



Potato Research Institute Finland

Nordic Field Trial Network Conference 4.3.2025

Viivi Hällfors



Potato production in Finland

18180 ha in 2024

9065 ha consumption

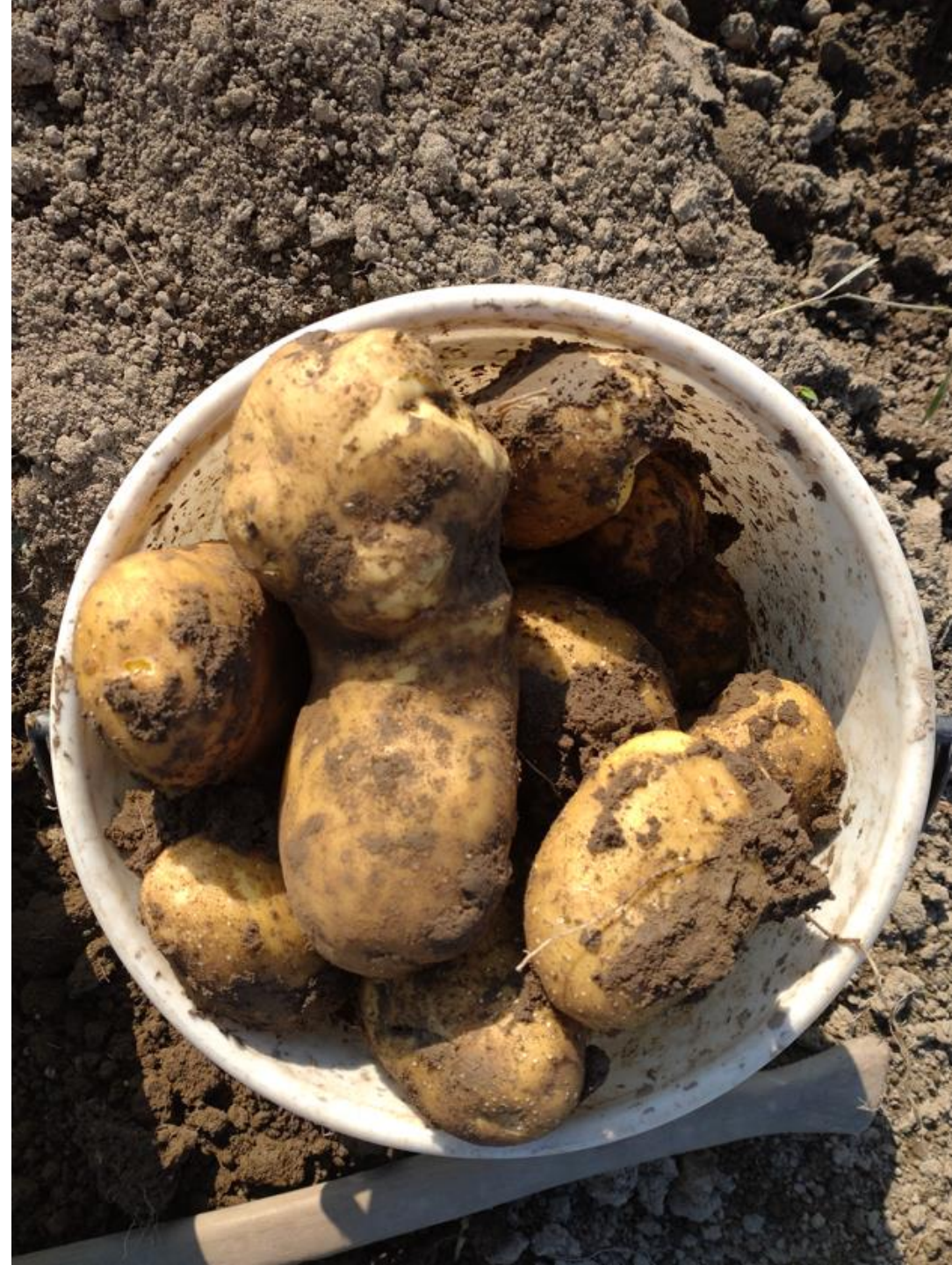
4840 ha starch industry

2750 ha food industry

1035 ha certified seed potato

Most potato production takes place on the west coast

Source: <https://www.mtk.fi/-/peruna-ja-sokerijuurikas>



Potato Research Institute - PETLA

- Private research unit in Finland focusing on potato research, consultation, training and publications
- Maintained by Potato Research and Development Foundation
- Foundation will merge with another foundation in 2025 and Petla will join Pyhäjärvi Institute
 - Our research will continue normally

Supporters of the foundation:

- Apetit Ruoka Oy
- Evijärven Peruna Oy
- Finnamyl Konserni: Finnamyl Oy, Lapuan Peruna Oy
- Jepuan Peruna Oy / Jeppo Potatis Ab
- Maa- ja metsätaloustuottajain Keskusliitto ry (MTK)/ The Central Union of Agricultural Producers and Forest Owners
- Svenska Lantbruksproducenternas Centralförbund r. (SLC)





Location

Köyliö, Säkylä

Räpi experimental farm

Close to the important potato production areas on the west coast of Finland

Personnel

Research Scientist Riina Lukkala

Research Specialist Minttu Koivisto

Research Specialist Viivi Hällfors

Potato Research Institute

- Field trials
 - Only research institute in Finland doing plot field trials on potato
- Assessment & analysing services
- Guides & advisory publications
- Trial reports
 - Results published and accessible to everyone (not confidential trials)
 - Open day in August presenting on-going trials
- Professional magazine targeted at farmers and other operators in the potato sector





Research topics

- Potato variety tests and quality factors of potato
- Potato nutrients and fertilization
- Potato plant health, plant protection
- Cultivation techniques, technology
- The concept of potato quality and quality measurements
- The economy of potato production and processing

Field trials 2024

Trial	Treatments	Replicates	Plots
Weed control: herbicides	10	4	40
Late blight control: fungicides	5	4	20
Rhizoctonia control: fungicides	5	4	20
Rhizoctonia control: biofungicide carry-over	4	4	16
Seed quality: grading & fungicide	4	4	16
Crop rotation (6-year trial)	4	4	16
Nitrogen levels on different starch potato varieties	21	4	84
Polysulphate	4	4	16
Phosphorous project – companion plant trial with buckwheat. Demo blocks with canola and blue lupine.	5	4	20+2
Confidential	6	3	18
Confidential	6	4	24
Confidential	5	4	20
Confidential	3	4	12
Total of 13 trials	82		324

Field trials

- Planning February-April
- Planting May
- Maintenance, treatment applications, assessments June-September
- Harvesting & yield grading and other analyses September-November
- Analysing data & reporting results
 - ARM (Agricultural Research Manager) - program (GDM Solutions)



Field trials

- Trials located next to our office and other facilities
 - Sometimes farmers' fields used
- Operations done by ourselves at the Räpi experimental farm
 - Excluding soil preparation, plot forming by rotary tillage, laboratory analysis
- Plot size often 4 rows x 10 metres
 - Small plots of 5 plants also possible with trials with very many varieties



Research projects

SUSPO: Knowledge of the potato late blight population to help the sustainability of potato production 2021-2024

<https://mmm.fi/perunaruton-populaation-tuntemus-perunantuotannon-kestavyuden-avuksi>

ECOSOL: Eco-friendly solutions for the integrated management of late and early blight of potatoes (ECOSOL) 2021-2023

Dr. Alison Lees, James Hutton Institute, Scotland.
Denmark, Germany, Estonia and Finland.

<https://agro.au.dk/forskning/internationale-platforme/euroblight/research-projects/ecosol/wp-descriptions/>

Topics: potato late blight population, cultivar resistance, biological control agents, IPM strategies and forecasting models





Project:
**Better utilization of arable soil
nutrient resources – Phosphorus
–project 1.3.2024-30.6.2027**

Luke, Natural Resources Institute Finland
Potato Research Institute
Vihreä Härkä
Kauppapuutarha Verso



Ministry of Agriculture and Forestry of Finland



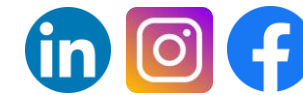
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Future plans



Thank you!



Perunantutkimuslaitos
Potato Research Institute

www.petla.fi