



Agenda

Interlaboratory comparisons organised by laboratories in the EPPO region

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Since 1998, the European and Mediterranean Plant Protection Organization (EPPO) has established a work programme in the area of plant health diagnostics to harmonize procedures across the region. The work is conducted by the Panel on Diagnostics and Quality Assurance in collaboration with specialized Panels (Diagnostics in Bacteriology, Entomology, Nematology, Virology and Phytoplasma) and the European Mycological Network). The EPPO Panel on Diagnostics and Quality Assurance is preparing a Standard to provide guidance for the organization of interlaboratory comparisons by plant pest diagnostic laboratories.

In order to make further progress on the draft standard, it was considered important to gather information on the procedures followed by laboratories organizing proficiency testing and test performance studies (frequently called ring tests). An online survey was organised between September 2012 and January 2013.

In total, 52 laboratories from 28 countries answered the survey. Laboratories were asked if they had already organised proficiency testing and/or test performance studies and on which pest/matrix combination. The list of laboratories and test/matrix combination concerned are presented in the tables below.

Pest/matrix combination for proficiency testing

Pays	Laboratory name	Pest/matrix combination
France	ANSES, Plant Health Laboratory	<ul style="list-style-type: none"> • <i>Chalara fraxinea</i>/<i>Fraxinus</i> spp. • <i>Phytophthora ramorum</i>/<i>Rhododendron</i> spp. • <i>Monilia fructicola</i>/<i>Prunus persica</i> • <i>Gibberella circinata</i>/Seeds of <i>Pinus</i> spp. • <i>Gibberella circinata</i>/Pure culture • <i>Plasmopara halstedii</i>/Seeds of <i>Helianthus annuus</i> • <i>Ceratocystis platani</i>/<i>Platanus</i> spp.
		<ul style="list-style-type: none"> • Viruses/leaves of <i>Musa</i> spp.
		<ul style="list-style-type: none"> • <i>Globodera pallida</i> and <i>Globodera rostochiensis</i>/Soil • Female of <i>Meloidogyne</i> sp/<i>Solanum tuberosum</i> • <i>Ditylenchus dipsaci</i> and <i>Ditylenchus destructor</i>/Seed • <i>Bursaphelenchus xylophilus</i>/<i>Pinus</i> spp. wood extract
		<ul style="list-style-type: none"> • <i>Ralstonia solanacearum</i> and <i>Clavibacter michiganensis</i> subsp <i>sepedonicus</i> on potaoes
		<ul style="list-style-type: none"> • Beet necrotic yellow vein virus (BNYVV) on roots of sugar beet (<i>Beta vulgaris</i>).
		<ul style="list-style-type: none"> • <i>Bemisia tabaci</i> (puparium) • <i>Diabrotica virgifera</i> (adults)
		<ul style="list-style-type: none"> • Flavescence dorée and Bois noir phytoplasmas on <i>Vitis vinifera</i>
Germany	Analyse und Diagnoselabor im DLR Rheinpfalz	<ul style="list-style-type: none"> • Grapevine fanleaf virus (GFLV), Arabic mosaic virus ArMV); Grapevine leafroll-associated virus 1 (GLRaV-1, Grapevine leafroll-associated virus 3 (GLRaV-3), Grapevine fleck virus (GFIV) • Prune dwarf virus (PDV), Prunus necrotic ringspot virus (PNRSV), Plum pox virus (PPV)
	JKI-KLM, bacteriology	<ul style="list-style-type: none"> • <i>Clavibacter michiganensis</i> ssp. <i>sepedonicus</i>/<i>Solanum tuberosum</i> tuber extract • <i>Ralstonia solanacearum</i>/<i>Solanum tuberosum</i> tuber extract
Russia	Russian Plant Quarantine Centre	<ul style="list-style-type: none"> • Bacterial suspension (<i>E. amylovora</i>, <i>R. solanacearum</i>, <i>Clavibacter michiganensis</i> ssp. <i>sepedonicus</i>, <i>P. stewartii</i>)



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Pest/matrix combination for proficiency testing (cont'd.)

Pays	Laboratory name	Pest/matrix combination
Poland	Central Laboratory of the Main Inspectorate of Plant Health and Seed Inspection	<ul style="list-style-type: none"> • <i>Globodera</i> spp. – soil, cysts, DNA • <i>Bursaphelenchus xylophilus</i>/ specimens, PPV, PSTVd/lyophilized or fresh material • CMS/slides, <i>Diabrotica virgifera</i>/specimens, <i>Frankliniella occidentalis</i>/specimens • <i>Synchytrium endobioticum</i>/soil
Finland	Finnish Food Safety Authority Evira	<ul style="list-style-type: none"> • Tosspoviruses INSV and TSWV in ornamental plants.
Belgium	ILVO - Unit Plant Sciences - Crop Protection	<ul style="list-style-type: none"> • <i>Phytophthora ramorum</i> and <i>Phytophthora kernoviae</i> on <i>Rhododendron</i> spp., <i>Viburnum</i> spp. and <i>Camellia</i> spp. • <i>Clavbacter michiganensis</i> ssp. <i>sepedonicus</i>/<i>Solanum tuberosum</i> tuber extract • <i>Ralstonia solanacearum</i>/<i>Solanum tuberosum</i> tuber extract • <i>Erwinia amylovora</i>/Extract from woody plants
Spain	Instituto Agroforestal Mediterraneo-Universitat politecnica de Valencia	<ul style="list-style-type: none"> • <i>Gibberella circinata</i> as pure cultures
	Laboratori de Sanitat Vegetal-Generalitat de Catalunya	<ul style="list-style-type: none"> • PepMV, TSWV, ToMV, TYLCV in <i>Solanaceae</i>
Spain	Laboratorio regional de la C.A.R.	<p><i>Vitis vinifera</i> viruses (GFLV, GLRaV1, GLRaV3, GFKV AND ArMV):</p> <ul style="list-style-type: none"> • <i>Vitis vinifera</i> fresh plant material; • <i>Vitis vinifera</i> extracts
	Laboratori de Sanitat Vegetal-Generalitat de Catalunya	<ul style="list-style-type: none"> • <i>Vitis vinifera</i> fresh plant material; • <i>Vitis vinifera</i> extracts
Pays-Bas	Naktuinbouw Laboratories	<ul style="list-style-type: none"> • Leaves, seeds different pests
Slovénia	National Institute of Biology	<ul style="list-style-type: none"> • DNA isolated from mixture of <i>Ralstonia solanacearum</i> in potato extract • Immunofluorescence slides of <i>R. solanacearum</i> in <i>Solanum tuberosum</i> extract



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Pest/matrix combination for test performance studies

Pays	Laboratory name	Pest/matrix combination
France	ANSES, Plant Health Laboratory	<ul style="list-style-type: none"> • <i>Chalara fraxinea</i>/<i>Fraxinus</i> spp. • <i>Phytophthora ramorum</i>/<i>Rhododendron</i> spp. • <i>Monilia fructicola</i>/<i>Prunus persica</i> • <i>Gibberella circinata</i>/Seeds of <i>Pinus</i> spp. • <i>Gibberella circinata</i>/Pure culture • <i>Plasmopara halstedii</i>/Seeds of <i>Helianthus annuus</i> • <i>Ceratocystis platani</i>/<i>Platanus</i> spp.
		<ul style="list-style-type: none"> • Bacteria (<i>Xanthomonas axonopodis</i> pv. <i>dieffenbachiae</i>)/Anthurium
		<ul style="list-style-type: none"> • <i>Meloidogyne chitwoodi</i> and <i>M. fallax</i>/DNA from soil extract • <i>Bursaphelenchus xylophilus</i>/DNA from <i>Pinus</i> spp. wood extract
Poland	Central Laboratory of the Main Inspectorate of Plant Health and Seed Inspection	<ul style="list-style-type: none"> • <i>Globodera</i> spp. – soil, cysts, DNA • <i>Diabrotica virgifera</i>/specimens • <i>Bursaphelenchus xylophilus</i>/specimens
Italy	CRA - Plant Pathology Research Centre	<ul style="list-style-type: none"> • Viruses: Plum pox virus on symptomatic and asymptomatic <i>Prunus</i> spp. leaves • Pepino mosaic virus on <i>Solanum lycopersicum</i> leaves, fruits and seeds, Tomato infectious chlorosis virus and Tomato chlorosis virus on <i>Solanum lycopersicum</i> leaves • Potato spindle tuber viroid on solanaceous ornamentals leaves • Grapevine viruses on <i>Vitis vinifera</i> bark • Phytoplasmas: '<i>Candidatus P. mali</i>' on <i>Malus domestica</i> apple leaves, '<i>Candidatus P. prunorum</i>' on <i>Prunus</i> spp. leaves • Bacteria: <i>Erwinia amylovora</i> on <i>Pyrus</i> spp. symptomless twigs, <i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> on <i>Solanum lycopersicum</i> seeds, <i>Xanthomonas arboricola</i> pv. <i>pruni</i> on symptomless <i>Prunus domestica</i> and <i>Prunus persica</i> different material, <i>Pseudomonas syringae</i> pv. <i>actinidiae</i> on pollen, symptomatic leaves and bark of <i>Actinidia chinensis</i> • Fungi: <i>Monilinia fructicola</i> on <i>Prunus persica</i>, <i>Tilletia indica</i> on teliospores, <i>Gibberella circinata</i> on <i>Pinus nigra</i> seeds, <i>Phytophthora ramorum</i> on fungal DNA
Belgium	ILVO - Unit Plant Sciences - Crop Protection	<ul style="list-style-type: none"> • Adults <i>Diabrotica virgifera</i> on pheromone traps
Netherlands	Naktuinbouw Laboratories	<ul style="list-style-type: none"> • Leaves, seeds different pests
	National Plant Protection Organization	<ul style="list-style-type: none"> • Various - focus on molecular biological detection and identification methods (conventional (RT) PCR (RFLP), real-time (RT) PCR, DNA barcoding).
Slovenia	National Institute of Biology	<ul style="list-style-type: none"> • DNA isolated from defined mixtures of <i>Erwinia amylovora</i> in host plant tissues (real-time PCR test)

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