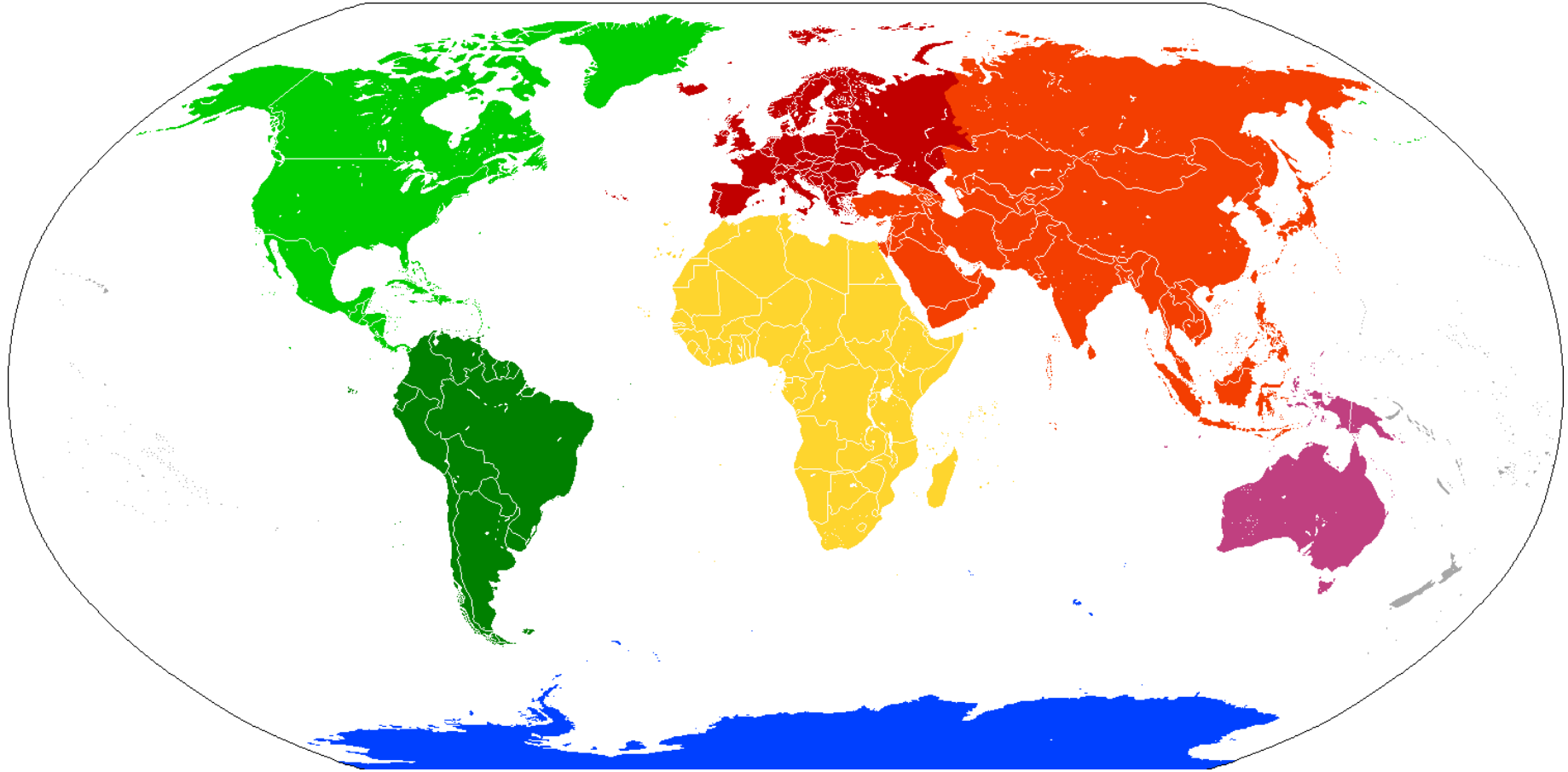




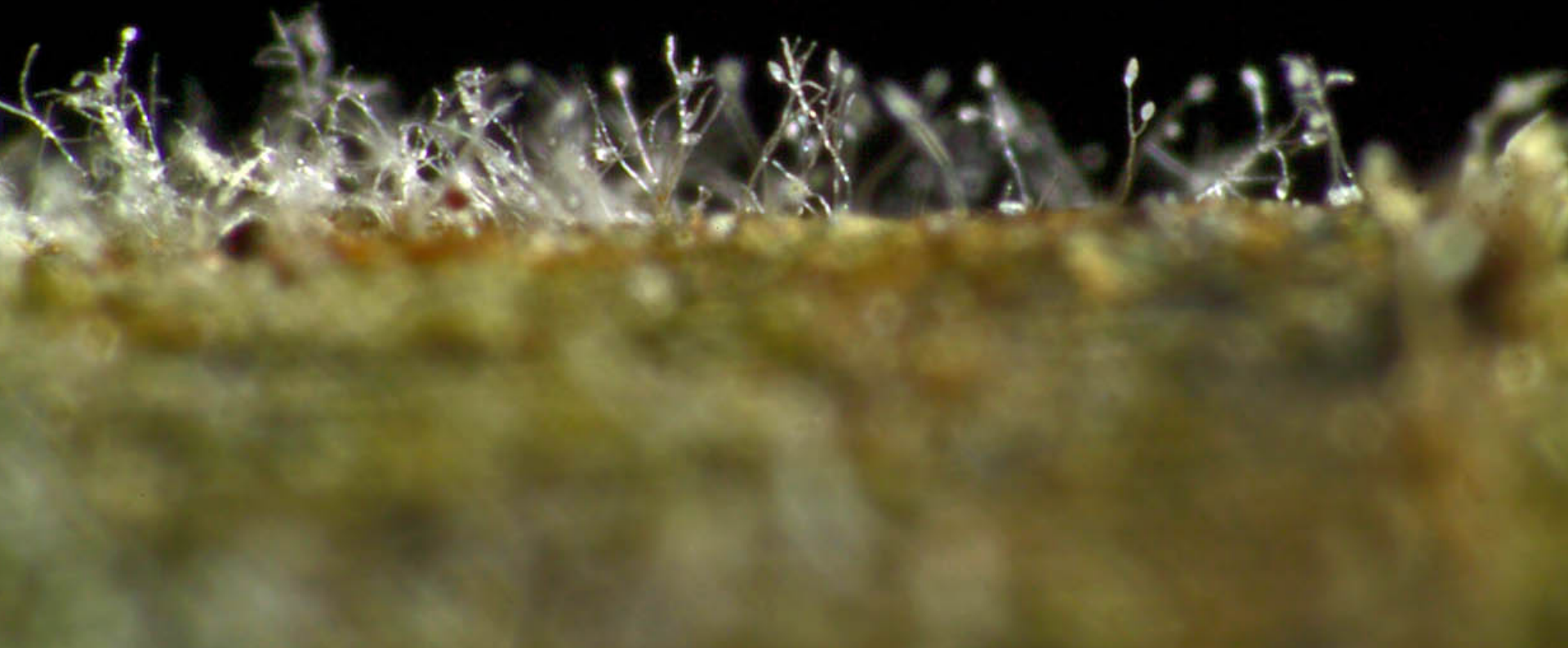
**Potato late blight management in four continents:  
Similarities, Differences and Future Opportunities and  
Challenges for network activities**

**Work in progress**

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Acuña & William E. Fry*



- Potato is the 3<sup>rd</sup> most important global food crop
- *P. infestans* remains the most damaging pathogen
- Management good in some regions but many growers around the world do not have the knowledge, support or education required and suffer serious losses
- Costs and yield losses Eur900 M in EU alone



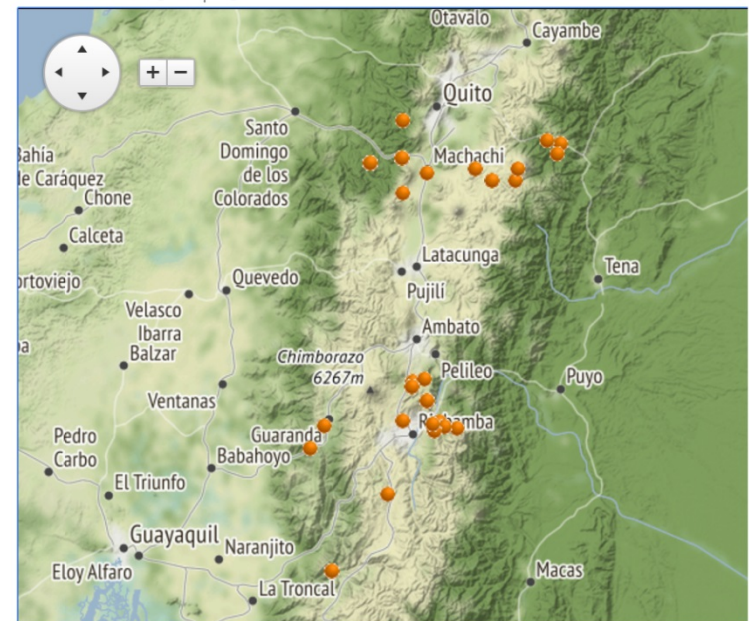
# Workshop themes

- **Tracking the potato blight pathogens** in a global context - Tools, network infrastructures and activities
- **Stewardship of host resistance genes and active ingredients** - develop and adopt innovative and sustainable control strategies on regional scales
- **Education, advocacy and communication** - taking into account different scales and stakeholders

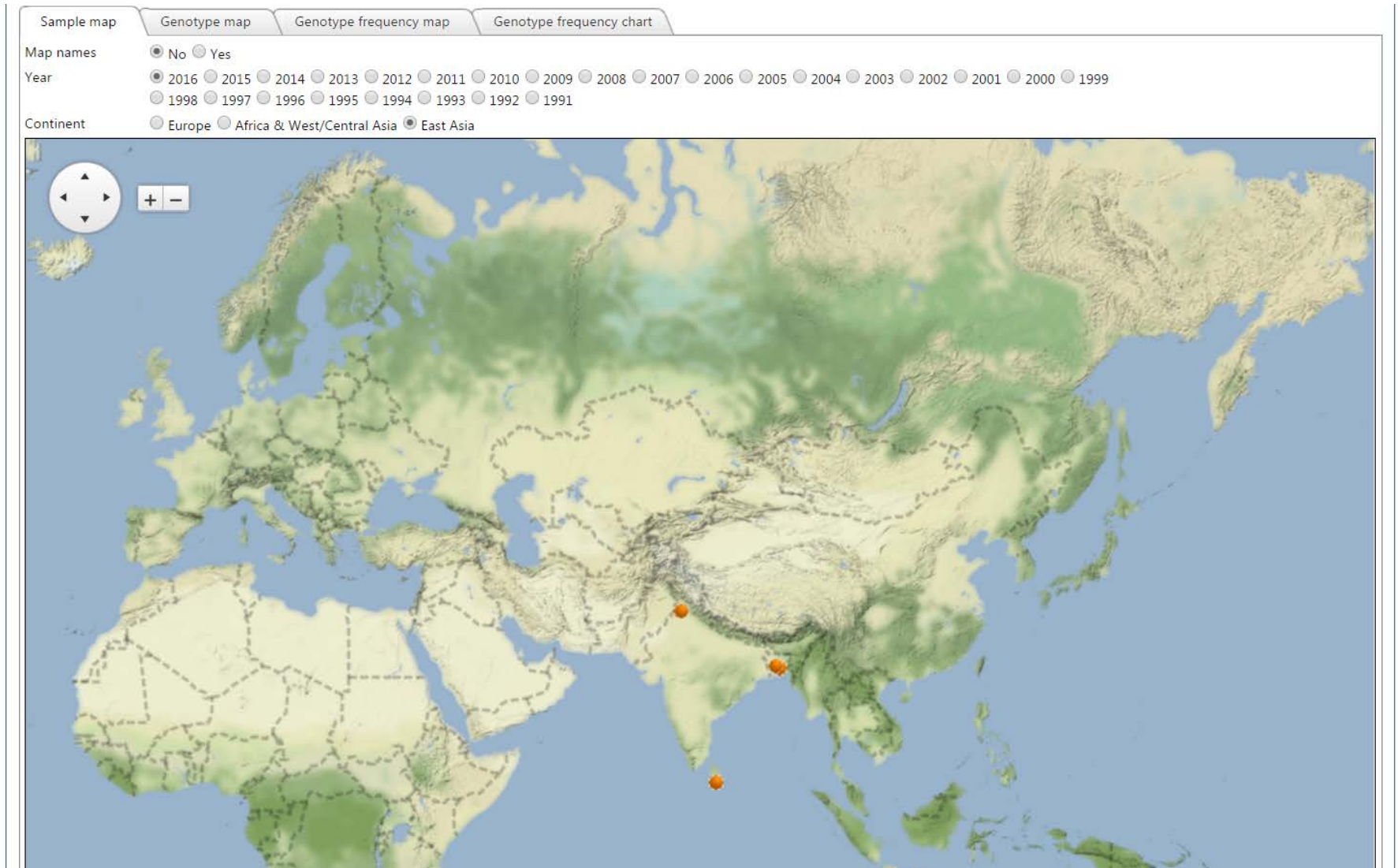


# Database updates

- Europe. 30K entries, 11K + SSR data
  - Africa & West/central Asia 469
  - East Asia >100
  - South America 356
  - Oceania - started
- 
- Older data 2003-2008 with 11 SSRs
  - Newer data 2008 on 12-plex data
  - Links between 2 datasets now made



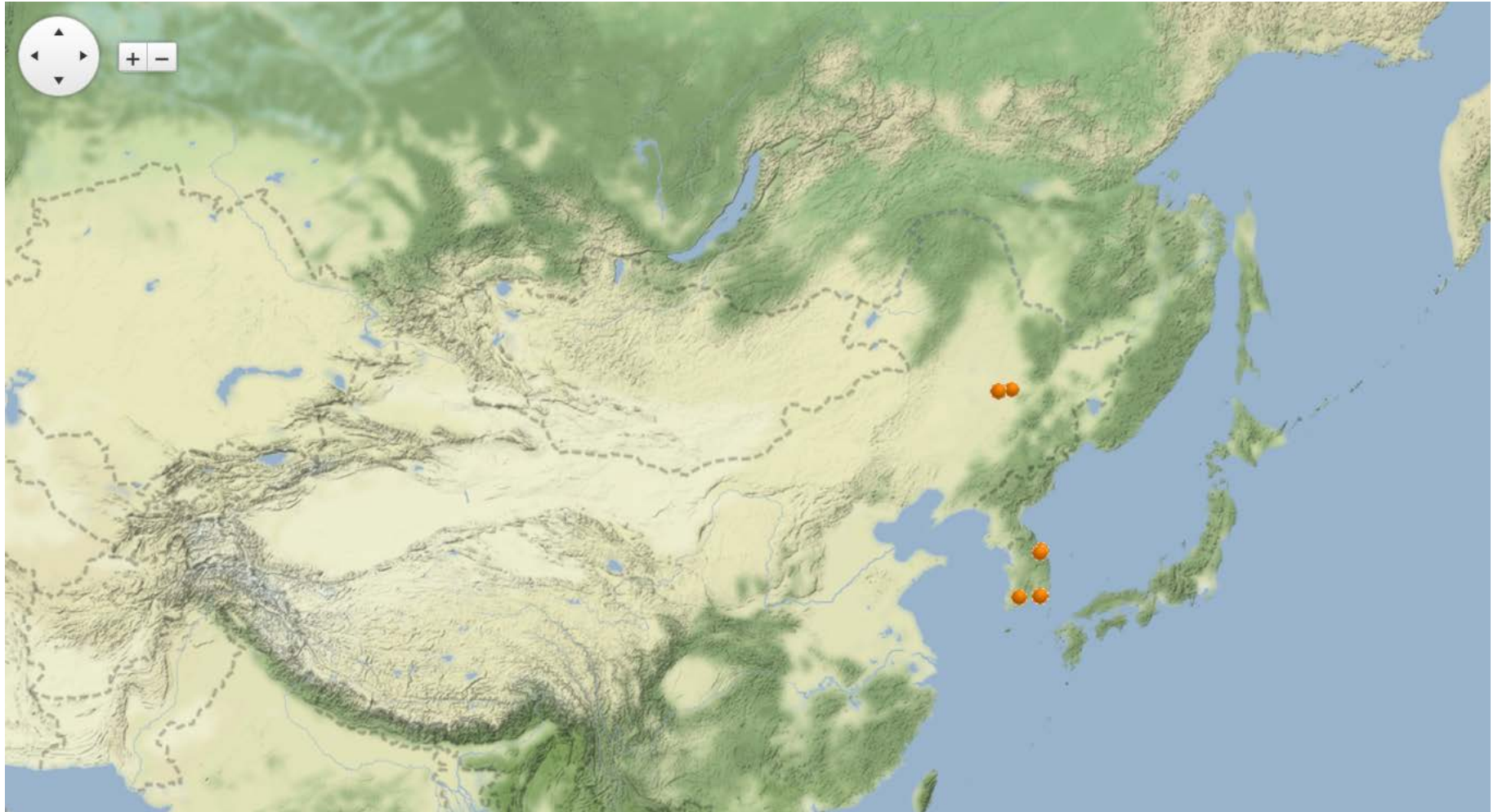
# Database expansion



# Database expansion



# Database expansion





# Similarities

- Basic biology/life cycle & temperature/humidity requirements the same in all continents
- General lack of host resistance and reliance on fungicides (some exceptions)
- Decision support needed from complex to simple (right product -right time)
- Risks of getting management wrong are high



# Differences

- Clean seed access
- Chemical product access
- Resources and level of grower expertise
- Inoculum sources vary from region to region (soil and tuber borne)
- Some areas PLB a problem every year (EU, parts of Asia) and sometimes more sporadic (USA, Australia)



# Opportunities

- Massive opportunity from expanding existing network as we share expertise and experiences globally
- We are doing a lot with little funding – imagine what we could do with more resources?
- Synergy from the different approaches in different continents helps us learn
- Strengthening links and getting support from commercial partners/companies – mutual benefits need to be stressed (larger companies have a global infrastructure of staff working to a common goal, support their products with best practice guidelines for IPM and act responsibly as stewards for their products)
- Win-Win with shared practices
- more?



# Challenges (1)

- Funding for the fundamental and applied science
- Succession planning for next generation
- Developing a sense of collaboration and identity for each network (Euroblight benefits a lot from a small team of very committed staff)
- Euroblight is a central hub – but a fully funded Global initiative would be better (like rust initiative)
- Education & advocacy (team who publically support the cause and speak out in its favour at all opportunities)
- We all need to be advocates for future funding



# Challenges (fungicides)

- Fungicide resistance –we have been lucky in PLB c.f. EB
- Proliferation of ‘generic/off patent’ products confusion for growers in some markets –
- Education on effective (and safe) product use needs to be improved
- Responsible marketing needed to avoid reputational damage (DC personal view)
- Loss of products via regulatory burden – potential threat of resistance
- Population tracking informs and helps manage this risk – partnership required



# Challenges (host resistance)

- Getting grower to use good sources if they exist can be challenge - marketing
- Technology advances; GM approaches and gene editing (CRISPR-Cas9) (potential and problems)
- Maximise durability – careful deployment with fungicide protection
- Need to understand pathogen evolution and resistance breakdown
- Decision support tools

