PÕLLUMAJANDUSUURINGUTE KESKUS

AGRICULTURAL RESEARCH CENTRE

Laboratory of Plant Health and Microbiology

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head of lab

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Agricultural Research Centre (ARC)

Teaduse 4/6, Saku, 75501, ESTONIA
www.pmk.agri.ee

- 5 accredited laboratories
- 3 variety testing stations
- Agricultural park
- Agri-research and monitoring dep.
- Rural economy analysis dep.
- Rural network dep.

- Partner in state control system (feed, seed, soil, food, plant health and so)
- Involved in agricultural and rural policy development
- Creating and spreading new knowledge
- Competence centre for agricultural analysis and field-testing
- Supporting partners in agricultural, environmental and rural area in their decision making processes

Põllumajandusuuringute Keskus (PMK) paikneb üle Eestimaa 7 erinevas kohas, nii mandril kui ka saarel.

PÕLLUMAJANDUSUURINGUTE KESKUS
AGRICULTURAL RESEARCH CENTRE

Laboratories

Lab. of Agrochemistry (NRL)

Soil, growing substrates; mineral- and lime fertilizers; organic fertilizers and peat; products, feedstuffs, plants

Lab. of Residues and Contaminants (NRL)

Pesticide residues, mycotoxins, nitrate ion in fruits and vegetables, Determination of the quality of pesticides

Lab. of Seed Testing

Examination of agricultural, vegetable and ornamental seeds (purity, other seed determination, germination, moisture content, viability, 1,000 seeds weight, seed health testing, germination of beer barley, inherence of wild oat, storage pests)

Lab. of Feed and Cereals (NRL)

Cereal and cereal products, pulses; oilseeds and oil; feedstuffs, feed material and foodstuffs of plant origin; nutritional parameters, fermentation quality an d metabolic energy of silage; bioenergy plants and so.

Lab. of Plant Health and Microbiology (NRL)

Bacteria and phytoplasmas, viruses and viroids, plant and soil nematodes, insect pests, mites, fungal diseases from plants, plant products, and detection of weed seed; soil and feed microbiology

Laboratory of Plant Health and Microbiology

Services:

- Laboratory analysis:
  - Estonian Agricultural Board (shops, production, greenhouse, border, private so)
  - private clients
  - exporters
- Quarantine greenhouse
  - biotests (confirmation)
  - quarantine station (harmful plant pests/diseases + monitoring)
- Cooperation projects with researchers, producers so
  - Tallinn Technical University (TalTec)
  - Estonian University for Life Sciences
  - Estonian Crop Research Institute and so.
- Microbiological collection
- Estonian Reference Laboratory for plant health disc. (NRL)

Potato cyst nematode

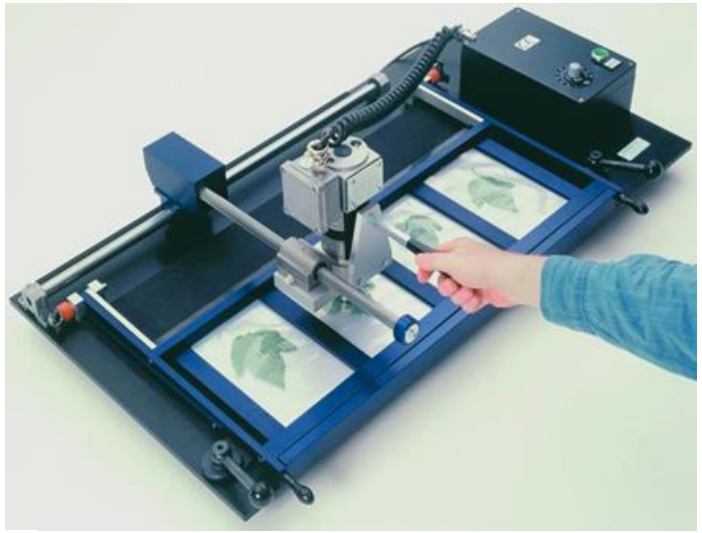
Laboratory of Plant Health and Microbiology

What is our work about?

- Sample registration and preparation
- Laboratory analysis (about 5000/year)
- Growing plants (biotests)
- Testing methods:
  - classical microbiology, plating
  - morphological identification
  - microscoping
  - immunological methods (IFAs, ELISA)
  - biomethod
  - molecular methods (PCR, Real-Time PCR, RT-PCR)
- Interpretation and results
- Microbiological collection
- Project-work and development
- Administrative work
- and so….

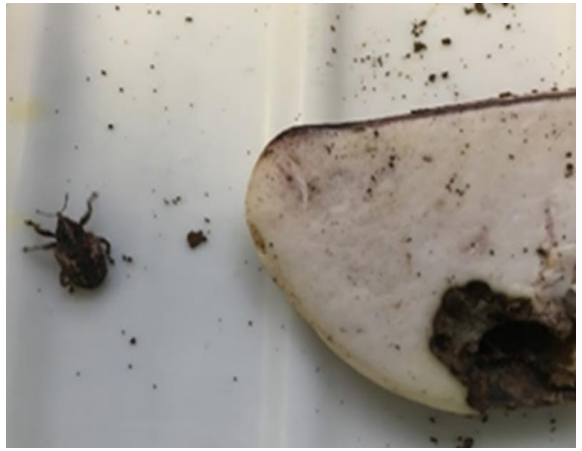
LABORITEENUSED

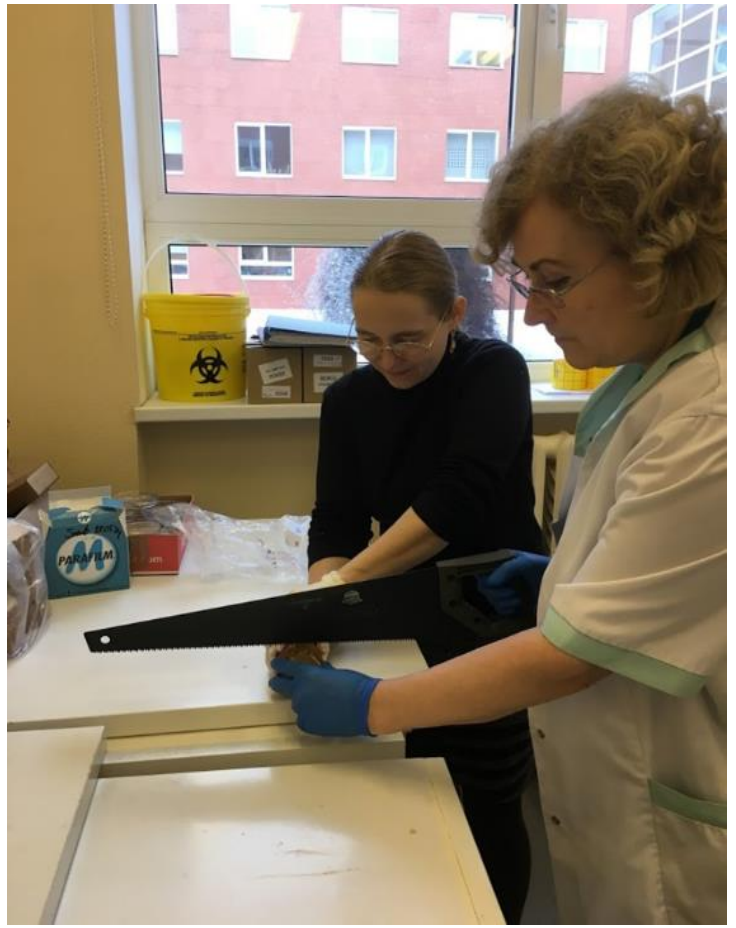
Laboratory of Plant Health and Microbiology



Laboratory of Plant Health and Microbiology

- Estonian National Reference Laboratory (plant health)
  - active cooperation with EURL networks
  - trainings, workshops, proficiency tests, reference material, support
  - information channel
  - future responsibilities (teaching official laboratories, support and so).

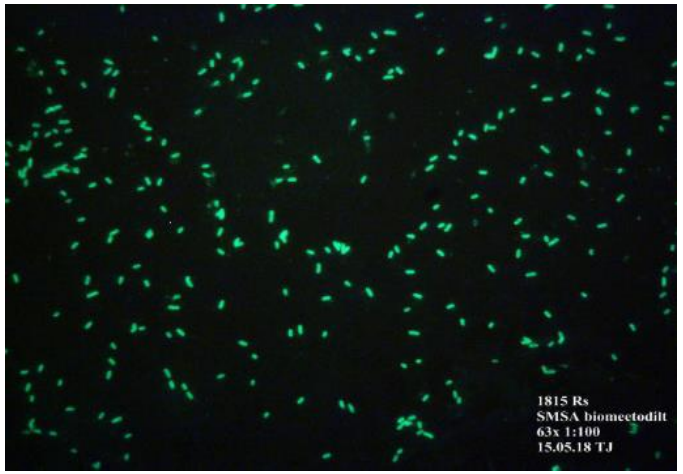




Laboratory of Plant Health and Microbiology

What to expect and what we expect?

- Internship for 1-2 students/year
- Topics: lab. detection of quarantine plant pests and diseases/soil microbiology/microbiological collection
- Interest in laboratory work, plant health, microbiology
- Good in English or Russian language
- Basic laboratory skills
- Last year BSc, MSc or early PhD



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