EuroBlight
A potato late blight network for Europe

EuroBlight: Future shared facilities, coordination and support actions

Jens G. Hansen, Alison Lees, Mout De Vrieze and Geert Kessel - EuroBlight Mgmt

Statement: The EuroBlight community can achieve more through increased collaboration and by creating synergies between existing projects and initiatives.

Why: The industry sounded the alarm – and ask for help. We cannot wait on EU funding

How:

- Form eight EuroBlight working groups
- For each: Select a lead and a co-lead, define mission, impact pathway and 1-2 goals or concrete actions and report your success at next workshop
- Collaborate and coordinate between working groups

Together with the EuroBlight MGMT prepare a EU- CSA, COST or RIA

Existing EuroBlight Structure

EuroBlight
A potato late blight network for Europe

EuroBlight Management

EuroBlight

- Pathogen & Host (David Cooke)
- Control Strategies & DSS (Beert Evenhuis)
- Alternaria (Hans Hausladen)

EuroBlight Sub-group leads

EuroBlight
A potato late blight network for Europe

Proposal for a New EuroBlight Management Structure

From a coordination-focused, two-year meeting approach to a mission-oriented strategy

EuroBlight MGMT

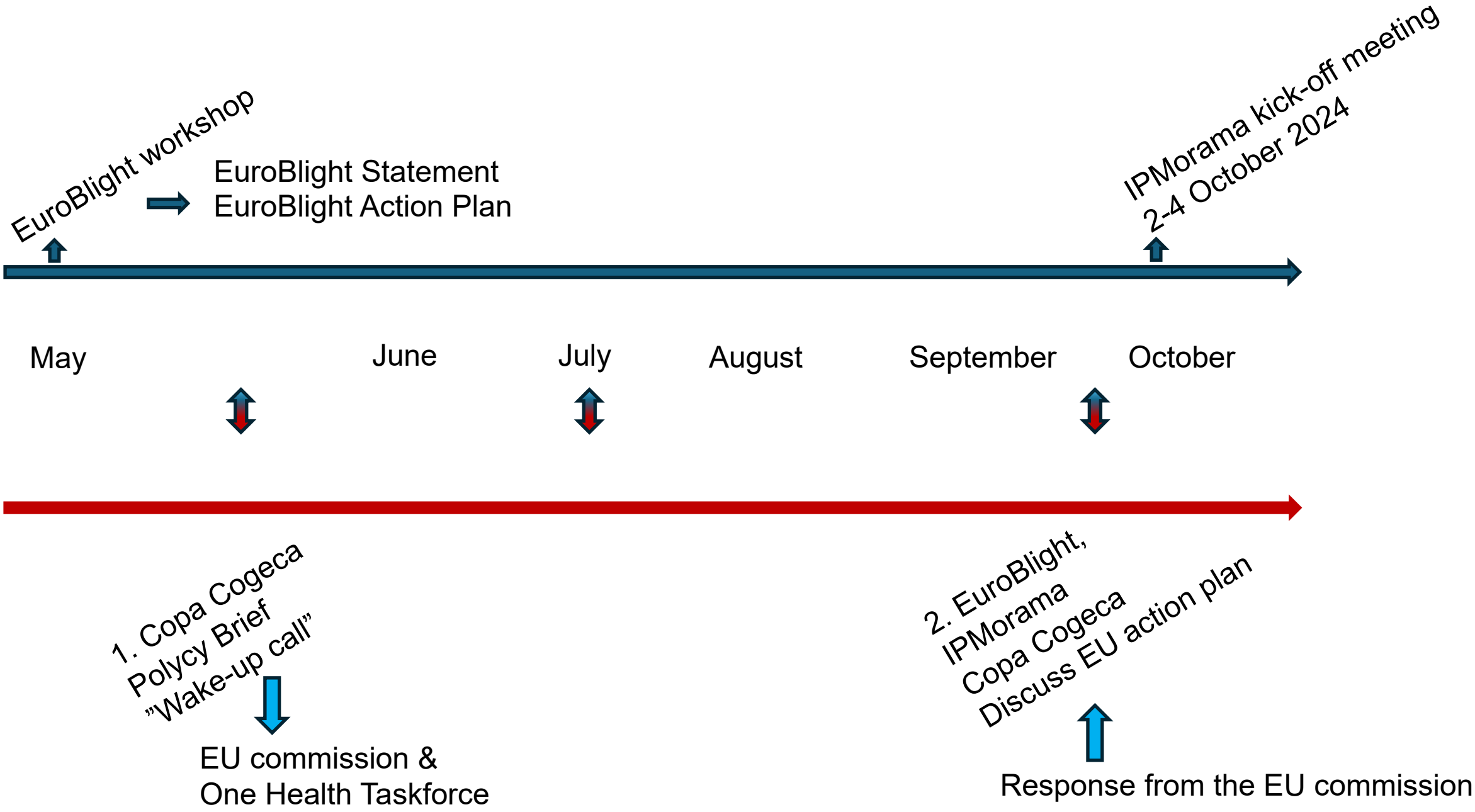
(Website, Newsletter, Databases, Workshop / Working groups management & coordination)




Alison Lees, The James Hutton Institute (UK)
Jens G. Hansen, Aarhus University (DK)
Geert Kessel, Wageningen University (NL)
Mout De Vrieze Agroscope (CH)

EuroBlight Working groups (coordinate and obtain synergies between existing projects.) Mission oriented and with focus on the impact pathway

Working group title	Lead /co-lead
Framework and pipeline for test of biologicals and alternatives	TBD
Network of Living labs in Europe re late blight management with less pesticides	TBD
Network of phenotyping labs	TBD
Whole genome sequencing and marker development	TBD
Aerobiology - spore detection and DNA sampling	TBD
Pathogen monitoring and early warning	TBD
Breeding, release and regulation of traditional & NGT potatoes	TBD
Alternaria	TBD


EuroBlight workshop
EuroBlight Statement
EuroBlight Action Plan
IPMorama kick-off meeting
2-4 October 2024
May
June
July
August
September
October
1. Copa Cogeca
Polycy Brief
”Wake-up call”
EU commission &
One Health Taskforce
2. EuroBlight,
IPMorama
Copa Cogeca
Discuss EU action plan
Response from the EU commission

What can we do more – together?

EuroBlight
A potato late blight network for Europe

Participants

Copa Cogeca - Dominique, Jacob, Lars and Geoffry represents
EuroBlight – Geert, Mout & Jens
IPMorama – Dan, Jens & Geert

Agenda

- Welcome & presentation of participants / all
- What is EuroBlight, IPMorama and Copa Cogeca action plan
- Background & setting the scene for the discussion / Jens
- Collaboration and concrete actions before next season / all
- Collaborative statement from this task force to the IPMorama kick-off / all
- Any other business

IPMorama

copa cogeca
european farmers european agri-cooperatives

Discussion of key research questions – EuroBlight workshop 2024

Topic	Key research questions
Pathogen	1. Evolution, selection pressures and spread of new variants of *P. infestans* 2. Develop markers for phenotypic traits e.g. fungicide resistance 3. Understand host-pathogen interactions better
Management issues	1. Fungicide resistance avoidance strategies 2. Paradigm shift: From IPM to ICM

Topic	Key research questions
Breeding issues	1. Breeding NGT potatoes. 2. Release and regulation of NGT potato varieties. 3. Protection of resistance genes in ICM strategies
Collaboration, shared facilities, outreach	Pan-european actions: 1. Pathogen monitoring 2. Virulence monitoring 3. ICM Living labs
Activities / Initiatives / Action plans	1. Contribute to policy White paper (Global) 2. Feed into a European action plan 3. EuroBlight early warning system 4. Contribute to Network of ICM living labs

Potato Late Blight Early Warning System – timeline and actions

Unusual disease epidemic event happened!

Actions needed:	***How can EuroBlight contribute:***
Effective and coordinated system for disease surveillance and sampling (”hunting the new”).	**BlightTracker App** for disease surveillance, include early blight. Expand to more regions. Adapt the **Potato Late Blight Toolbox** to store, manage, display and distribute data via APIs. **Isolate samples** collected and submitted to dedicated **diagnostic labs**.
Fast and reliable pathogen diagnostics and characterisations.	**Sample recovery,** purification and molecular genotyping and race phenotyping. **Respons time** for diagnosis reduced by improved molecular diagnostic tools, and by **increased capacity and expertice** in the labs. **Alignment** needed to obtain comparable results (JHI, WUR, AU, INRAe)
Effective and coordinated dissemination and communication infrastucture to facilitate alerts.	**Genotypic** and race **phenotypic** data uploaded to the **Potato Late Blight Toolbox** and displayed on maps and charts, and **analysed in a regional and a global context**. Alerts via websites, press releases, and social media. **Maps and charts** integrated in **national agricultural & knowledge information systems** (**AKIS**)

Time

Short term alerts and transboundary warnings (1 day - 6 months). Farmers adapt IPM strategy accordingly

Asessment of epidemic potential of new emerging genotypes and races.	**New tools for coordinated impact evaluation** – monitoring of virulence, aggressivenes and fungicide resistance. Results feed into pan european Risk models (Vulnerability Mapping Tool (VMT) and epidemiological modelling).
Accelerating breeding efforts for resistance to new races.	**Develop shared facilities,** e.g. Biorepository, Breeding network of field nurseries. Test of new cultivars and isolate sampling. Off-season test of new genotypes/races in green house.
Developing IPM/ICM based control strategies in diverse agroecological environments.	Validate **new IPM/ICM & DSS strategies** taking into account new genotypes/races and more resistante cultivars in field trials in EuroBlight countries**,** including collaboration with lead end-users, advisors and farmers **(case study regions / Living labs)**
Impact on Value for Cultivation and Use (VCU) testing (official variety testing)	**VCU host Trap nurseries,** 75 trial sites in Europe for structured sampling, ”Hunting the new” and indication of regional disease pressure. Feed into VMT and epidemiological modelling at landscape level.
Development of Risk Management tool: Which potato varieties are at risk? Where may the new variants spread next? How to minimise risks of future invasions, spread and how to prevent future yield losses.	Improve **risk management and prevention measures.** Models for pathogen evolution and spread. Utilize the **EuroBlight network** including all stakeholders to optimise **preparedness, resilience and early warning** of new genotypes and races with epidemic potential at regional, national and global level.

Time

Longer term actions (6-18 months). National lists of varieties updated. Breeding programs adapted. Early warning maps and charts and Risk Management tools updated. Results synthesised and communicated via stakeholder nertworks and academia articles, workshops and conferences.

Based on a template from the EU project RustWatch (2018-2022)

EuroBlight Early warning system

- Virulence and genotype monitoring
- Within season sampling and reporting Results on maps and charts appr. a week after
- On the same samples apply Markers for fungicide resistance. (Budget needed)
- Trap/Field nurseries with breeders
- Engage with the official variety testing
- Network of living labs
- Network of phenotyping labs (IHAR, AU JHI, INRAe)
- EuroBlight Fungicide trials
- Test of DSSs in a panEuropean context
- Risk modelling for Europe
- Communication infrastructure
- Activate BioEuroblight
- Collaborate with IPMorama and other projects and initiatives

Super goal: Sustainable potato production – economic and environmental

infrastructures to mitigate devastating potato late blight epidemics – Draft ideas

National Action plans for sustainable potato production 2030 – *engage all stakeholders along the value chain*

EuroBlight – Early warning of potato late blight – *Science & ICM*

Short Term

Effective and coordinated system for disease surveillance and sampling (”hunting the new”).

Fast and reliable pathogen diagnostics and characterisations.

Effective and coordinated dissemination and communication infrastucture to facilitate alerts.

Longer term

Asessment of epidemic potential of new emerging genotypes and races.

Accelerating breeding efforts for resistance to new races.

Developing IPM/ICM based control strategies in diverse agroecological environments.

Impact on Value for Cultivation and Use (VSCU) testing (official variety testing)

Development of Risk Management tool: Which potato varieties are at risk? Where may the new variants spread next? How to minimise risks of future invasions, spread and how to prevent future yield losses.

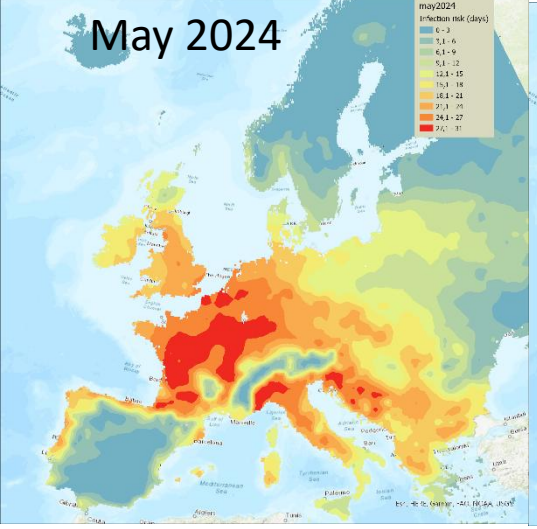
Global – Early warning of potato late blight – *Science & food security*

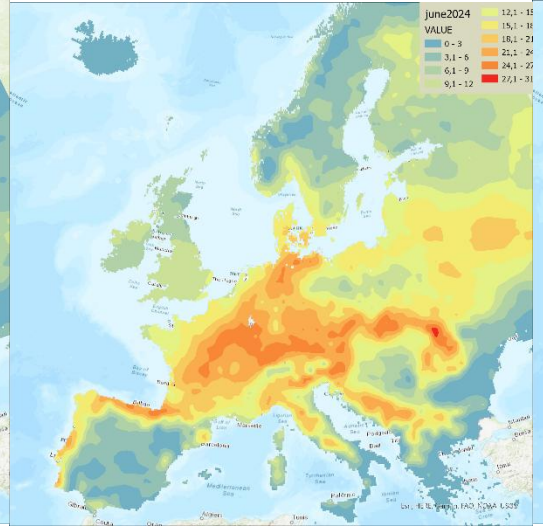
Policy

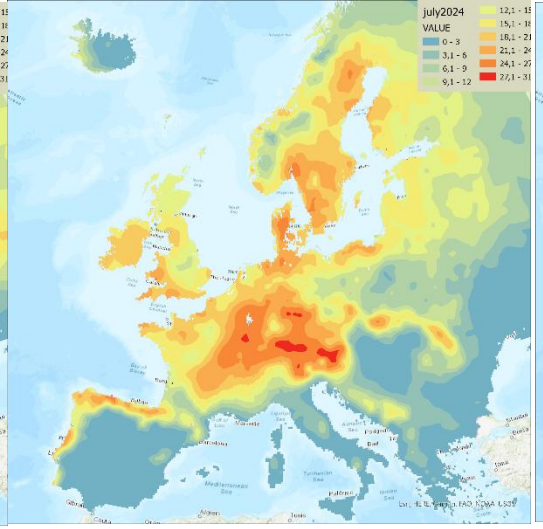
1. **Offer EuroBlight actions as a use case** in the OMNIBUS policy framework implementation
2. **Collaborate with ongoing projects e.g.** IPMorama, IPMDecisions.
3. **Policy brief on the needs for a sustainable potato production in Europe**

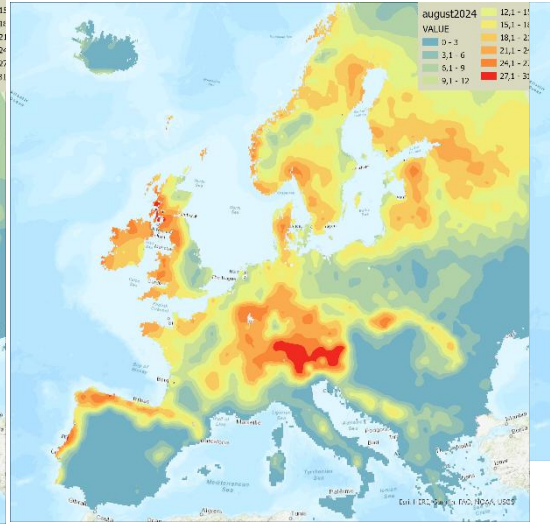
Some new data management, analysis and visualization tools

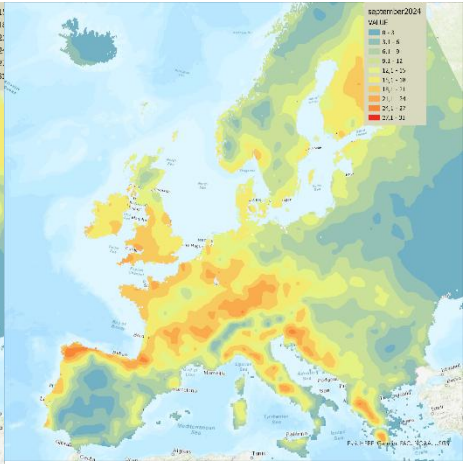
May 2024



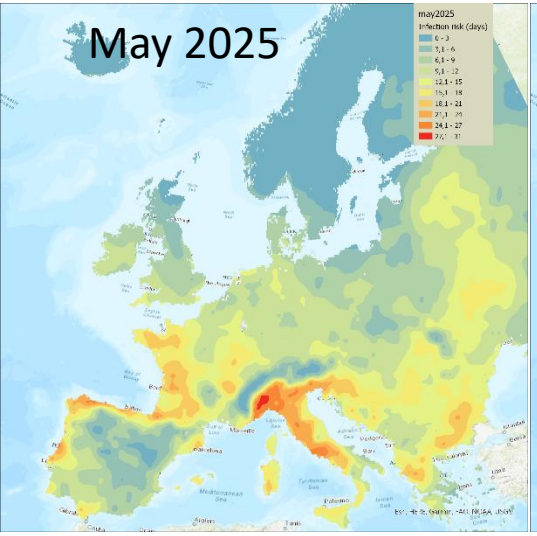


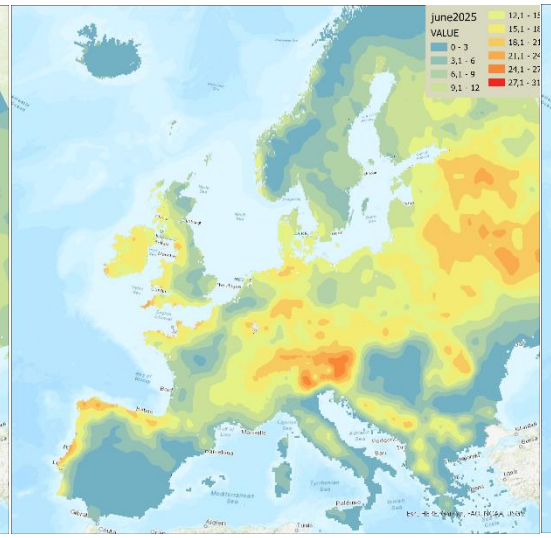


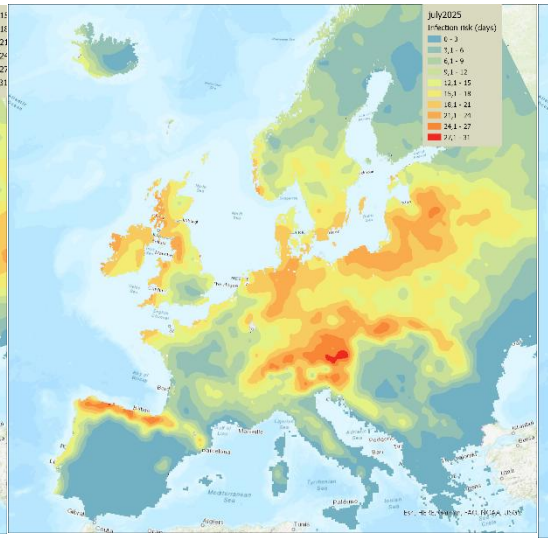


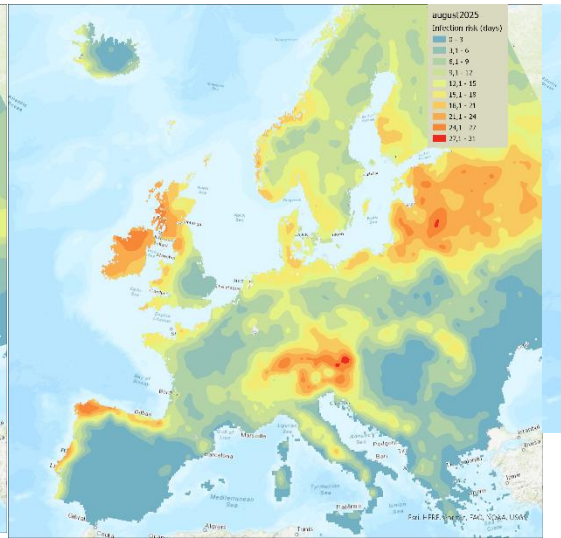


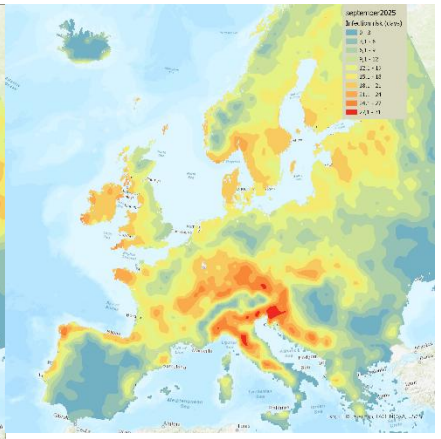
May 2025











Sign in to your account | Authentication successful | BlightTracker_2in1_v2025.1

www.arcgis.com/apps/dashboards/3ef24091e8a344b9b2167167e708975a

Import bookmarks... | Getting Started | Add-ons Manager | ERDA Home | New Tab

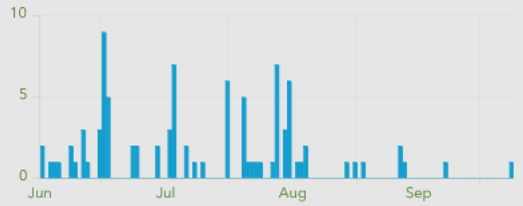
Blight Tracker

Select Blight	Date	Cultivar	Locations with sampling	Country
Late blight	2025	No category selected	only data with sample code	All data

Number of observations

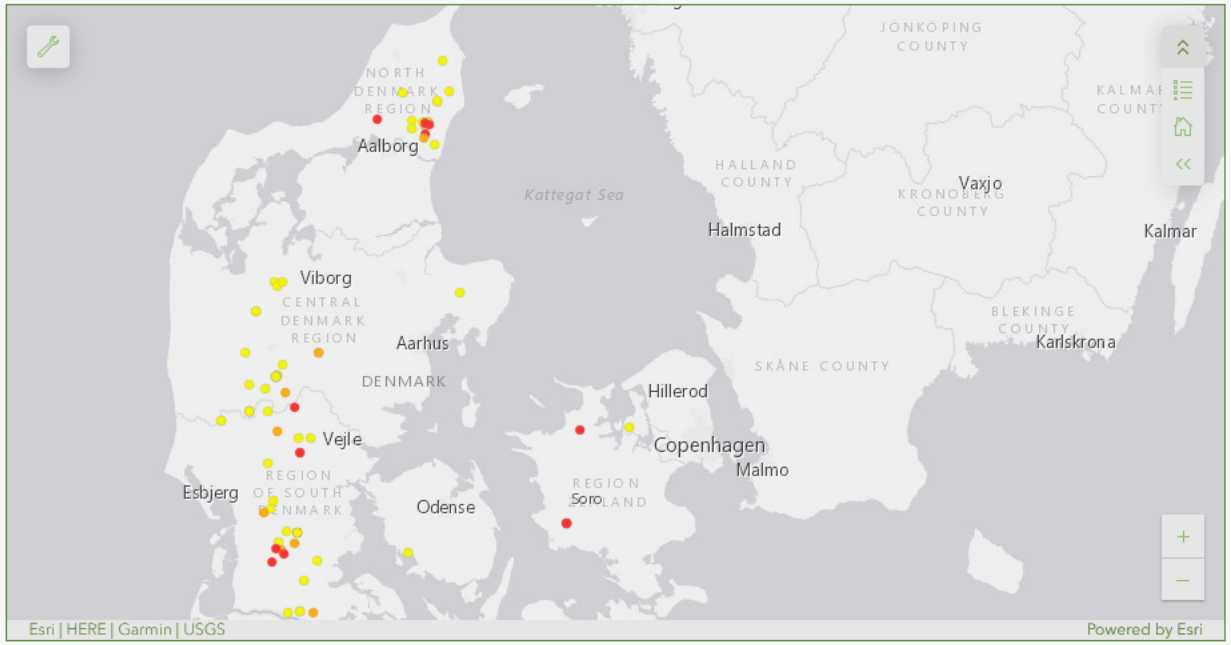
158

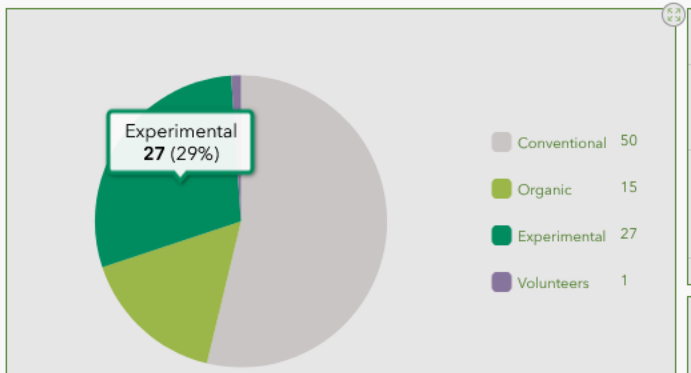
Daily observations



Selection required on one or more elements

photo late blight | photo early blight





Survey site | Growth stage

Click on the list item to see photos (if available)

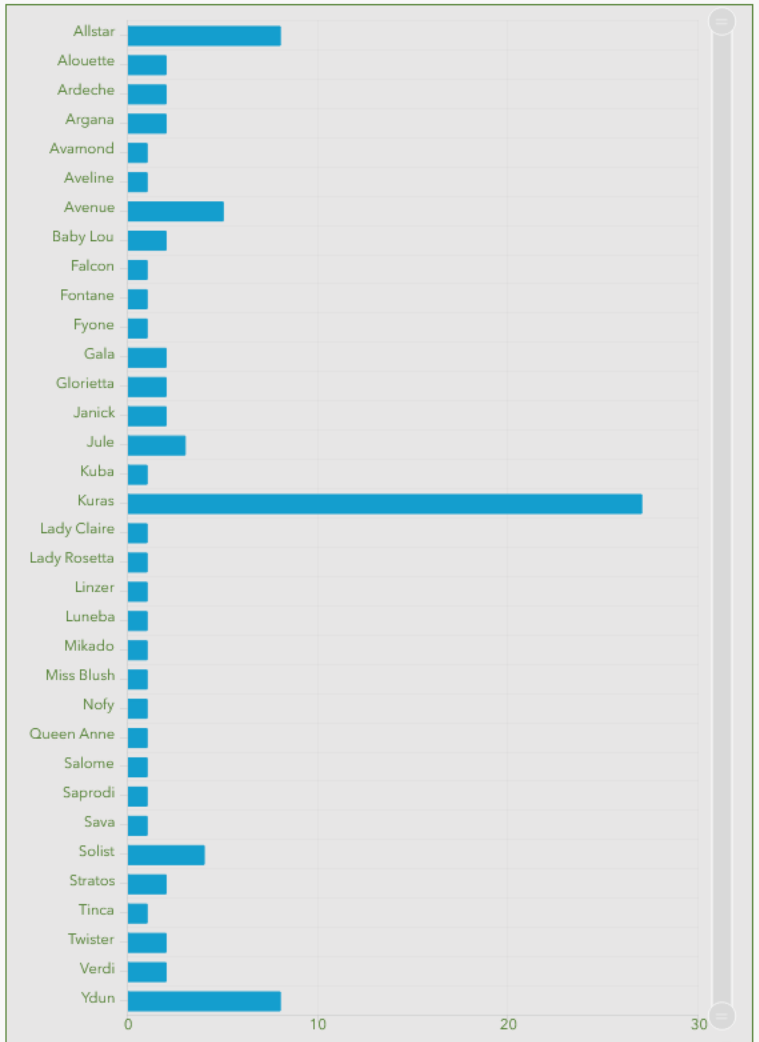
Survey site: Experimental
Growth stage: 60-70 % of flowers in the first inflorescence open
Comments: Trap nursery

Survey site: Conventional
Growth stage: 20-30 % of plants meet between rows
Comments: Marken var ikke behandlet mod skimmel. Angreb startet som primær angreb fra inficerede knolde og spredt ud over hele marken

Survey site: Conventional

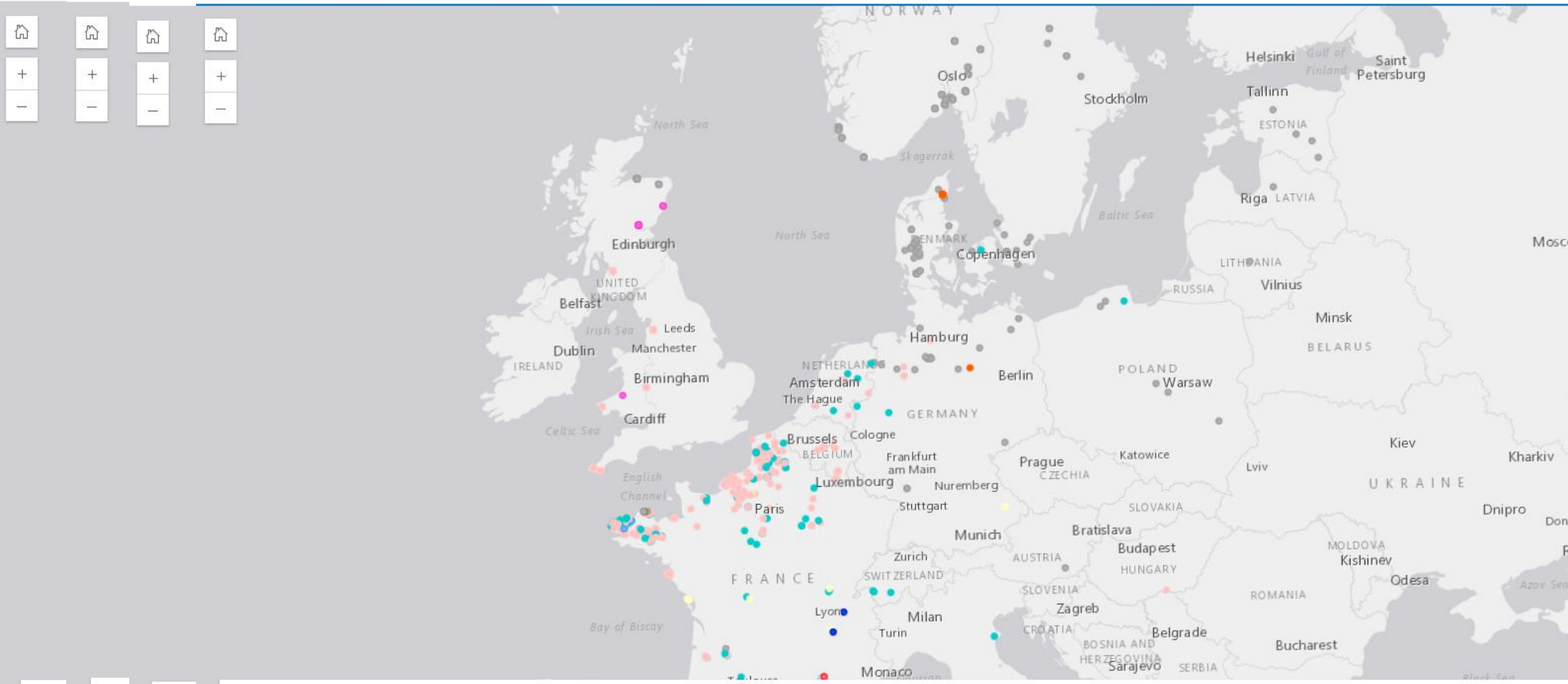
Select an item from the observation list above to show its sample code.

Sample code late blight



Observation count by cultivar

Instant_ Instant Instant_ Instant_App_Genotyper_EU_2025

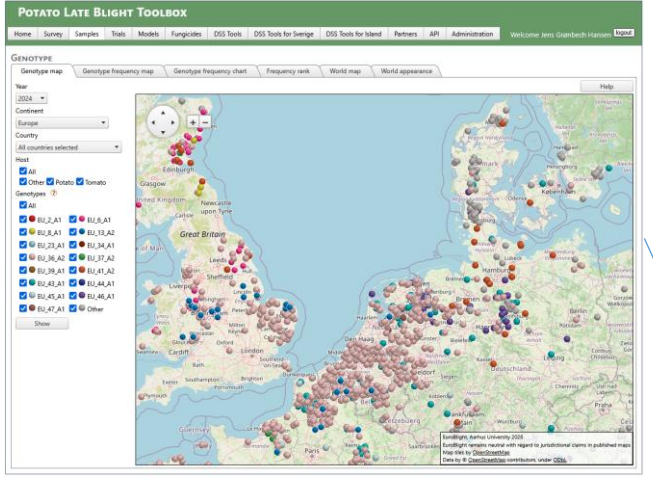


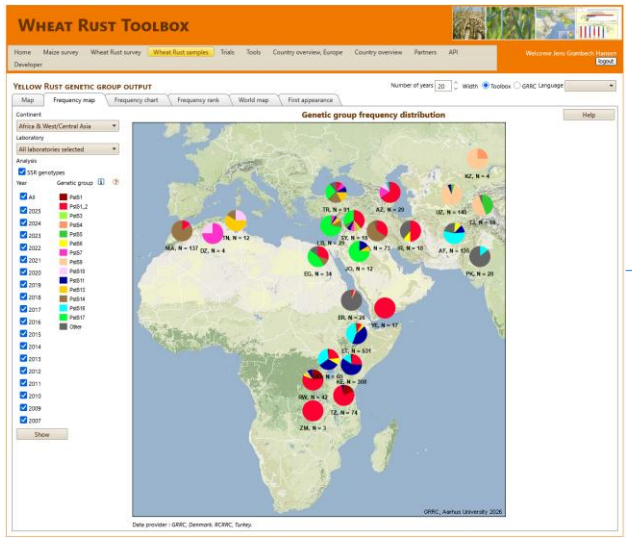
8/2/2025

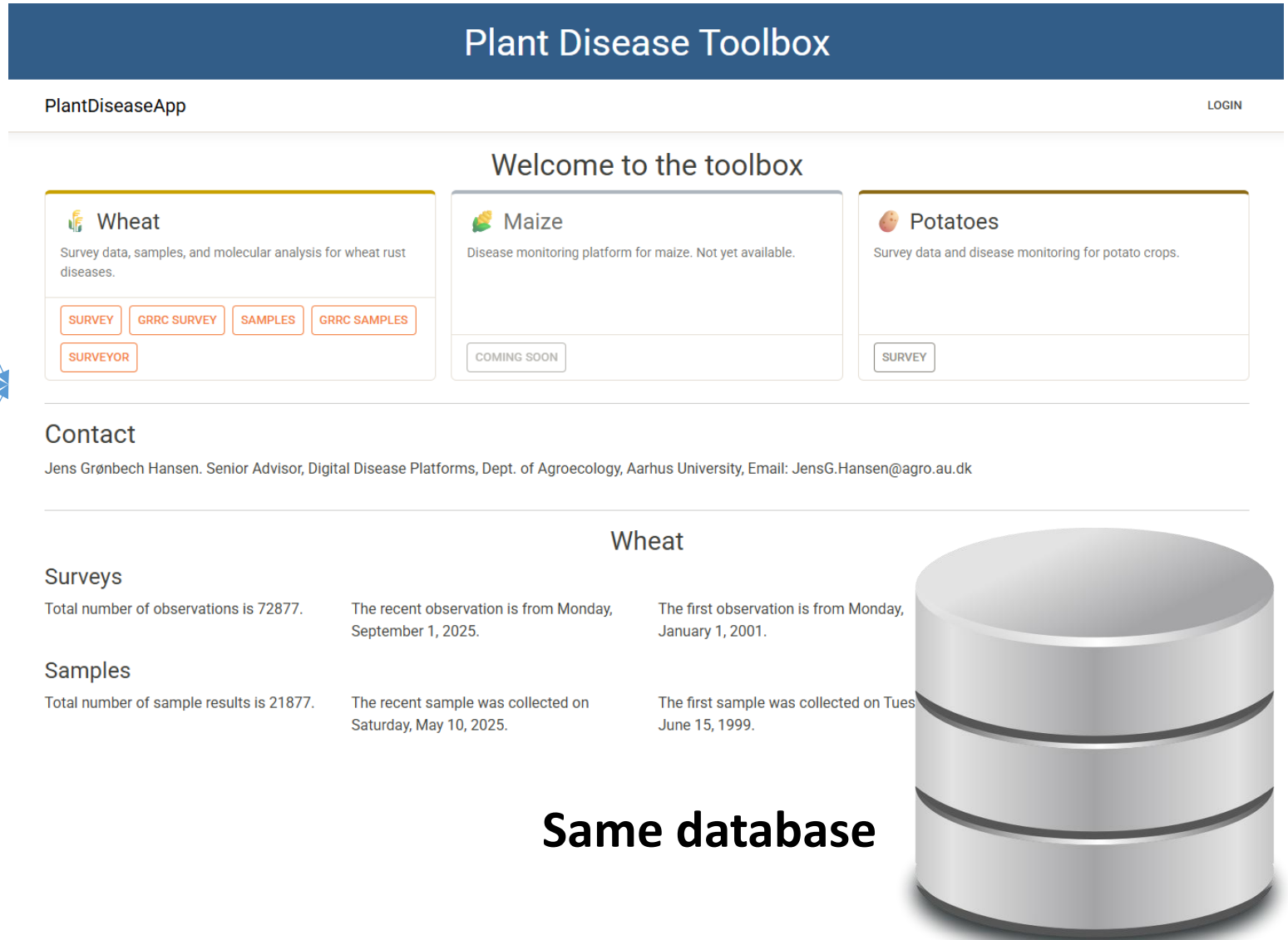
April May June July August

3/1/2025

Three Toolbox Client UI to one - scalable to more crops







Same database

Plant Disease Toolbox

PlantDiseaseApp

LOGIN

Welcome to the toolbox

Wheat

Survey data, samples, and molecular analysis for wheat rust diseases.

SURVEY | GRRC SURVEY | SAMPLES | GRRC SAMPLES | SURVEYOR

Maize

Disease monitoring platform for maize. Not yet available.

COMING SOON

Potatoes

Survey data and disease monitoring for potato crops.

SURVEY

Contact

Jens Grønbech Hansen. Senior Advisor, Digital Disease Platforms, Dept. of Agroecology, Aarhus University, Email: JensG.Hansen@agro.au.dk

Wheat

Surveys

Total number of observations is 72877.

The recent observation is from Monday, September 1, 2025.

The first observation is from Monday, January 1, 2001.

+ YEAR | + COUNTRY

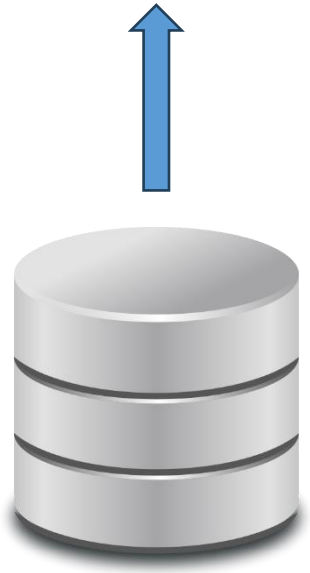
Samples

Total number of sample results is 21877.

The recent sample was collected on Saturday, May 10, 2025.

The first sample was collected on Tuesday, June 15, 1999.

+ YEAR | + COUNTRY



Plant Disease Toolbox

DiseaseApp LOGIN

Survey Management

OVERVIEW | SURVEY | SAMPLES | PICTURES | MAP | IMPORT | EXPORT

Levels: Unpublished All levels

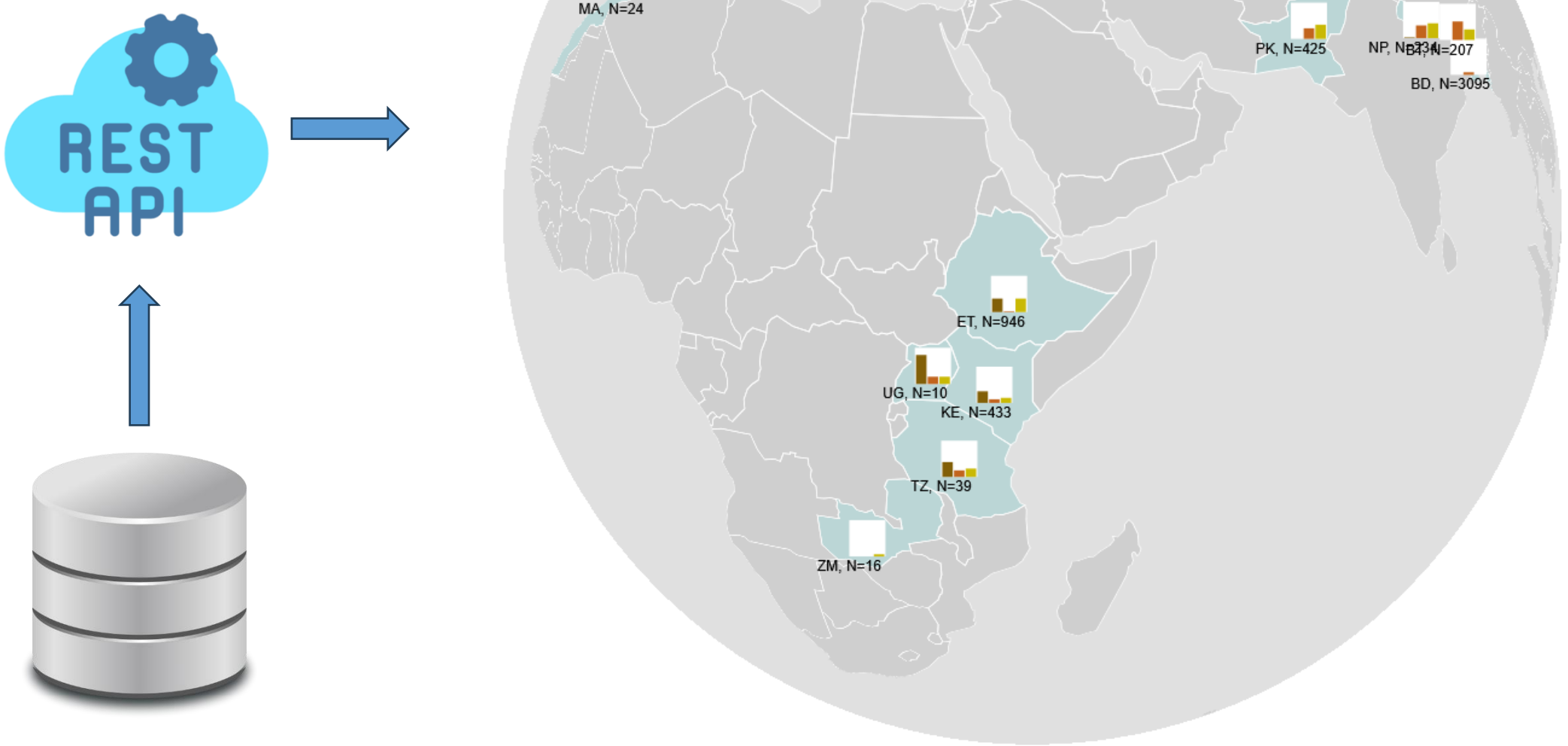
Year: 2023

Country: ALL COUNTRIES SELECTED

Disease: Stem Rust Leaf Rust Yellow Rust Fusarium Head Blight Septoria

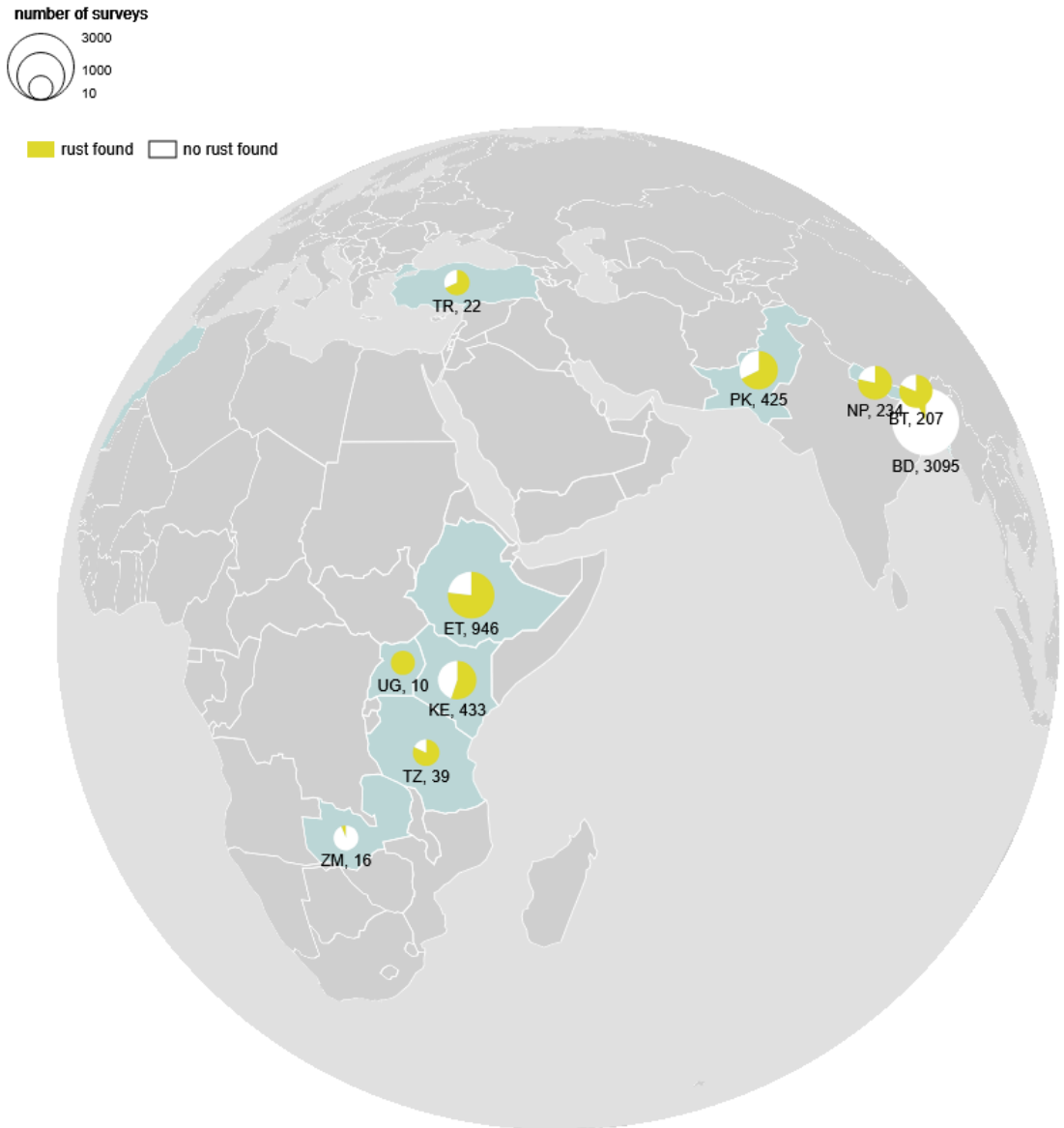
SHOW TABLE

Date: 16-11-2023 00:00:00 Location: 02 Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: 02 Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: Elemo Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: Haro Caancoo Cultivar: Dandaa  SHOW	Date: 16-11-2023 00:00:00 Location: Haro Caancoo Cultivar: Hidasse  SHOW
Date: 16-11-2023 00:00:00 Location: Haro Caancoo Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: Haro Caancoo Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: Hibre suuqii Cultivar: Hidasse  SHOW	Date: 16-11-2023 00:00:00 Location: Limaayi Cultivar: unknown  SHOW	Date: 16-11-2023 00:00:00 Location: Limaayi Cultivar: unknown  SHOW


REST
API
JS based
TR, N=22
MA, N=24
PK, N=425
BD, N=3095
ET, N=946
UG, N=10
KE, N=433
TZ, N=39
ZM, N=16

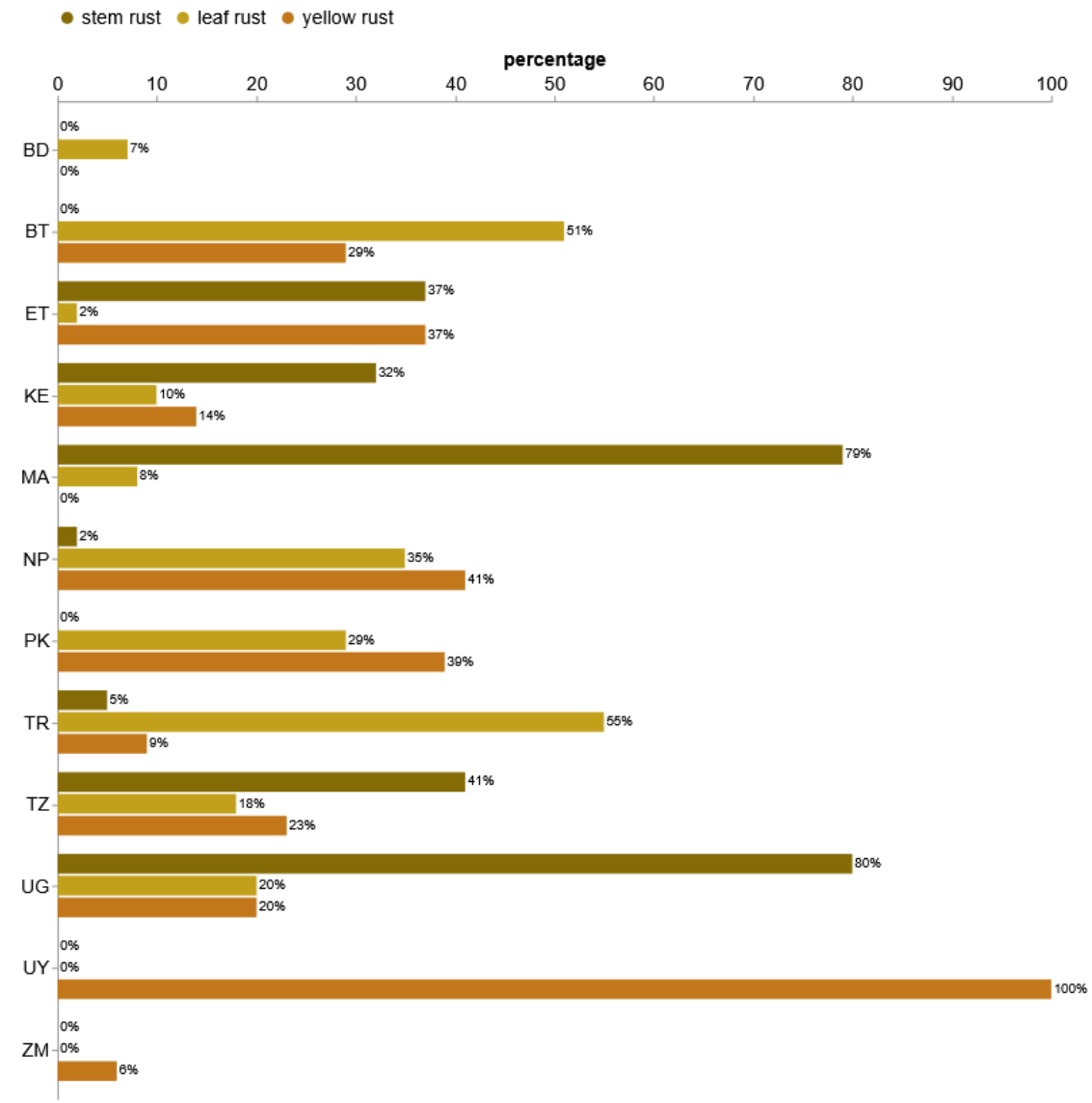
survey with rust reported

click on the country to highlight its rust type bar charts on the right



reported rust types

rust type by count | rust type by percent



select year to begin

2024

select disease will update

Stem Rust Leaf R

select country. available

Bangladesh Bhut

select severity levels

None (0) Low (le

update graphics

cluster map - zoom in to

by count per severity

select year to begin

2024

select disease will update opt

Stem Rust Leaf Rust

select country. available coun

Bangladesh Bhutan

select severity levels

None (0) Low (less th

update graphics

cluster map - zoom in to see

by count per severity cate

select year to begin

2024

select disease will update options for severity

Stem Rust Leaf Rust Yellow Rust Wheat Blast Fusarium Head Blight Septoria Spot Blotch

select country. available countries are dependent on the selected year

Bangladesh Bhutan Ethiopia Kenya Morocco Nepal Pakistan Tanzania Turkey Uganda Uruguay Zambia

select severity levels

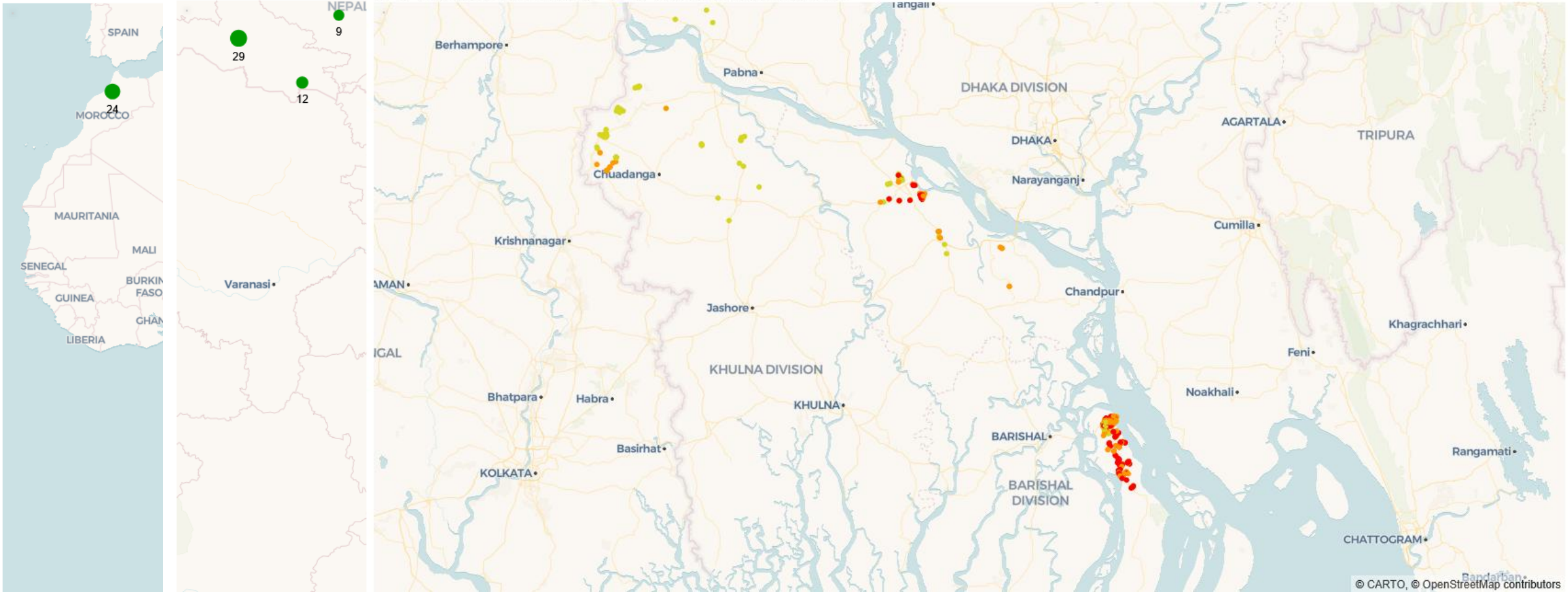
None (0) Low (less than 20 %) Moderate (20 - 40 %) High (more than 40 %)

update graphics

cluster map - zoom in to see individual points

per country summary

by count per severity category by proportion within each cluster



Thursday 21 May

Plenum **08:30-08:50**	**EuroBlight: Future shared facilities, Coordination and Support actions** / *Jens G. Hansen, Mout De Vrieze, Geert Kessel & Alison Lees*
Session 5 **A, B & C** **08:50-10:00**	**Parallel subgroup meetings continued**

Control strategies - Marie Curie Auditorium: *(Moderator: Bert Evenhuis, Secretary: Ruairidh Bain)*

- Review the value of the fungicide tables
- Framework and pipeline for test of biologicals and alternatives. Establish a EuroBlight working group with a mission
- Network of Living labs in Europe re late blight management with less pesticides. Establish a EuroBlight working group with a mission

Pathogen and host resistance - Salon de Grados: *(Moderator: David Cooke, Secretary: Geert Kessel)*

- Network of phenotyping labs. Concrete actions in 2026. Establish a EuroBlight working group with a mission
- Whole genome sequencing and marker development. Establish a EuroBlight working group with a mission
- Aerobiology - spore detection and DNA sampling. Establish a EuroBlight working group with a mission

Alternaria - Class room B3: *(Moderator: Hans Hausladen, Secretary: Laura Meno)*

- Review the value of the fungicide tables
- Concrete actions on *Alternaria* in 2026 and until next workshop

10:00-11:00	**Coffee break**
Session 6	**Plenary session in Auditorium- outlook and new initiatives – reports and discussion (Marie Curie Auditorium)** ***Chair:*** *Jens G. Hansen* ***Sub-chair:*** *Alison Lees*
11:00-12:15	**Report from the subgroups** › *Alternaria* Subgroup (*Hans Hausladen*) / 10 +5 minutes. › Control strategies (*Bert Evenhuis*) / 10 + 5 minutes › Pathogen and Host resistance Subgroup (*David Cooke*) / 10 + 5 minutes › Outline of the EuroBlight statement 2026 (*Jens G. Hansen*) / 15 + 15 minutes
12:15-12:40	**Introduction to EuroBlight workshop 2028** – *TBD* **Closing of the workshop** / *Mout De Vrieze*

EuroBlight
A potato late blight network for Europe

EuroBlight: Future shared facilities, coordination and support actions

Jens G. Hansen, Alison Lees, Mout De Vrieze and Geert Kessel - EuroBlight Mgmt

Statement: The EuroBlight community can achieve more through increased collaboration and by creating synergies between existing projects and initiatives.

Why: The industry sounded the alarm – and ask for help. We cannot wait on EU funding

How:

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Subgroup recommendations to EB Statement → Together with the EuroBlight MGMT prepare a EU- CSA, COST or RIA

EuroBlight

A potato late blight network for Europe

Draft EuroBlight Statement 2026

21st EuroBlight Workshop, 18–21 May 2026, Ourense Spain

EuroBlight MGMT 21 May 2026

“Towards coordinated, resilient and integrated management of potato late and early blight in a rapidly changing production landscape”

EuroBlight reiterates its overall objective:

To identify, evaluate and combine the best possible tools to predict, manage and control late and early blight as part of sustainable Integrated Crop Management strategies.

1. Strengthen coordinated surveillance and rapid response systems

The rapid spread of aggressive and fungicide-resistant *P. infestans* genotypes in recent years demonstrates the urgent need for strengthened European and global surveillance systems. Workshop presentations confirmed continued evolution of pathogen populations across Europe, Latin America, and Asia, including resistance to key fungicide groups and emerging virulence against resistance genes.

EuroBlight therefore recommends:

- x

EuroBlight further commits to developing shared infrastructures for data integration and coordinated surveillance & monitoring activities.

2. Accelerate integrated crop management and reduced-input strategies

The workshop highlighted the need to move beyond disease-by-disease management towards holistic crop-health approaches integrating host resistance, forecasting, agronomy, biologicals, and stewardship of remaining fungicide options. This transition is increasingly important considering EU Farm-to-Fork objectives, pesticide reduction targets, PFAS restrictions, and the limited availability of new active ingredients.

EuroBlight therefore recommends:

- x

EuroBlight recognises that traditional fungicides remain essential tools for crop protection but stresses that their sustainable use must increasingly rely on integration with more resistant cultivars and less use of pesticides.

3 Support durable host resistance and innovative breeding strategies

The deployment of resistant cultivars was identified as a cornerstone of future sustainable blight management. However, presentations also demonstrated the continuing adaptability of *P. infestans* populations and the need for coordinated stewardship of resistance genes.

EuroBlight therefore recommends:

- x

EuroBlight emphasises that durable resistance can only be achieved through coordinated stewardship combining breeding, monitoring, agronomy, and integrated disease management.

4. Expand aerobiology and early warning systems

A major outcome of the workshop was the recognition that aerobiology, spore detection, and DNA technologies are becoming increasingly important components of disease forecasting and early warning systems.

EuroBlight therefore supports:

- x

EuroBlight considers early detection technologies to be critical tools for reducing unnecessary fungicide applications and improving resilience of integrated management systems.

5. Strengthen EuroBlight as a collaborative European platform

The workshop confirmed the continuing importance of EuroBlight as a trusted multi-actor platform linking research, extension, industry, and policy communities.

EuroBlight therefore commits to:

- x

EuroBlight calls upon European institutions, national authorities, funding agencies, industry, and research organisations to support long-term collaborative infrastructures necessary for sustainable blight management.

Concluding remarks

The discussions in Ourense clearly demonstrated that late and early blight remain highly dynamic and evolving threats to sustainable food production. However, the workshop also demonstrated unprecedented scientific progress and a strong willingness across sectors and countries to collaborate towards practical, science-based solutions.

EuroBlight concludes that resilient management of blight diseases will require coordinated surveillance, rapid knowledge exchange, integrated crop management, responsible stewardship of fungicides and resistance genes, investment in innovation, and strong international collaboration.

The EuroBlight network remains committed to supporting these goals through coordinated action and shared scientific leadership leading towards the next workshop in 2028 in Gent, Belgium.

For more information about EuroBlight and previous workshop statements, see EuroBlight official website.

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