



Valitest

Workpackage 5:

Optimisation of proficiency evaluation for a horizontal
assessment

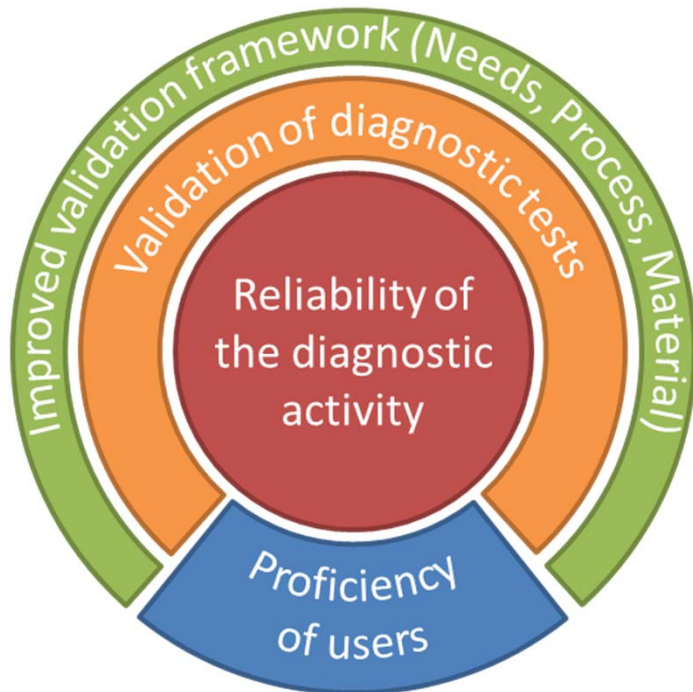
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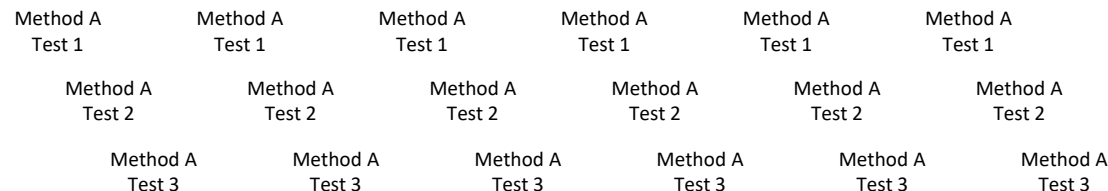


- Ultimate goal: reach a reliable diagnostic activity
- Requires the use of the available tools by proficient users

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- Users have to demonstrate their proficiency in
 - ...using one method...
 - ...performing one test...
 - ...over time.
- } for many pests and a few technologies
- Current approach is based on regular specific proficiency tests:

each combination is assessed over time



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BUT:

- Increasing number of pests
- Numerous matrices to test
- Limited resources of laboratories to organize and/or participate in these proficiency tests

⇒ this approach is no longer adequate and sustainable

⇒ room for improvement

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- Task 5.1: Identification of possible horizontal proficiency tests.
 - questionnaire => determine the needs of the laboratories
 - identify the critical points,
 - identify overlaps
 - design proficiency tests, which could cover a large number of diagnostic tests with sufficient commonality in process and procedure.

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- Task 5.2: Consultation of accreditation bodies.
 - Take advice from technical assessors
 - acceptability of the approach
 - limits of the approach
 - EPPO will open discussions with the European co-operation for Accreditation (EA)
 - Consultations will be performed in parallel with the drafting of the guidelines (task 5.3)

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- Task 5.3: Preparation of guidelines

prepare guidelines including:

- requirements to take into account if limiting the number of proficiency tests to carry out,
- limits of the horizontal proficiency tests, if experts consider that using such an approach represents a risk to decrease the monitoring of the proficiency of the laboratories,
- a list of horizontal PT to be considered by PT organizers as a new offer of services for proficiency testing.

What about today's brainstorming ?

- Work on the task 5.1: Identification of possible horizontal proficiency tests.
 - needs of the laboratories (Survey)
 - identification of critical points, overlaps
 - design proficiency tests, which could cover a large number of diagnostic tests with sufficient commonality in process and procedure.

1 - Needs of the laboratories

- 2012: proficiency test needs identified for each field (questionnaire)
 - Bacteriology:
 - *Erwinia amylovora*;
 - *Clavibacter michiganensis ssp michiganensis*;
 - Fatty acids profiling (Cms)
 - Entomology:
 - *Diabrotica virgifera virgifera* on traps;
 - *Liriomyza huidobrensis*

1 - Needs of the laboratories

- 2012: proficiency test needs identified for each field (questionnaire)
 - Mycology:
 - *Monilia fructicola*
 - *Synchytrium endobioticum*
 - *Phytophthora ramorum*
 - Nematology:
 - *Bursaphelenchus xylophilus* in wood
 - *Meloidogyne chitwoodi* and *M. fallax* in tubers

1 - Needs of the laboratories

- 2012: proficiency test needs identified for each field (questionnaire)
 - Virology:
 - Plum Pox Virus (Sharka)
 - Pospiviroids
 - Potato Virus Y
 - Tomato Yellow Leaf Curl Virus
 - Phytoplasmas:
 - Flavescence dorée
 - Apple proliferation

1 - Needs of the laboratories

- Survey addressed to all the laboratories of the EPPO database on diagnostic expertise
(By June 2019)

- By Field (Mycology....)
 - By Method (PM7/76-5: Bioassay, Biochemical.....)
 - Identify the Pest/Matrix for which the laboratory needs to show its proficiency

1 - Needs of the laboratories

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- Comments on the methodology
- First thoughts:

Field:

Mycology

Needs for proficiency testing

including currently covered needs



Bioassay	Biochemical	Fingerprint	Isolation/extraction	Molecular	Morphological and morphobiometric	Pathogenicity assessment	Serological
Pest / Matrix	Pest / Matrix	Pest / Matrix	Pest / Matrix	Pest / Matrix	Pest / Matrix	Pest / Matrix	Pest / Matrix



2 - Identification of critical points, overlaps

- Factors determining the correctness and reliability of a test

Factors	ISO17025	PM7/84 (2)
Human factors	X	X
Accommodation and environmental conditions	X	X
Test methods and method validation	X	X
Equipment	X	X
Measurement traceability	X	
Sampling	X	X
Handling of test items	X	X
Reference material		X
Biological material (Matrix)		

2 - Identification of critical points, overlaps

- The extent to which these factors contribute to the uncertainty differs between methods/tests...
 - ⇒ is a proficiency result valid for a different test ?
 - ⇒ is it valid for a different method ?
 - ⇒ is it valid for all methods in the field ?
 - ⇒ Is it valid for all methods across fields ?

2 - Identification of critical points, overlaps

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Factors determining the correctness and reliability of the tests (ISO17025 & PM7/84)

Types of methods
(PM7/76-5)

	Human factors	Accommodation & environmental conditions	Test methods & method validation	Equipment	Measurement traceability	Sampling	Handling of test items	Reference material	Biological material (Matrix)
Bioassay									
Biochemical									
Fingerprint									
Isolation/extraction									
Molecular									
Morphological and morphobiometric									
Pathogenicity assessment									
Serological									

If a laboratory obtains satisfactory results during a proficiency test using a molecular method, do you consider that the factor « accommodation and environmental conditions » is under control for :

- This test only
- This field
- This method
- Across fields

3 - Design of transversal proficiency tests

- Should different pests be included in each round of the Proficiency test?
- For each pest, should the samples represent (1) the different plant species, (2) the different plant parts and (3) other matrices that can be analyzed by laboratories in routine testing?
- What should be the frequency of the Proficiency test?
- Should different pests be included in each round?
- **ACTIONS FOR THE LABORATORY** : Which new measures should the laboratory put into place if the laboratory does not regularly participate in Proficiency tests?

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Thank you for your attention



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