PÕLLUMAJANDUSUURINGUTE KESKUS

AGRICULTURAL RESEARCH CENTRE

ESTONIA,
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ANSES, France
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LABORATORY OF PLANT HEALTH AND MICROBIOLOGY (PHML)

NEMATOLOGY
- ✓ **identification of nematodes parasitizing on plants**

MYCOLOGY
- ✓ **identification of diseases caused by fungi**

ENTOMOLOGY
- ✓ **identification of insects in adult and larva stage of development**

BACTERIOLOGY
- ✓ **identification of bacterial diseases from plant** (potato ring-rot, potato brown-rot, fire blight so.)

VIROLOGY
- ✓ **identification of virus diseases from potato, tomato, ornamental plants so.**

QUALITY SYSTEM of PHML

PHML laboratory is accredited according to ISO 17025:

- potato ring rot and brown rot (from 2007)
- potato quality viruses (from 2007)
- potato cyst nematodes (from 2009)
- detection of toxicity level of cereals and feed (from 2009)
- virus detection and evaluation of infection level of plant material by Real-Time-RT-PCR method (from 2015)
- detection of Plum Pox virus (PPV) by PCR (from 2015)
- detection and identification of *Phytophthora ramorum* (from 2017)
- detection of Plum Pox Virus (PPV) by ELISA (from 2018)

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Since spring 2019, EST Minister of Rural Affairs appointed

Laboratory of Plant Health and Microbiology

to be the

NRL for ESTONIA

- Bacteria
- Viruses, viroids and phytoplasmas
- Nematodes
- Fungi and oomycetes
- Insects and mites

Analyses performed for AB

Number of analyses	2014	2015	2016	2017	2018
AB analyses total, including:	**3716**	**3889**	**4039**	**3771**	**4368**
1. Plant material and pests	35	61	22	44	24
2. Potato cyst nematodes (incl. species)	1587	1476	1602	1743	2013
3. Virus diseases	96	33	35	37	44
4. Bacterial diseases	1036	878	946	924	1008
5. Potato Wart Disease	0	50	40	40	40
6. *Candidatus liberibacter sol.*	0	0	50	108	67
7. Wood pests (ento+nemat)	176	136	136	160	140
8. Monitorings:	**786**	**1305**	**1208**	**715**	**1032**
Pine wood nematode	250	249	262	240	263
Plum pox virus	33	345	305	9	363
Erwinia amylovora	274	266	245	239	216
Phytophthora ramorum + P. kernoviae	141+44	197+59	176+45	65+3	30+0
Gibberella circinata	43	24	43	19	32
Anoplophora sp.	1	3	12	4	7
Diaporthe vaccinii			4	25	28
Tomato leaf curl New Delhi virus			67	62	52
Dendrolimus sibiricus			13	21	11
Pseudomonas syringae pv. Actinidae			8	8	8
Xylella fastidiosa			20	20	22
	2014	**2015**	**2016**	**2017**	**2018**

Total Amount of Analyses

	No of an.	No of an.	No of an.	No of an.	No of an.
Client	2014	2015	2016	2017	2018
AB	3716	3389	4039	3771	4368
Export	31	21	42	110	99
Private clients	232	162	140	155	153
ARC	7	0	0	1	0
TOTAL	**3986**	**4072**	**4221**	**4037**	**4620**

Findings

2017

Ditylenchus destructor, Phytophthora ramorum, Monochamus spp. non-european, Globodera rostochiensis, Trioza apicalis/urticae, Candidatus liberibacter solanacearum, Bursaphelenchus xylophilus

2018

Anoplophora glabripennis, Sternochetus mangiferae, Ceratitis cosyra, P.ramorum, Clavibacter mich. subsp. sepedonicus, Ralstonia solanacearum, Globodera rostochiensis, Globodera pallida, Liriomyza trifoli, Ditylenchus destructor

2019 Jan-Aug

Tuta absoluta, Clavibacter mich. subsp. sepedonicus, Phytophthora ramorum, Globodera rostochiensis, Globodera pallida, Erwinia amylovora, Plum Pox Virus (PPV), TCLVd,……

IMPLEMENTATION OF ISO 17025:2017

- New things, mostly focused on:
  - Ensuring/monitoring the competence of the staff
  - Impartiality
  - Risk management (→)

ENSURING/MONITORING THE COMPETENCE OF THE STAFF

- Competence is documented
  - Job-description: qualification requirements, duties, responsibilities, authority so.
  - signed (3) and communicated to the staff
  - new competence area documented and added to the register of competence
- Yearly training plan (keep updated);
- Internal/external guiding and training; mentoring, coaching (new thing!);
- The register of competence of PHML staff;

ENSURING / MONITORING THE COMPETENCE OF THE STAFF

- EVERY competence for every employee should be ensured/monitored at least 1 x 5 years

- Monitoring is registered in an excel – table:
  - blind test, ringtests, proficiency tests, internal control;
  - monitoring, auditing, assessing, improving documentation;
  - yearly development conversations;
  - „supervision“ of personnel:
    - equipment, cleaning, documentation and so during the year
    - done by management of the lab
    - registered at least 1 x year.

IMPARTIALITY

- Gifts and salary from clients not allowed
- Employee or relative cannot benefit/cause damage
- Salary does not depend on the results or no of samples
- Sample is analysed anonymously (staff works ONLY with ARC's sample number)
- Management of the Lab can see the customer information through the sample register-system (need for invoicing)
- If risk for impartiality (f.ex. conflict of interests), inform lab-management and an another person will take over

RISK ASSESSMENT

- In progress
- 1.General guidelines from the EST Ministry of Rural Affairs
- 2.Renew the environmental and work safety risk analysis
- 3.Lab-specific risk assessment: risk analysis of critical points of methods so.
- Unfortunately: no real action yet with 3.
- PHML specific plans: EPPO Standard 7/98 (3) + general guidelines from ARC/MRA + EAC (accreditation in October 2019)

CONCERNS / QUESTIONS

- Accreditation plan: what organisms/order?
- Accreditation: so far focused on OUR regional aspects/SPECIFIC harmful pests. NOW focus on EU monitoring programs + flexible scope?
- Need to know working plans of EURL (small countries have just 1 NRL for all organisms, need good planning + a lot of resources: time/personel/money)?
- EURL proficiency tests are on organisms that our region have no any experience with. How to perform obligatory tests/reach accreditation/keep competence?
- Where to find official list of NRLs?
- How to apply special support for accreditation (Article 163 changing EU regulation 652/2014, art. 30a)?

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Thank you for your attention!

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