed germination

H. W. Pritchard, Moctar Sacande

Tropical seed germination of socio-economic species on 10 more palms: four species in the genus *Arenga* and three species in *Livistona* and *Phoenix*.

The mass of cleaned and dried seed was < 1 g for six species and about 2 g for the other four species. The initial (on receipt) relative humidity of the seed lots was generally > 85 %, although two seed lots were lower at 61 and 78 % RH.

Moisture contents too were within a relatively narrow range, from 21 to 33 % (fresh weight basis).

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A.1 Introduction of New Methods

1 Tropical tree seed germination

H. W. Pritchard, Moctar Sacande

Germination and mean times to germinate at 30°C :

Arenga australasica (90%; 19 d); *Arenga obtusifolia* (90%; 35d);
Arenga pinnata (68%; 31d); *Arenga westerhoutii* (98%; 27d);
Livistona benthamii (95%; 10d); *Livistona rotundifolia* (33%; 27d);
Livistona speciosa (88%; **8d**); *Phoenix acaulis* (65%; 15d); *Phoenix
loureiroi* (80%; 24d); *Phoenix paludosa* (100%; **80d**).

Activities were done by Hugh W. Pritchard, Moctar Sacande,
Lindsay Dytham, Jenny Davies.

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A.1 Introduction of New Methods

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Juniperus germination

Beti Piotto, Jill Barbour

Germination in *Juniperus* species is a quite complex issue about which very little is known, strong variation between species and within species has been assessed. The project aims at collecting information, mainly through abstracts, about germination in *Juniperus* species.

Information includes related topics like seed dispersal, seed collection, dormancy, dormancy removal, nursery growing. Information will be processed to be available in different formats (files sent to users, on line, etc).

About 950 abstracts on germination issues have been retrieved and are being processed



Juniperus

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A.1 Introduction of New Methods

3	Comparative tests of <i>Abies</i> germination	D.G.W. Edwards
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To evaluate a new dormancy-breaking stratification-redry method in fir seeds (controlling seed moisture content during stratification = prechilling)
To compare with current prechilling prescriptions and tetrazolium test

No actual work has yet begun due to a lack of seeds.
Data-recording sheets have been drafted and will be circulated to participating laboratories early in 2006.
Efforts will be increased to secure at least one suitable seedlot to begin the ring test in 2006.

Finalisation has been postponed until 2008.

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A.1 Introduction of New Methods

4	Comparative tetrazolium tests of <i>Abies</i>	Z. Prochazkova
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July 2006

a questionnaire will be prepared and circulated to laboratories

August 2006 – data processing ?

October 2006 – obtaining seedlots for ring test ?

November 2006 – ring test ?

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A Rules Development

A.3 Introduction of Rules Changes

	Subject	Proposed finalisation	Collaboration
1	Revision of pure seed definitions (PSD)	2006	PC
2	Harmonisation Table 6. Tetrazolium tests with Table 2 Sampling	2006	TZ

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A.3 Introduction of Rules Changes

1	Revision of pure seed definitions (PSD)	D.G.W. Edwards
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A proposal to revise the ISTA Rules concerning Pure Seed Definitions for several coniferous seeds has been submitted (in cooperation with the PUR Committee). The proposed revisions have been included in the Proposed Rule Changes to be voted on at the Ordinary Meeting in Zürich.



PSD

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A.3 Introduction of Rules Changes

2	Harmonisation Table 6 TEZ with Table 2 Sampling	Z. Prochazkova
2005 Data collection - in cooperation with Tetrazolium and Bulk and Sampling Committees 2006 Proposal of new tables		
Proposal to postpone until 2007		

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A.3 Introduction of Rules Changes

Betula germination

Z. Prochazkova + GER

A proposal for testing *Betula* germination by counted replicates (4 x 100 seeds) as well as by weighed replicates (Chapter 13)



Betula

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B Publications

B.1 Rules accompanying publications

	Publication title	Proposed finalisation	Collaboration
1	ISTA Tree and Shrub Seed Handbook - revision	2007	
2	Seedling Evaluation Handbook	2007	GER

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B.1 Rules accompanying publications

1	ISTA Tree and Shrub Seed Handbook - revision	Zdenka Prochazkova
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Corrections of text in scanned (electronic) copy have been done.

Tables' transcription is in process.

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B.1 Rules accompanying publications

2	Seedling Evaluation Handbook	Peter Gosling
Draft proposals for clarifying the developmental stage at which germinating tree seeds can be classified as 'normal' seedlings (additional chapter dealing especially with tree and shrub seed germination will be elaborated)		
No progress yet		

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C Workshops and Seminars

C.1 Training and education workshops

	Workshop subject	Proposed Date	Region
1	Tree and Shrub Seed Tetrazolium Workshop	06.2005	Europe Germany

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C.1 Training and education workshops

1	Tree and Shrub Seed Tetrazolium Workshop	S. Krämer
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**The project was finalised in June 2005 thanks TEZ
Committee
(S. Krämer, N. Leist, M. Kruse and M. Steiner)**

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D Proficiency Tests

	Proficiency Test Subject	Proposed date	Collaboration
1	Tree and Shrub Seed Germination – 1 st round with 1 species	2007	PT

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D Proficiency Tests

1	Tree and Shrub Seed Germination – 1st round with 1 species	Zdenka Prochazkova
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July 2006

A questionnaire (top 10 species + methods) will be elaborated and circulated to laboratories

August 2006 – data processing ?

October + November 2006 – species + test selection ?

January + February 2007 – 1st round with 1 species ?

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E Special Projects

	Project name/subject	Proposed finalisation	Collaboration
1	Harmonisation of the ISTA and AOSA Rules	2007	
2	Publication of Proceedings of FTS Workshop, Prague 2003	2004	

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E Special Projects

1 Harmonisation of the ISTA and AOSA Rules

V. Vankus

Primary accomplishment during 2005 was a comparison of the TZ methods for trees and shrubs. Methods were compared from the AOSA Tetrazolium Handbook and the 2003 ISTA Working Sheets on Tetrazolium, Volume II - Tree and Shrub species.



Harmonisation

E Special Projects



Forty-two participants from 20 countries attended the third ever ISTA, Forest Tree and Shrub Seed Committee Workshop' in Prague - Průhonice, Czech Republic between 20-22 October 2003

- Průhonice, Czech Republic, October 20-22, 2003



Hosted by
Forestry and Game Management Research
Institute Jíloviště-Strnady,
Czech Republic

Edited by
Zdeňka Procházková, Peter G. Gosling
and Jack R. Sutherland



Forest Research
The Research Agency of the Forestry Commission

Proceedings were published in June 2005

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C Workshops and Seminars

C.1 Training and education workshops

Organiser: Dr. Fabio Gorian

	Workshop subject	Proposed Date	Region
2	Tree and Shrub Seed Workshop (Purity, Germination, TEZ)	12. - 15.09. 2006	Europe Italy





Thank you for your attention

**Any questions?
Suggestions?**