ISTA - Variety Committee

... the Technical Committee for Species and Variety Testing

Report of ...

- Working program
- Activities
- Special projects
- Looking for active co-workers

Berta Killermann
## Committee Composition

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Country/Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Berta Killermann</td>
<td>DE-Germany</td>
</tr>
<tr>
<td>Vice-chair</td>
<td>Ana Laura Vicario</td>
<td>AR-Argentina</td>
</tr>
<tr>
<td>Members</td>
<td>Emanuela Casarini</td>
<td>IT-Italy</td>
</tr>
<tr>
<td></td>
<td>Rainer Knoblauch</td>
<td>DE-Germany</td>
</tr>
<tr>
<td></td>
<td>Kae-Kang Hwu</td>
<td>TW-Taiwan</td>
</tr>
<tr>
<td></td>
<td>Cheryl Dollard</td>
<td>CA-Canada</td>
</tr>
<tr>
<td></td>
<td>David Zhang</td>
<td>FR-France</td>
</tr>
<tr>
<td></td>
<td>Sylvain Gregoire*</td>
<td>FR-France</td>
</tr>
<tr>
<td></td>
<td>Ulf Kjellström</td>
<td>SE-Sweden</td>
</tr>
<tr>
<td></td>
<td>Eszter Timar</td>
<td>HU-Hungary</td>
</tr>
<tr>
<td></td>
<td>Jerzy Drzewiecki</td>
<td>PL-Poland</td>
</tr>
<tr>
<td></td>
<td>Hedwich Teunissen</td>
<td>NL-Netherland</td>
</tr>
<tr>
<td></td>
<td>Savitha H. Reddy</td>
<td>IN-India</td>
</tr>
<tr>
<td></td>
<td>Kalyn Brix-Davis</td>
<td>US-United States</td>
</tr>
<tr>
<td></td>
<td>Wendy Carnegie*</td>
<td>CA-Canada</td>
</tr>
</tbody>
</table>
## Working Group - DNA-based Methods

<table>
<thead>
<tr>
<th>Leader</th>
<th>1</th>
<th>Emanuela Casarini</th>
<th>IT-Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-workers</td>
<td>2</td>
<td>Ana Laura Vicario</td>
<td>AR-Argentina</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Kae-Kang Hwu</td>
<td>TW-Taiwan</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Cheryl Dollard</td>
<td>CA-Canada</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>David Zhang</td>
<td>FR-France</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Sylvain Gregoire</td>
<td>FR-France</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Daniel Perry</td>
<td>CA-Canada</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Marie-Jose Cote</td>
<td>CA-Canada</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Elisa Viereira</td>
<td>BR-Brazil</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Kalyn Brix-Davis</td>
<td>US-United States</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Kunusoth Keshavulu</td>
<td>IN-India</td>
</tr>
</tbody>
</table>
Activities - WG DNA-based Methods

2007-2008
- Comparative Tests (Emanuela Casarini)
  - *Triticum aestivum*, *Triticum durum*, *Glycine max*, *Oryza sativa*, *Zea mays* (SSR = simple sequence repeats)

2009
- Organisation of a Workshop for Species and Variety Testing in Bologna, Italy

2010 or later
- Develop a chapter “DNA-based methods” for the HANDBOOK OF VARIETY TESTING
# Working Group - Electrophoresis

**Leader**

1. Rainer Knoblauch  
   DE-Germany

**Co-workers**

2. Berta Killermann  
   DE-Germany

3. Jerzy Drzewiecki  
   PL-Poland

4. Savitha H. Reddy  
   IN-India

5. Maria Alicia Loray  
   AR-Argentina

6. Kalyn Brix-Davis  
   US-United States

7. Kunusoth Keshavulu  
   IN-India

8. Ravi Age  
   IN-India

9. Yujia Wu  
   US-United States

10. Chiara Delogu  
    IT-Italy
Handbook - Electrophoresis

The HANDBOOK OF VARIETY TESTING

ELECTROPHORESIS TESTING

(last revised in 1992)
Activities – WG Electrophoresis

2008 – 2009
- Comparative Tests
  - Improvement of A-PAGE for *Triticum* (Ana Laura Vicario)
  - SDS-PAGE, IEF for the discrimination of *Triticum* and *xTriticosecale*

2009 or later
- Comparative Tests
  - A-PAGE, SDS-PAGE, IEF for the discrimination of *Festuca* and *Poa*

2008 – 2010 or later
- Revision of the existing handbook “ELECTROPHORESIS TESTING”
- Organisation of a pre-congress workshop in 2010 in Germany at the Federal Office of Plant Varieties, Hannover
## Working Group - Conventional Methods

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td>Berta Killermann</td>
<td>DE-Germany</td>
</tr>
<tr>
<td>Co-workers</td>
<td>Benno Voit</td>
<td>DE-Germany</td>
</tr>
<tr>
<td></td>
<td>Michael Lovelace</td>
<td>US-United States</td>
</tr>
</tbody>
</table>

*We are looking for active co-workers*
The HANDBOOK OF VARIETY TESTING

RAPID CHEMICAL IDENTIFICATION TECHNIQUES

(last revised in 1993)
Activities – WG Conventional Methods

2007/2008
- Rules proposal “Testing bitter seeds in lupine samples” (will be voted at the Annual Meeting in Bologna, 2008)

April 2008
- Workshop of Species and Variety Testing was organised and hosted in Freising, Germany (21 participants from 9 countries)

(2009 – 2010 or later)
- Comparative Tests
  - Phenol tests (Oryza sativa, Vicia striata, Poa pratensis, …)
  - Fluorescence tests (Glycine max, Pisum sativum, Lolium spp.)
  - Other chemical tests (Glycine max, Avena, Sinapis arvensis, …)

2008 – 2010 or later
- Revision of the existing handbook
  “RAPID CHEMICAL IDENTIFICATION TECHNIQUES”
# Working Group – Field Methods

<table>
<thead>
<tr>
<th>Leader</th>
<th>Co-workers</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ulf Kjellström</td>
<td>2 Wendy Carnegie</td>
<td>CA-Canada</td>
</tr>
<tr>
<td></td>
<td>3 Benno Voit</td>
<td>DE-Germany</td>
</tr>
<tr>
<td></td>
<td>4 Michael Lovelace</td>
<td>US-United States</td>
</tr>
</tbody>
</table>

We are looking for active co-workers
Handbook – Field Methods

The HANDBOOK OF VARIETY TESTING

GROWTH CHAMBER - GREENHOUSE TESTING PROCEDURES: VARIETY IDENTIFICATION

(last revised in 1993)
Activities – WG Field Methods

2008 – 2010 (or later)

- Where should we focus our activities?
  - Questionnaire

- Looking for methods for testing herbicide tolerances on seedlings by means of germination tests (greenhouse trials)
  - Comparative Tests

- Revision of the existing handbook
  “GROWTH CHAMBER - GREENHOUSE TESTING PROCEDURES: VARIETY IDENTIFICATION”
A Further Handbook – Further Activities ...

The HANDBOOK OF VARIETY TESTING

LABORATORY TESTS FOR VARIETY DETERMINATION WITH FUNGAL PATHOGENS

(last revised in 1993)

- No working group!
- Carry out a questionnaire:
  - Who is working with this methods?
  - Are these methods still used and/or needed?
Special Projects

- inventory of methods for Species and Variety Testing
  (Kae-Kang Hwu)
  - ISTA and non ISTA methods
  - validated and non validated methods
  - in-house methods ...

- Revision of the existing four Handbooks
  aim: one handbook in loose-sheet format with 4 –5 chapters and a
  harmonisation in method description
  - Electrophoresis Testing
  - Rapid Chemical Identification Techniques
  - Growth Chamber – Greenhouse Testing Procedures:
    Variety Identification
  - Laboratory Tests for Variety Determination with fungal
    Pathogens?
  - DNA-based Methods (new part)
Requests in 2007/2008

Variety discrimination of *Vicia faba* by biochemical and molecular markers

- Jerzy Drzewiecki (Poland) recommends SDS-PAGE of albumins, globulins and vicilins. Scientists of VIR Saint Petersburg are very experienced in SDS-PAGE of legumes (a.konarev@vir.nw.ru)
- LTZ Augustenberg (Germany) recommends IEF of storage proteins (andrea.jonitz@LTZ.bwl.de)

Discrimination of *Poa supina* and *Poa annua*

- Seed Testing Station Freising recommends SDS-PAGE of storage proteins (berta.killermann@LfL.bayern.de)
- LTZ Augustenberg (Germany) recommends IEF of storage proteins (andrea.jonitz@LTZ.bwl.de)
ISTA - Variety Committee (VARCOM)

Any

- Questions?
- Ideas?
- Comments?

Please contact any of us.

The VARCOM meets from 17.00 – 19.00. You are cordially invited to join the meeting and discuss with us.
Thank you very much for your Attention