



ISTA Variety Committee

Activity Report 2007

**Chairperson Rainer Knoblauch
LTZ Augustenbergring, Karlsruhe
Germany**

Committee Membership List

Chair.	1	Rainer Knoblauch	Germany
Vice-chair:	2	Kae-Kang Hwu	Taiwan
Members:			
	4	Kalyn Brix-Davis	United States
	5	Emanuela Casarini	Italy
	6	Savitha H. Reddy	India
	7	W. Drost M. Sc	Canada
	8	Jerzy Drzewiecki	Poland
	9	Berta Killermann	Germany
	10	Paul Korányi	Hungary
	11	Ulf Kjellström	Sweden
	12	Jop Schipper	Netherland
	13	Cheryl Dollard	Canada
	14	David Zhang	France
	15	Sylvain Gregoire	France

A Rules Development

Introduction of Rules Changes



	TCOM	Subject	Proposed finalisation	Collaboration
1	VAR	The methods for IEF testing of Zea mays, Helianthus annuus - have been introduced in the ISTA Rules for the whole range of varieties.	finished 2006	

2	Further - Activity of the Variety Committee			
	VAR	List of procedures for inclusion in the ISTA Rules: <i>- Brassica, Lactuca, Cichorium, Winter-Summer Cereals, Sinapis arvensis in Brassica</i>	Work starts 2007	
	VAR	Improvement in the ISTA Rules: Alkaloid test <i>Lupinus</i>	First Proposal in October 2006, second presentation 2007	

TCOM	Subject	Proposed finalisation	Collaboration
VAR	Inclusion of methods from the ISTA Handbook into the ISTA Rules:		
	<p>a.) Phenol: <i>Triticum</i> spp., <i>Oryza sativa</i>, <i>Vicia striata</i>, <i>Poa pratensis</i></p> <p>b.) Fluorescence: Ryegrass seedlings, <i>Lolium</i>, <i>Avena</i>, <i>Pisum</i>, <i>Glycine max</i>, <i>Festuca rubra</i> and <i>Festuca ovina</i></p> <p>c.) Chemical tests: <i>Wheat</i>, <i>Sorghum bicolour</i>, red rice and rice varieties, <i>Melilotus</i></p> <p>d.) Other chemical tests: <i>Soybean</i>, <i>Oats</i> <i>Sinapis arvensis</i>, <i>Lupinus</i> spp. <i>Vicia faba</i></p> <p>e.) Chromosome number: <i>Lolium</i>, <i>Trifolium pratense</i>, <i>Beta vulgaris</i></p>	2007	

B Workshops and Seminars

	TCOM	Workshop subject	Proposed Date
1	VAR	ISTA/FAO Workshop for Protein and DNA analysis	2006 finished
2	VAR	ISTA Workshop: IEF-Variety and Hybrid testing with IEF	2006 finished
3	VAR	ISTA Workshop for Variety Testing	2007 April
4	VAR	Variety Testing ISTA/FAO Protein and DNA	2007 June planned
5	VAR	ISTA Variety Testing Workwhop with conventional Methods (no protein and no DNA)	2008 Munich



B Workshops and Seminars

	TCOM	Workshop subject	Proposed Date	Region
6	VAR	<p>Questionnaire: Offer for laboratory training in variety testing at homestations</p> <p>Organisation of the ISTA Variety Workshop on IEF</p> <p>Ringtests for variety testing with <i>Triticum, Avena, Pisum</i></p>	<p>2007-2010</p> <p>2008</p> <p>2007, 2008</p>	Worldwide

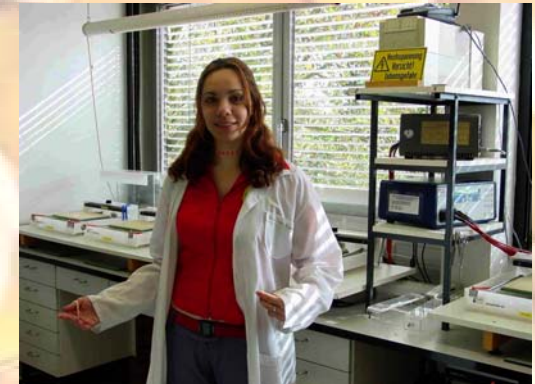


C Special Projects

	TCOM	Project name/subject	Proposed finalisation	Collaboration
1	VAR	Installation of Working Groups for the specific types of Variety Testing (techniques)	finished 2006	Members, see amendment below
2	VAR	Survey on methods to find a. Laboratories that have methods available, b. Methods urgently requested	2007 finished 2007	
3	VAR	Design of database obtained from all data from the survey	2007/08 in work	
4	VAR	Database available a. via ISTA-website b. as hardcopy	in progress	ISTA Secretariat

Special Projects

	TCOM	Project name/subject	Proposed finalisation	Collaboration
6	VAR	Integrate DNA Working Group into the Variety Committee	2007	Programm elaborated
7	VAR	Laboratory Training	2006	Regular offer from the commtttee



New Working Groups, Leaders, Members and Actions:

Working Groups	Leader	Member	Action
1. Fieldtrials	Ulf Kjellström		collecting methods for database and Handbook

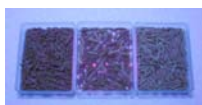
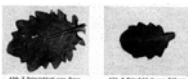


Proposed Working Groups, Leaders, Members and Actions:

Working Groups	Leader	Member	Action
<p>2. Conventional Methods</p> <ul style="list-style-type: none"> - morphological - anatomical - chemical - fluorescent aspects 	Jop Schipper	Berta Killermann	Formulate Rulesproposals, arrange Workshops

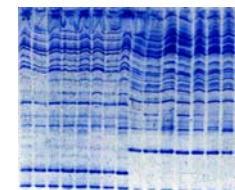
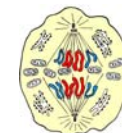
METHODS FOR VERIFICATION OF SPECIES AND CULTIVAR

- Morphological**
 - ripe plant
 - seedling
 - Anatomical**
 - seed
 - Chemical**
 - Phenol
 - Formic acid
 - Potash solution
 - Lugol solution
 - Hydrochloric acid
 - Fluorescence**
 - floret
 - seedling
- Brassica, Raphanus*
- Lactuca, Cichorium, winter-summer cereals
- Brassica species (testa)
- Triticum varieties
- Sinapis arvensis in Brassica
- Sinapis arvensis in Brassica
- Lupinus with / without alcaloids
- Vicia sativa / villosa
- Avena white / yellow var.
- Trifolium species
- Melilotus species
- Lolium perenne / multiflorum
- Festuca rubra / ovina
- Allium species



METHODS FOR VERIFICATION OF SPECIES AND CULTIVAR

- Cytology**
 - seedling
 - Biochemical**
 - seed
- Beta species*
- Triticum durum / aestivum
- Poa species, var.
- Phleum species, var.
- Trifolium pratense, var.
- Triticum, Hordeum (acid-PAGE)
- Lolium, Pisum (SDS-PAGE)
- Zea (UTLIEF)
- Helianthus (UTLIEF)



Working Groups	Leader	Member	Action
3. Electrophoresis PAGE and SDS Isozyme Starch IEF – Acrylamide IEF - Isozyme	Rainer Knoblauch	P. Korany J. Drezewiecki B. Killermann H. Savitha	- Rules proposals - Design the new Handbook
Proteinanalytik:	Methods for testing species and varieties with newest technique, IEF: <ul style="list-style-type: none"> - <i>Tree species : Abies, Cedrus, Larix, Picea, Pinus, Tilia, Quercus</i> - <i>Grasses: Festuca, Lolium, Poa, Agrostis</i> - <i>Cereals: Triticum, Avena, Hordeum, Secale, Oryza</i> - <i>Vegetables-: Capsicum, Cucumis, Cucurbita, Allium, Apium, Valerianella, Chichorium, Daucus, Asparagus, Lycopersicum, Petroselinum, Pisum, Vicia, Vigna radiate, Ocimum basilicum, Solanum melongena</i> - <i>Fodder plants: Beta, Trifolium, Medicago, Brassica, Lupinus</i> - <i>Special cultures: Cocos, Carica papaya, Mango, Phaseolus, Silene</i> 		

Proposed Working Groups, Leaders, Members and Actions:



Working Groups	Leader	Members	Action
4. DNA - Methods Variety Testing	Emanuela Casarini	Kae-Kang Hwu K.B. Davis C. Dollard D. Zhang	Methods development for Variety determination Group installed, actually procedures in discussion



6. Further

Sinapis alba, with nematode resistance *Glycine*,
Gossypium, *Sorghum*, *Arachis*





**As outgoing chair of the
ISTA Variety Testing Committee**

I want to thank all those who have actively supported our work in the last triennium.

**My best wishes go to the new Chair
to succeed to contribute at best to the
Uniformity in Seed Testing**