

Scottish Agricultural Science Agency

ISTA-Seed Health Committee Report

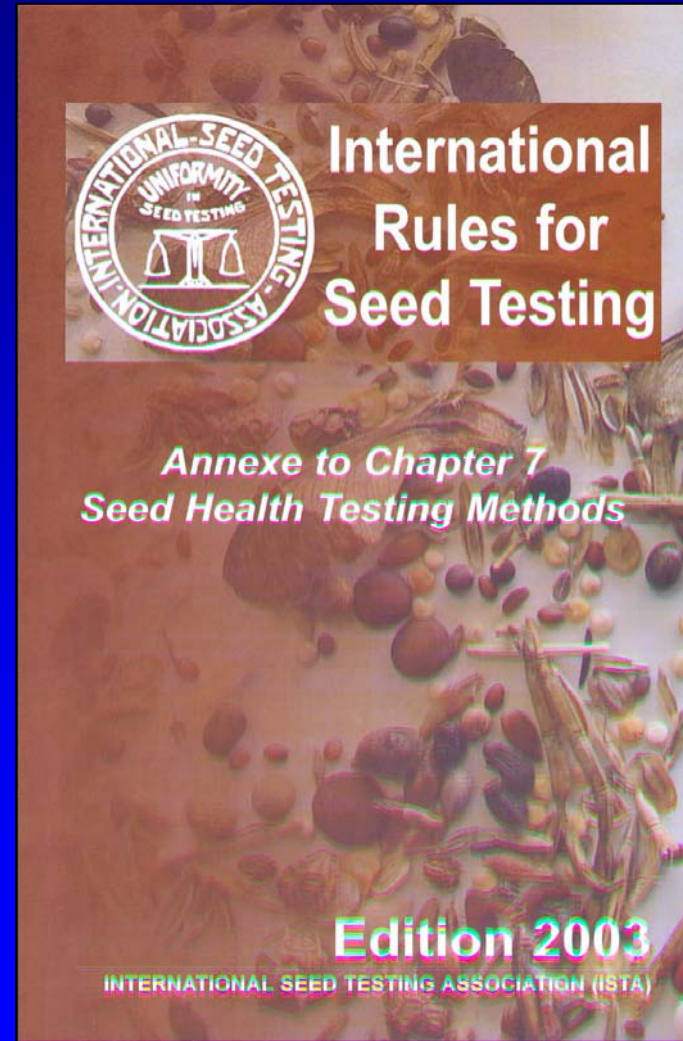
Valerie Cockerell

Contents

1. Rules Development
2. Seed Health Method Validation Programme
3. Proficiency Testing
4. Working Group Reports
5. Seed Health Handbook
6. Symposia
7. Training Courses/Workshops

RULES DEVELOPMENT

- ❖ RULES PROPOSALS
- ❖ RULES AMALGAMATION
- ❖ REVIEW OF METHODS



Rules Proposals-1: New Method

Crop: *Phaseolus vulgaris* (Bean)

Pathogen: *Xanthomonas axonopodis* pv *phaseoli* (both fuscans and non fuscans)

Authors: J Sheppard and P Remeeus

Proposer: ISTA

Submitted : September 2005

Approved: February 2005

Brief Description:

Seeds are suspended in saline plus Tween 20 in polythene bags or containers, and soaked overnight at 5°C (+/- 2°C). The diluted extracts are plated on MT and XCP1 media. Plates are incubated at 27-28°C for 3-5 d and then examined for the presence of suspect colonies of *Xanthomonas axonopodis* pv. *phaseoli*. Suspect colonies are sub-cultured to plates of YDC medium and their identity confirmed by a pathogenicity test on susceptible bean seedlings.

Rules Proposals-2: Editorial Change

Method 7-019

Page 3 Seed Treatment Statement

Background: Problem seed lots. Laboratories using method to test treated seed. Interpretation of “should” not as intended. Untreated seed?

Present

Chemical Seed treatments may affect the performance of this test. It should only be performed on untreated seed.

Change

Seed treatments may affect the performance of this test. It must only be performed on untreated seed.

Note: *Brassica* seed subjected to a physical treatment for example, hot water, is considered as treated seed.

Amalgamation Chapter 7 and Annexe

- ❖ Method Descriptions untouched and remain as an appendix.
- ❖ Removed any duplication between brown and white sheets.
- ❖ Corrected minor editorial errors, for example, spelling errors and PDC to SHC.
- ❖ References to Sampling Chapter updated.

Amalgamated text accepted as purely editorial.

Review of Methods

Twelve ISTA Official Seed Health Testing Methods to be reviewed in 2006

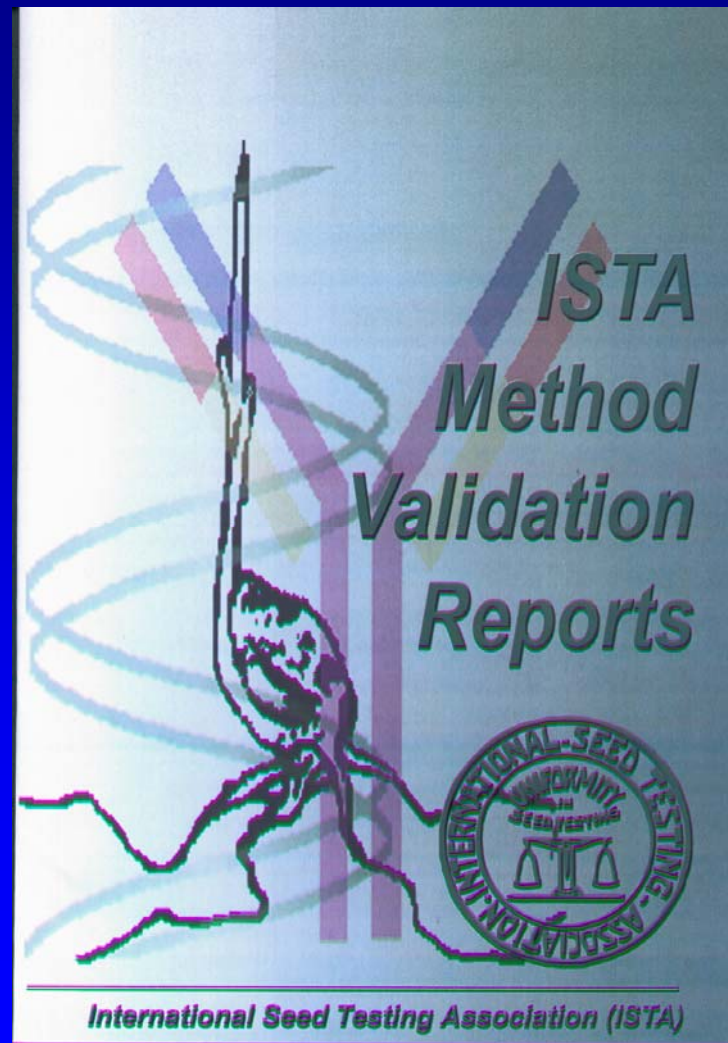
Methods 7-003 – 7-012

With the exception of Methods 7-004 and 7-013 we have received no formal request for changes or withdrawal of any of these methods since 2001. The ISTA Seed Health Committee would like to receive feedback as part of the review process .

- ❖ Questionnaire sent to all ISTA Laboratories requesting information.
- ❖ Questionnaire also available to non ISTA laboratories through web-site.
- ❖ Responses required by 30 August 2006

Seed Health Method Validation Programme

- ❖ METHODS IN PROGRAMME
- ❖ METHOD VALIDATION PROCESS
- ❖ VALIDATION REQUIREMENTS OF ISTA MEMBER LABORATORIES



Seed Health MV: Methods submitted

<u>Type</u>	<u>Crop/Pathogen</u>	<u>Category/Proposer</u>
Bacteria	Bean/ <i>Pseudomonas savastanoi</i> pv <i>phaseolicola</i>	New Method ISHI September 2005
Fungi	Wheat/ <i>Microdochium nivale</i> and <i>Fusarium roseum</i>	New Method ISTA June 2006

Seed Health MV: Procedures

Still a few problems

- ❖ Improve instructions to Authors
- ❖ Review instructions to Reviewers
 - Add question “Is the Method proposed fully justified by Validation Report”
- ❖ Introduce a Validation Report Advisor – a member of the SHC who can provide advice on writing a validation report to meet the criteria requested by ISTA
 - Terry Aveling, University of Pretoria

Seed Health MV: ISTA Laboratories

A questionnaire was sent to ISTA Member Laboratories to identify tests currently in use and considered fit for purpose but not in the ISTA Rules.

Responses require further examination.

First look suggests pathogens of field crops predominant (cereals, peas, linseed).

31 laboratories willing to participate in working groups

10 laboratories willing to act as test co-ordinators

Proficiency Testing

- ❖ Report prepared - to ISTA ECOM for discussion at November meeting.
- ❖ Meanwhile Pilot Proficiency Test for 2006
- ❖ Two tests being considered
- ❖ Three – four options at moment (need to check quantity of infected seed and infection level required for appropriate statistical analysis)
- ❖ Infected Seed challenge

The SHC need your help to predict future Proficiency Test Programmes.



Working Group Reports (1)

<u>Working Group</u>	<u>Leader</u>	<u>Progress</u>	<u>Proposed finalisation</u>
<i>Microdochium nivale/Triticum spp</i>	V Cockerell	Validation Package to ISTA June 2006	Complete
Three viruses/ Cucumis melo	H Koenradt	Samples sent out to 9 laboratories, results due July 2006	2007
<i>Aphelenchoides besseyi/Oryza sativa</i>	P Remeeus	Infected seed required	2007-08
<i>Pyrenophora spp/Hordeum vulgare</i>	K Sperlingson	Test plan initiated, laboratories identified	2007-08

Working Group Reports (2)

<u>Working Group</u>	<u>Leader</u>	<u>Progress</u>	<u>Proposed finalisation</u>
<i>Sclerotinia sclerotiorum</i> / <i>Phaseolus spp</i>	J Machado	Preliminary comparative test & method development on going.	2008
<i>Leptosphaeria maculans</i> / <i>Brassica spp</i>	J Thomas	Final report being written	July 2006
Molecular Biology Working Group	K Ophel-Keller	1.WG Meeting Angers, Determine whether Method Validation Programme suitable for Molecular Methods 2.Seed Health Handbook draft chapter	2007 September 2006

Seed Health Handbook

Who?

- the Laboratory technician/analyst, to be used for training in basic techniques and trouble shooting, why
- the laboratory manager, providing practical information that would allow decisions to be made that meet the requirements of customers e.g. sampling and sample sizes, seed storage, QA, etc

Content?

- detailed outlines of chapters produced and discussed
- some full chapters drafted, use Fungi chapter as model for bacteria, viruses, insects and nematodes chapters
- user friendly format, diagrams and pictures, flowcharts, tables

Targets?

- aim to have all chapters drafted by end September 2006
- meeting to discuss drafts October 2006, Edinburgh
- full draft available by Congress 2008

Seed Health Symposia

- ❖ 5th ISTA Seed Health Symposium, Angers, France 2005
 - Well attended
 - Excellent organisation
 - Excellent mixture of science and technical discussion
 - Opportunity to hold Method Validation Workshop and SHC Working Group Meetings

- ❖ **6th ISTA Seed Health Symposium, Kruger National Park, South Africa April 2008**

Training Courses/Workshops

- ❖ ISTA/APSA Training Course 18-22 July 2006
Bangkok, Thailand
- ❖ ISTA Workshop, pre-congress, Brazil 1-3 May
2007
- ❖ ISTA Training Course pre-symposium, South
Africa 2008

IN MEMORY ...

KEES LANGERACK

1947 - 2006

CLAUDE ANSELME

1925 - 2005

