

## Epidemics and control of late blight, 2009 in Europe

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# Late Blight Country Reports

## **General objective:**

- To provide an overview of the late blight seasons in Europe
- Support of specific surveys (i.e. EucaBlight results),
- Support the implementation of Directive 2009/128/EC on the sustainable use of pesticides (October 2009)

## **Specific objective:**

- Summary presentation at EuroBlight workshops.
- Report in the EuroBlight workshop proceedings

# Country Profile Editors (2009)

<b>country</b>	<b>Name</b>
Austria	Gottfried Besenhofer
Belgium (Flanders)	Pieter Vanhaverbeke
Belgium (Wallonie)	Jean-Louis Rolot
Czech Republic	Ervin Hausvater
Denmark	Jens G. Hansen & Bent Nielsen
England/Wales	Faye Ritchie
Estonia	Mati Koppel
Finland	Asko Hannukkala
France	Ludovic Dubois
Germany	Hans Hausladen & Benno Kleinhenz
<b>Hungary</b>	<b>Zsolt Polgar</b>
Ireland	Denis Griffin & Steven Kildea
Italy	Riccardo Bugiani
Latvia	Linda Bucena
Lithuania	Antanas Ronis
Netherlands	Kees Vogelar
Northern Ireland	Louise Cooke
Norway	Arne Hermansen & Ragnhild Nærstad
Poland	Jozefa Kapsa & Renate Lebecke
<b>Portugal</b>	? ?
<b>Rumania</b>	? ?
Russia	Alexey Filippov
Scotland	Ruairidh Bain & Alison Lees
Slovakia	Jan Heldak
<b>Spain</b>	? ?
Sweden	Bjorn Andersson
Switzerland	Tomke Musa

**Thank you for  
information!**

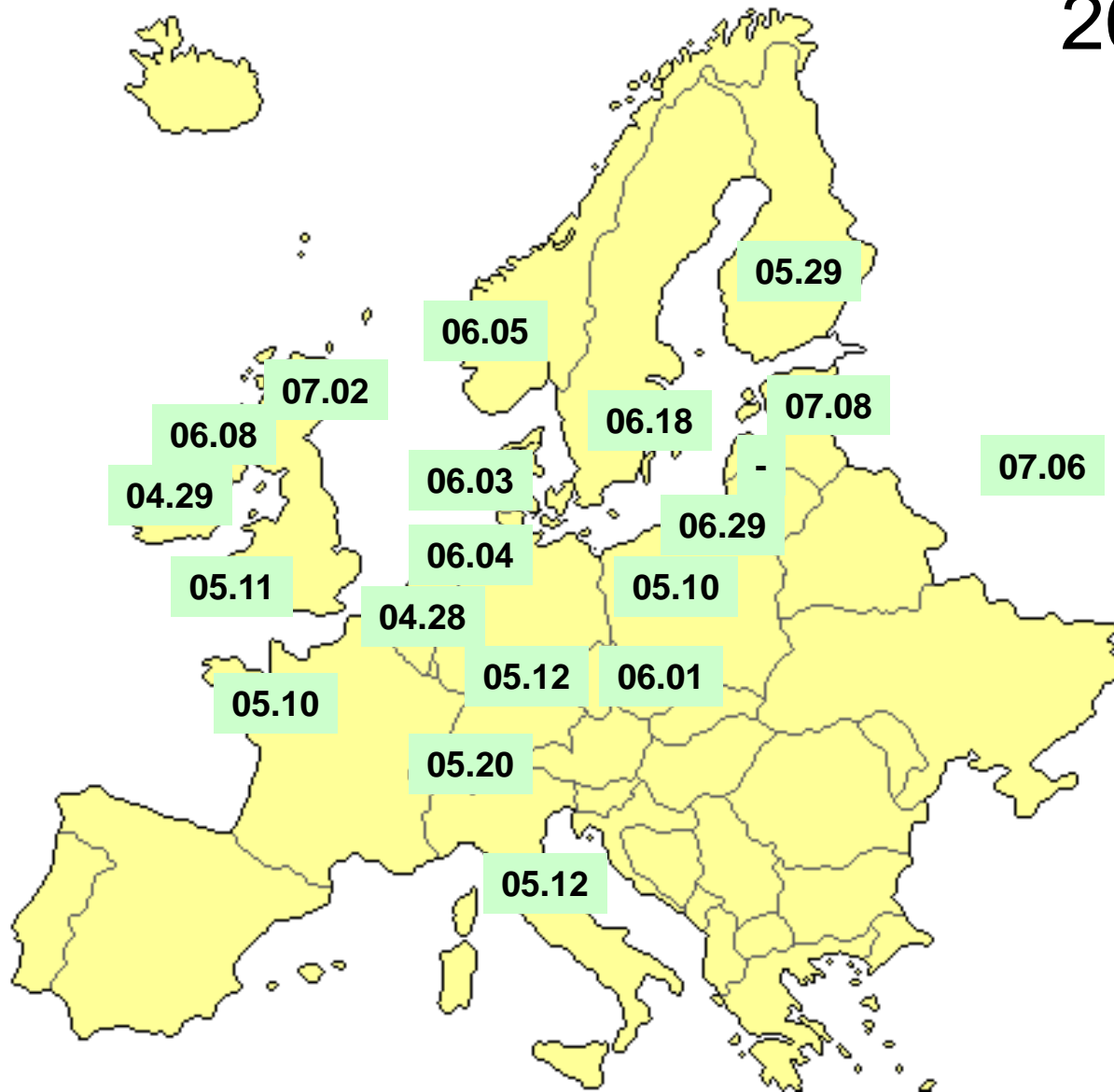
# Late blight country reports - Questions

## EuroBlight Country Profile Data

- **SUMMARY**
- **Early outbreaks of potato late blight**
- **Weather conditions and late blight development**
- **Use of fungicides and control strategies**
- **Organic potatoes**
- **Tuber blight**
- *Alternaria ssp*
- **Characteristics of *Phytophthora infestans***
- **Use of cultivars**
- **Use of DSS +**
- **Actions and NAP preparing for Directive 2009/128/EC**

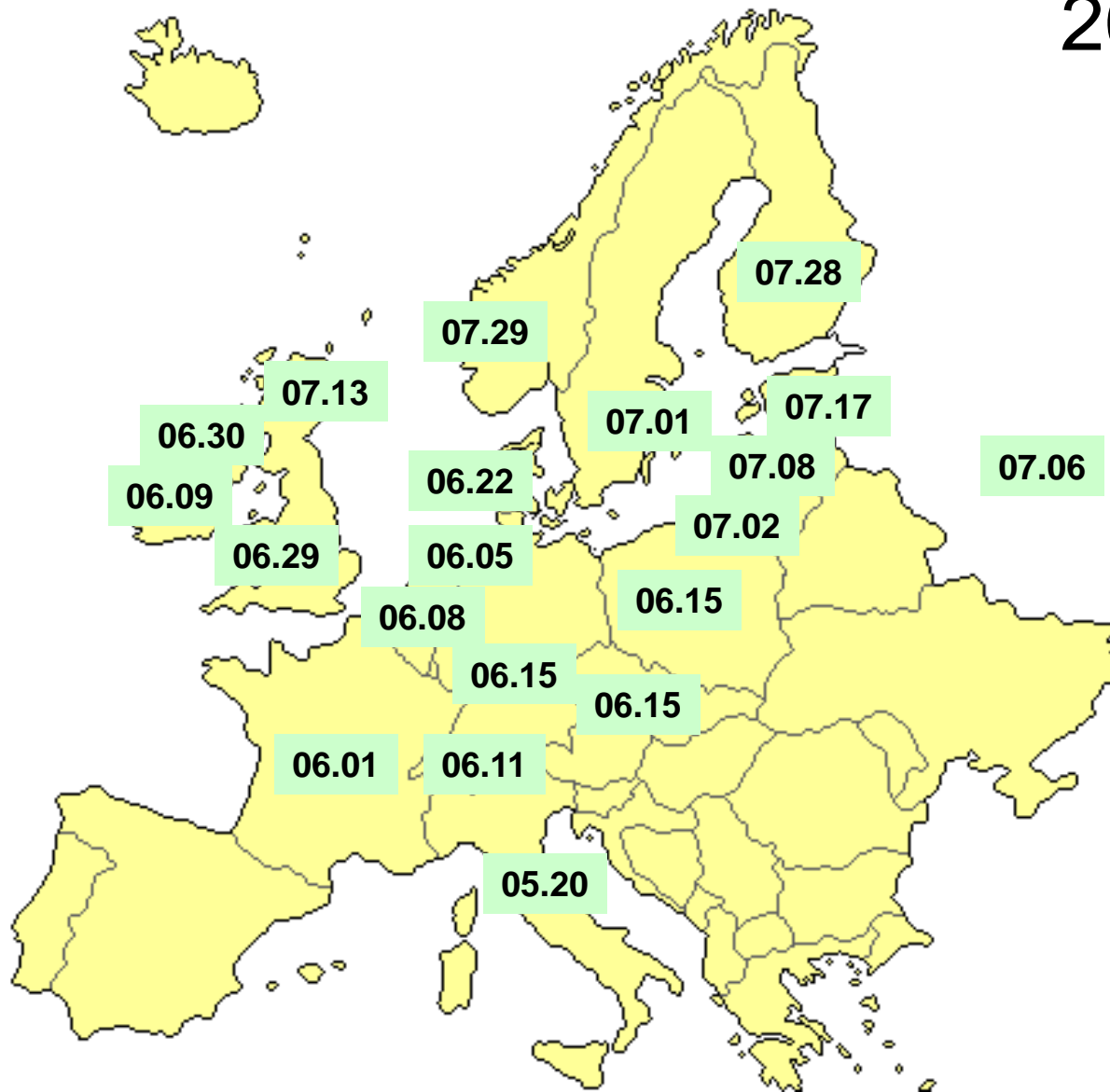
# First observation of late blight in covered or very early planted potatoes

2009



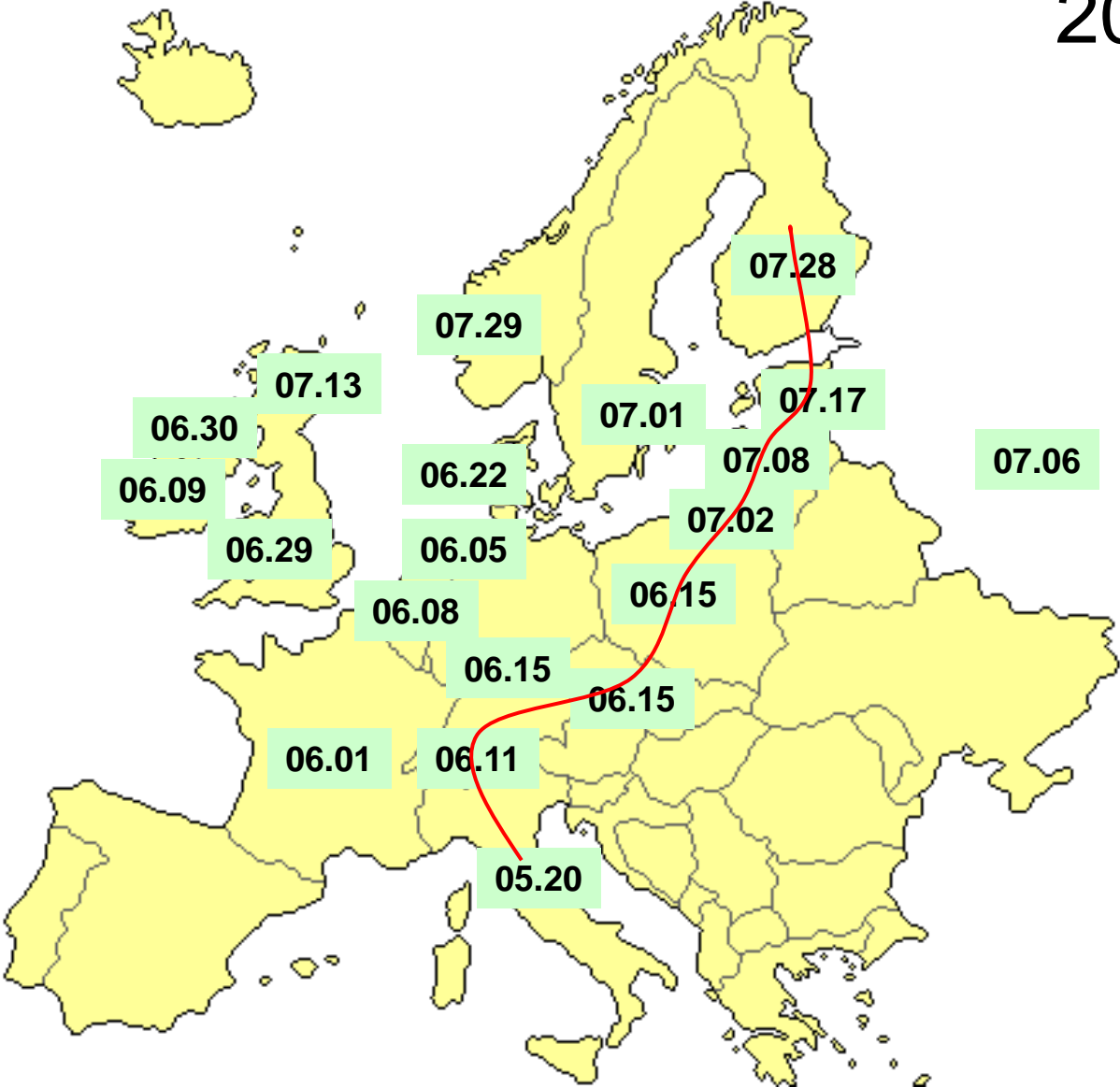
# Date when first infections were reported in more than 5 conventional, normally planted potato fields

2009



# Date when first infections were reported in more than 5 conventional, normally planted potato fields

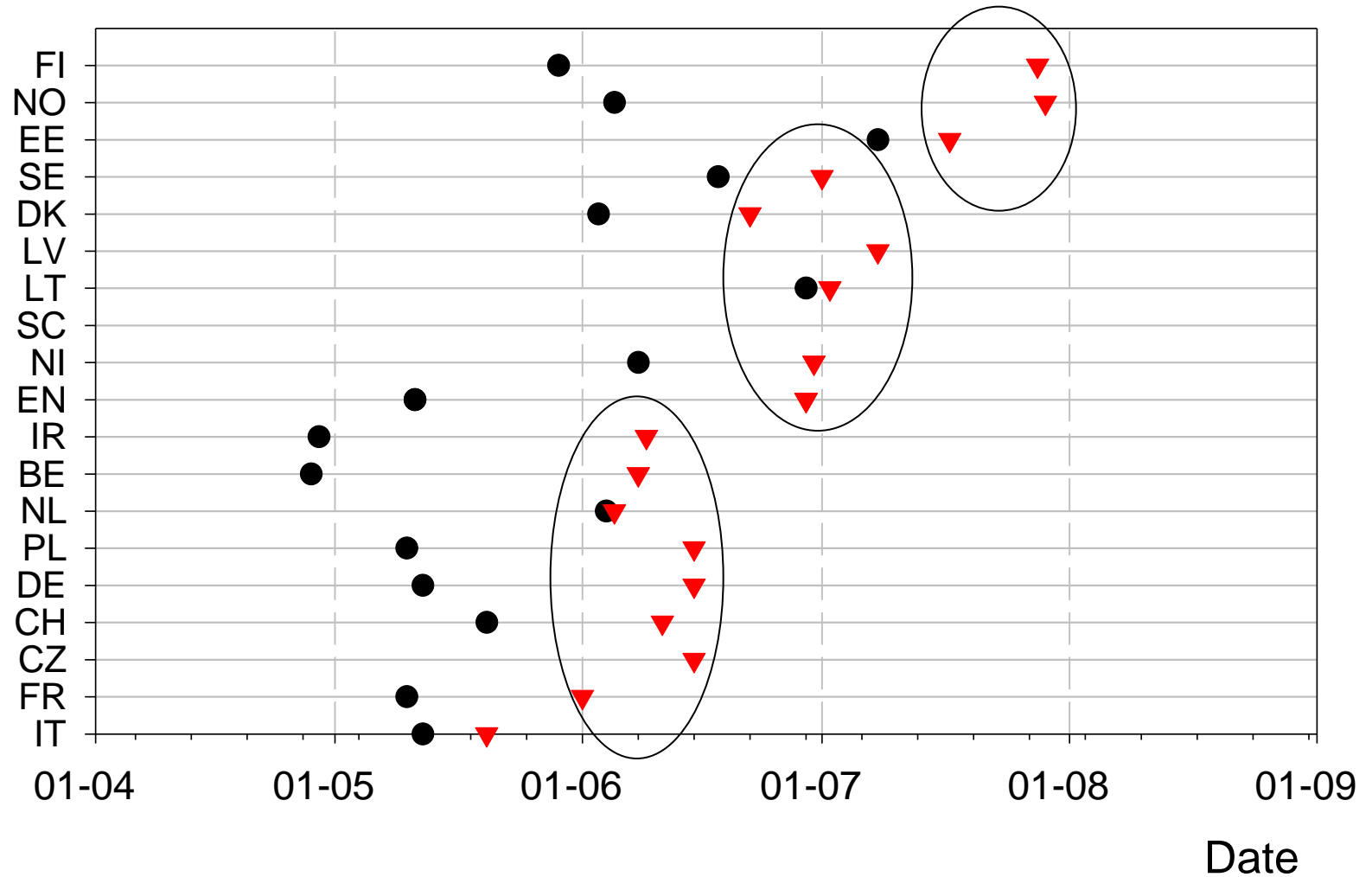
2009



# First infections, 2009

● = Covered potatoes, dumps, oospores

▼ = attacks in more than 5 conventional fields

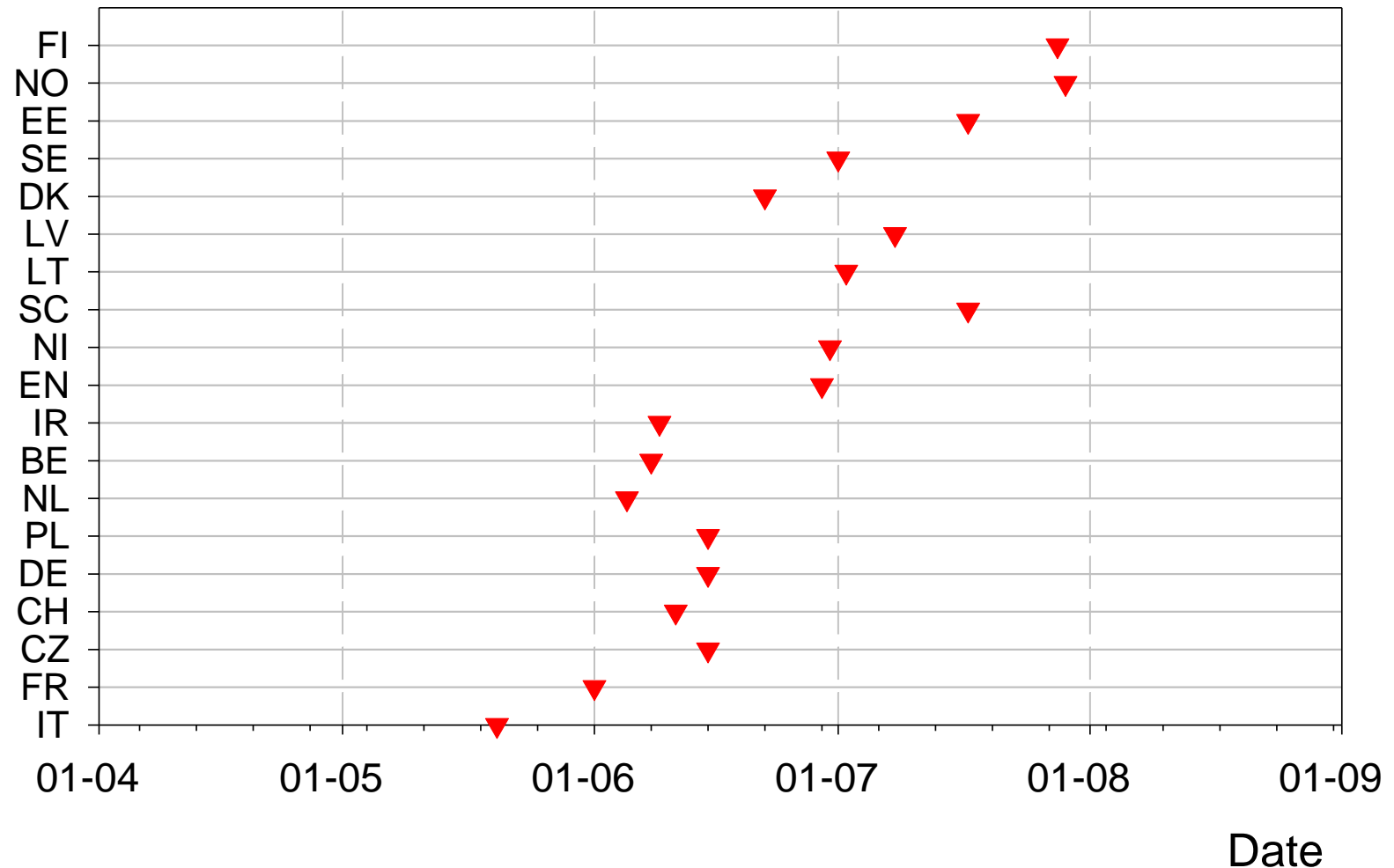




# Date when first infections were reported in more than 5 conventional, normally planted potato fields

▼ = 2009 attacks in more than 5 conventional fields

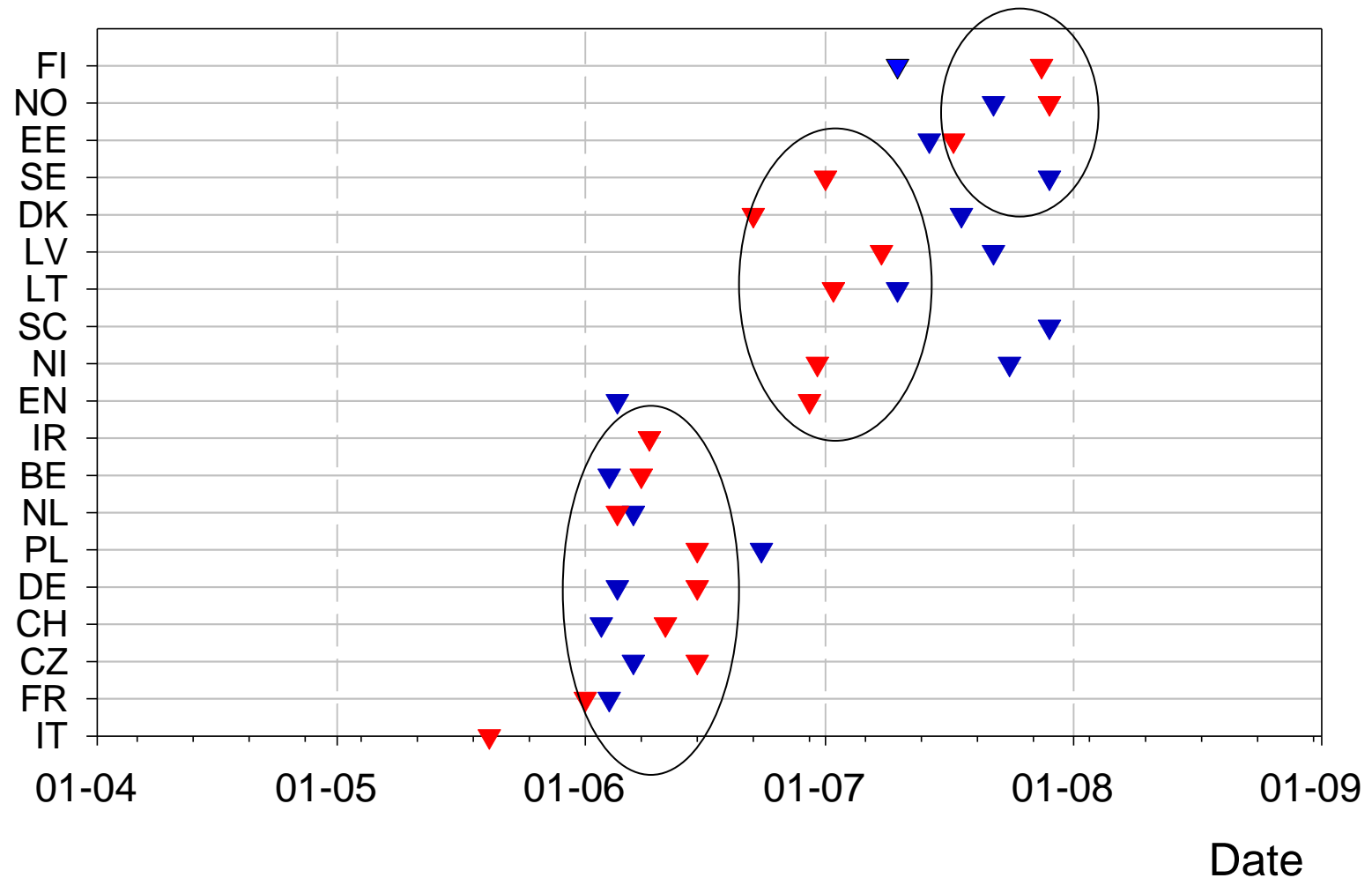
▼ = 2008 attacks in more than 5 conventional fields



# Date when first infections were reported in more than 5 conventional, normally planted potato fields

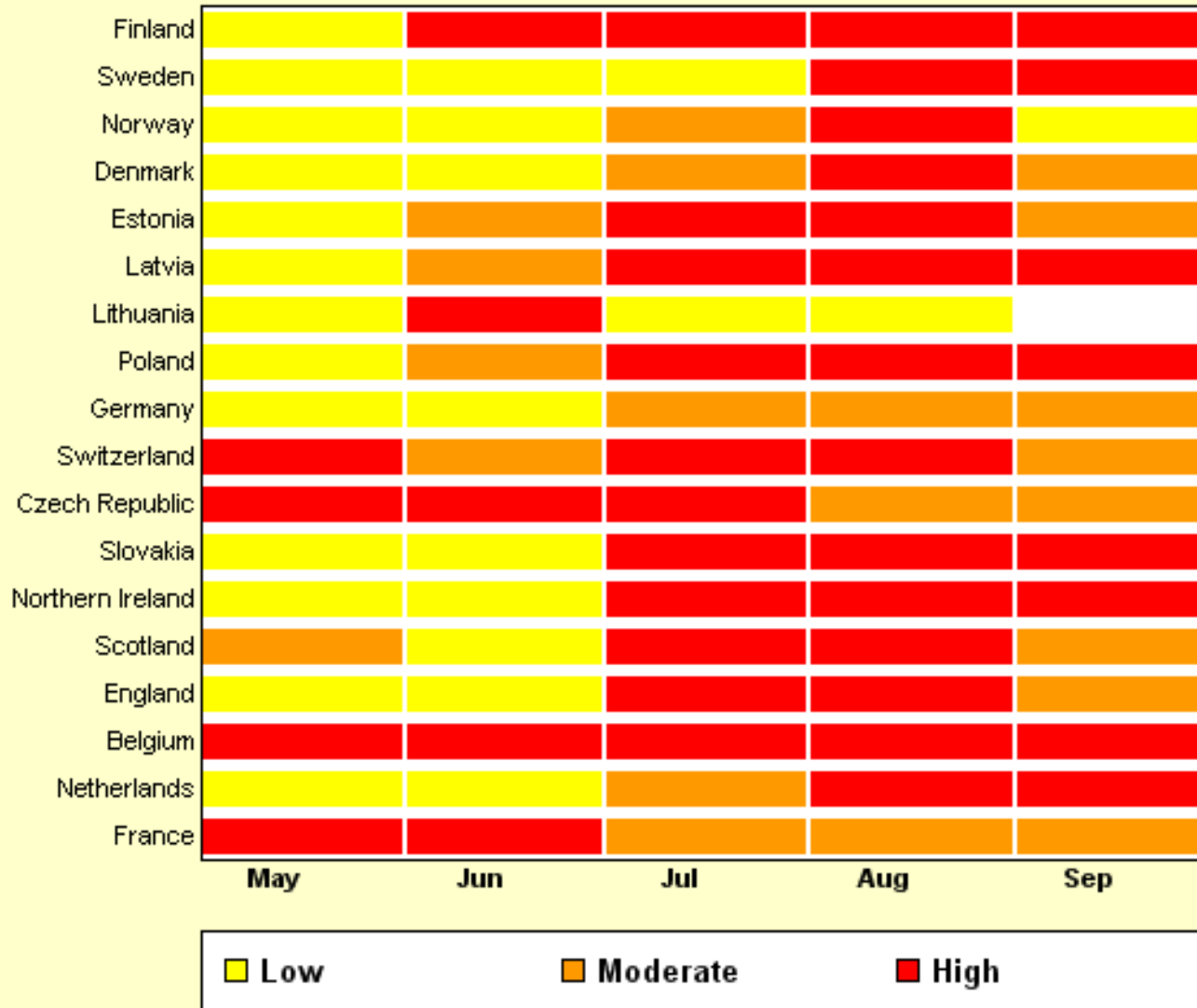
▼ = 2009 attacks in more than 5 conventional fields

▼ = 2008 attacks in more than 5 conventional fields



# Weather based late blight risk, 2008

Weather based late blight risk in 2008





Help

## Compare submodels

### Select specification

Country  
Denmark

Weather station  
Flakkebjerg

Year  
2009

Start date  
15-05-2009

End date  
25-08-2009

Weather data type  
Temperature and precipitation

Number of models  
3

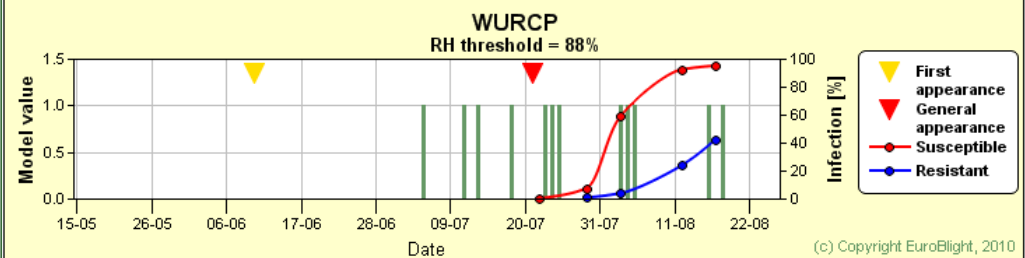
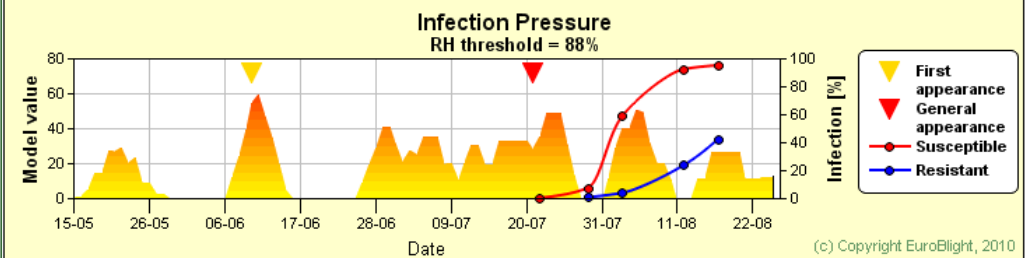
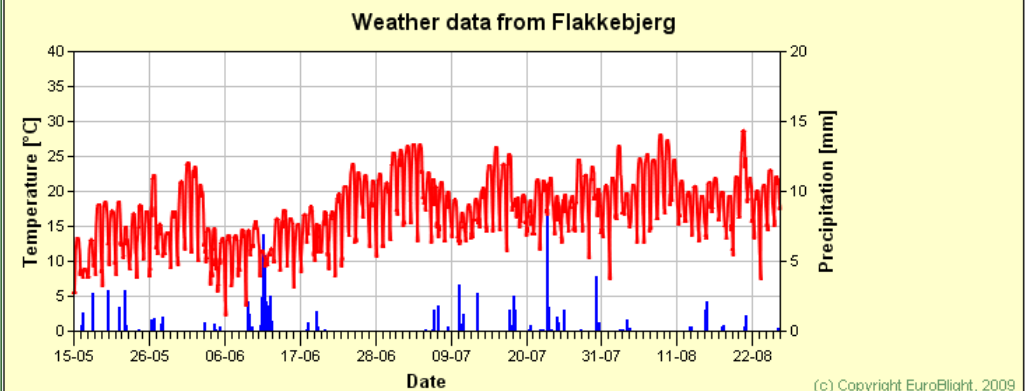
Model no. 1  
Infection Pressure  
RH threshold:  
 90%  88%  85%

Model no. 2  
WURCP  
RH threshold:  
 90%  88%  85%

Model no. 3  
Smith Criteria  
RH threshold:  
 90%  88%  85%

Show biological data if present

Show new date interval





# EuroBlight

A potato late blight network for Europe

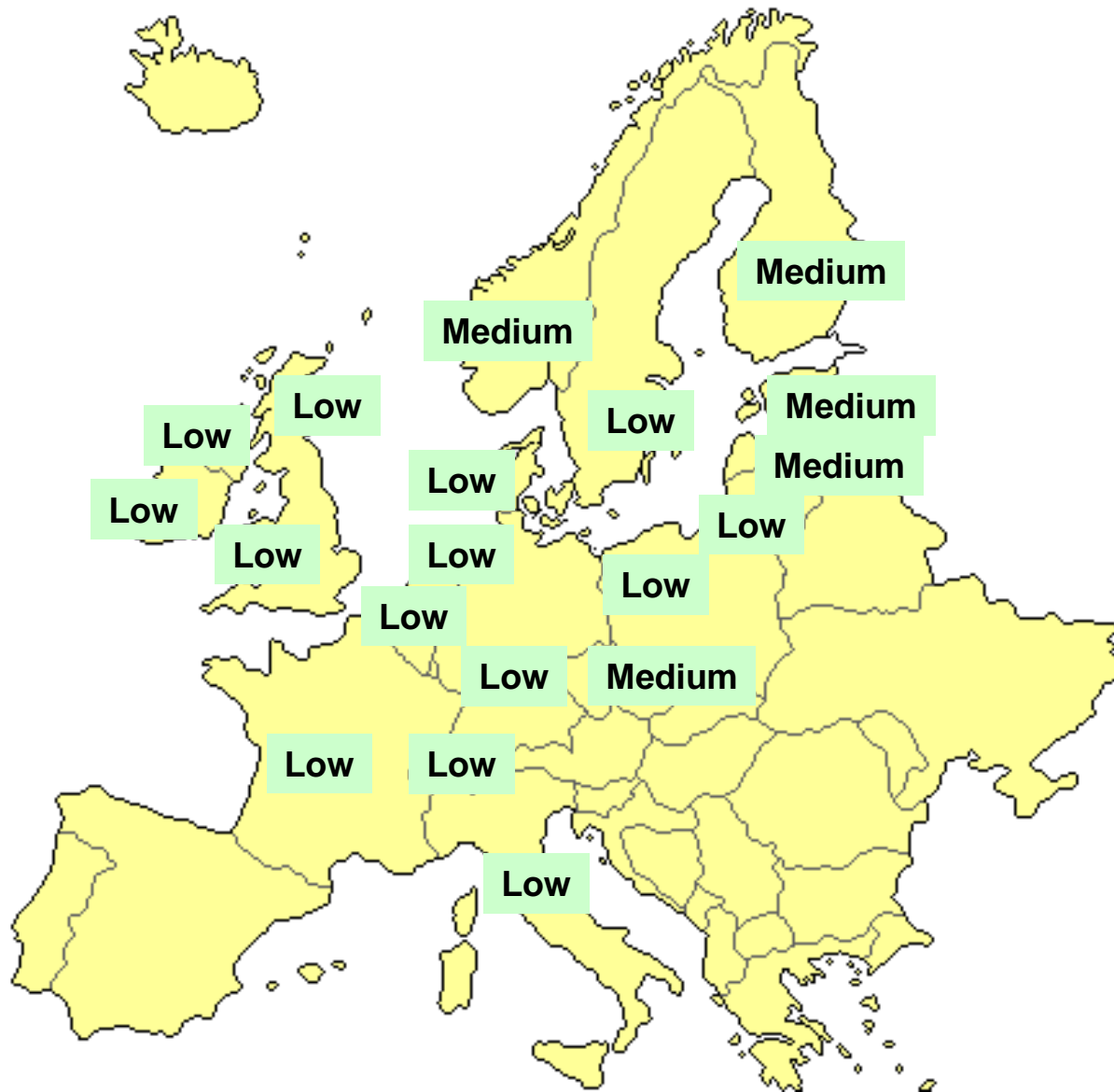
## WURCP

Days with risk of infection

At selected stations 2009

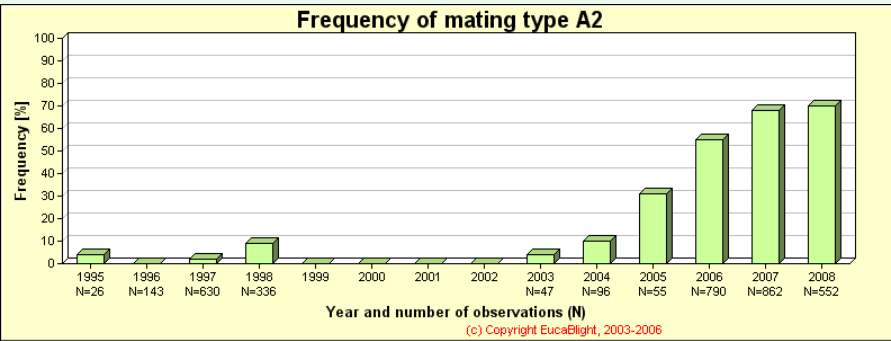


# Problems with tuber blight, 2009 (compared to normal)

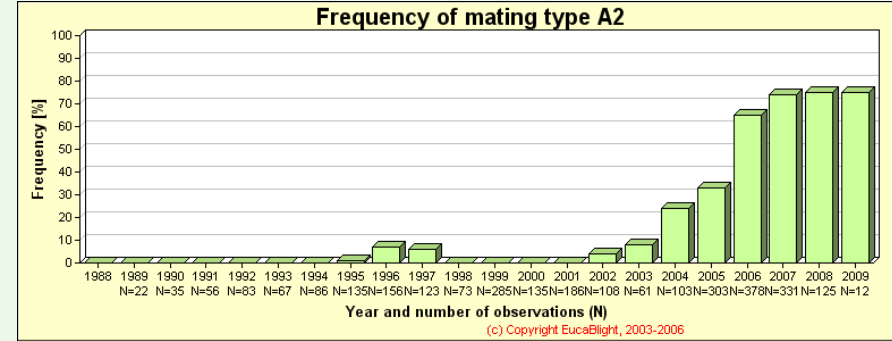


# Frequencies of mating type A2

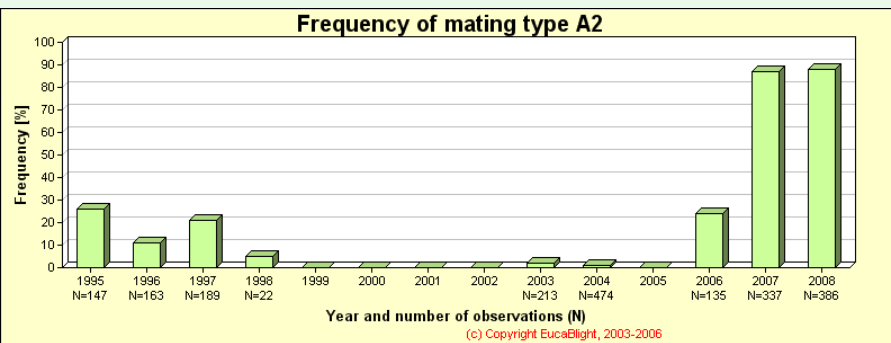
## England



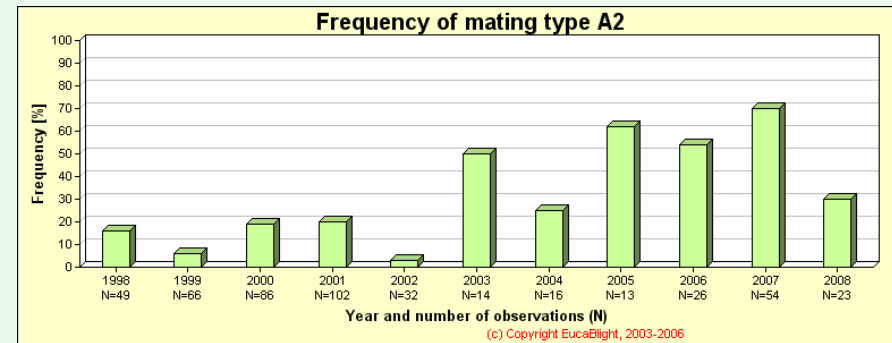
## France



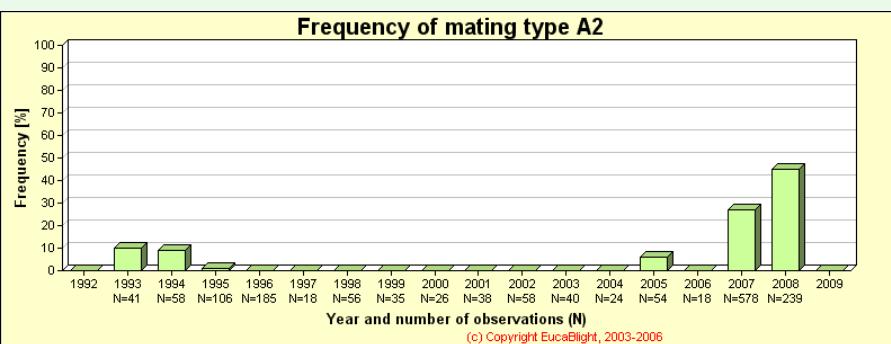
## Scotland



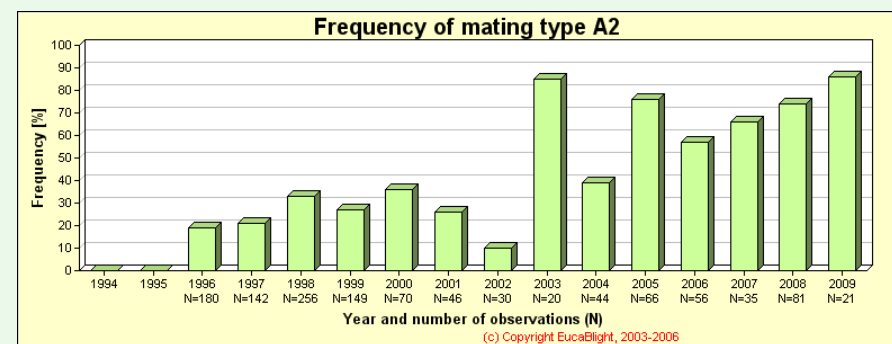
## Belgium



## N Ireland

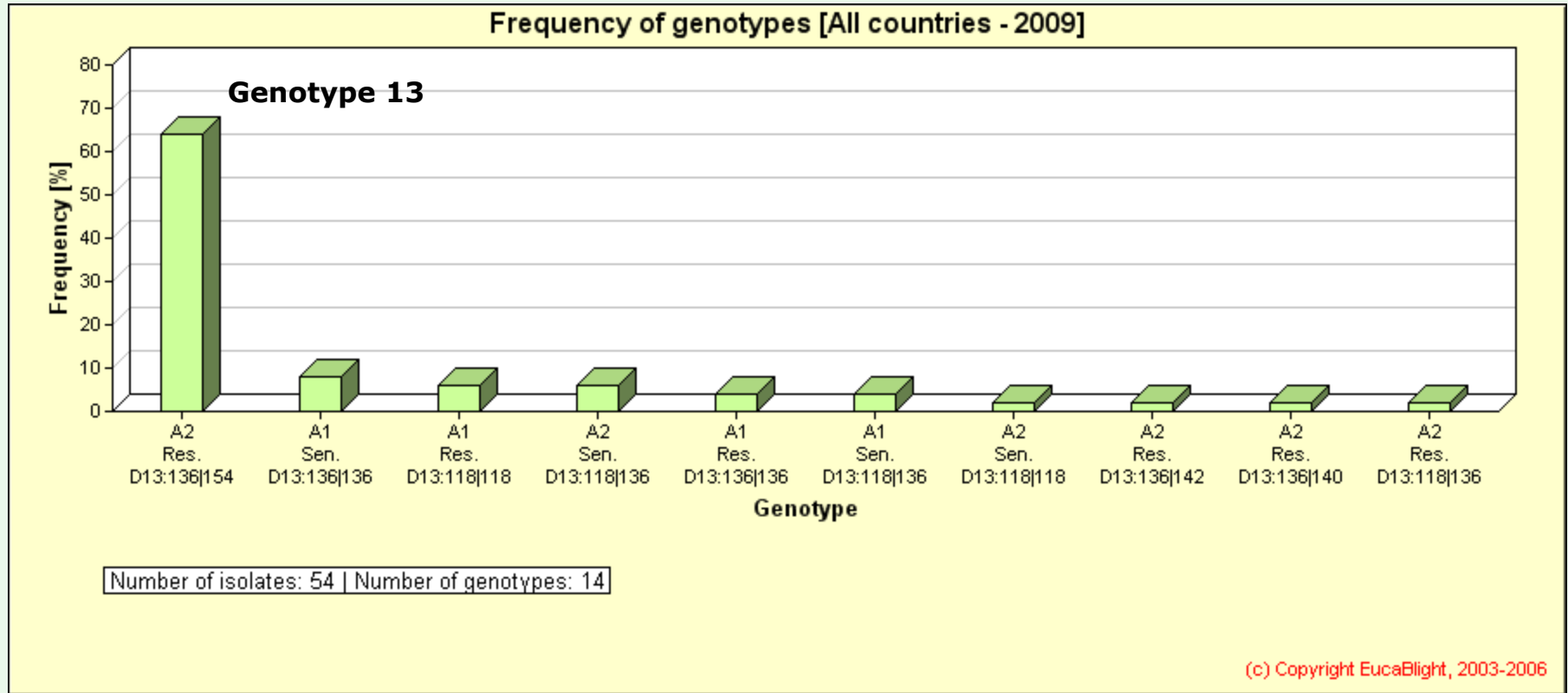


## Poland



# Genotypes 2009 – 54 isolates from 5 countries

Genotype, combination of traits = Mating type, sensitivity to metalaxyl, marker D13





# Use of DSSs

Belgium	Warning based on Guntz-Divoux
Czech Republic	Negative prognosis
Denmark	PlanteInfo - Blight Management
UK	Blight-Watch and Plant Plus
Estonia	Jögeva PBI web system
France	Mileos (MilPV + MildiLIS)
Germany	PhytophthoraModel Weihenstephan, ISIP
Netherlands	ProPhy and Plant Plus
N. Ireland	DARD Blight-Net
Norway	VIPS
Russia	Plant Plus, VNIIF-3 and SimCast+VNIIF-3
Sweden	(Plant Plus)
Switzerland	PhytoPRE+2000



### Related projects

Title	Description	Status	Themes
  Production and survival of oospores, II [OOSPORE II]	Experiments in field and greenhouse with influence of cover crops, soil temperature and humidity on survival of oospores.	<b>Duration</b> 2007 - 2010 <b>Responsibility</b> Sabine Ravnskov	Inoculum sources Oospores
  Development of a modeling platform and integration of decision support systems [ENDURE]	1) A joint DSS test platform, which can include different DSS will be tested and validated. 2) Validation of the DSS submodels with biological data. 3) Principles for a Risk Dependent Fungicide Input Model, where fungicide dose, intervals and timing vary as a function of infection pressure, potato variety type and local climatic conditions will be identified.	<b>Duration</b> 2009 - 2010 <b>Responsibility</b> Bent J. Nielsen	DSS Fungicide degradation Modelling Weather
  Test of Late blight DSSs [DOSE]	Semi field test of Plant Plus (NL) and Blight Management - Dose model (DK) for the chemical control of potato late blight	<b>Duration</b> 2009 - 2010 <b>Responsibility</b> Bent J. Nielsen [bent.nielsen@agrsci.dk]	DSS Modelling
  Test of new fungicides [Fungicide]	Field experiments regarding approval test of new compounds for the control of late blight	<b>Duration</b> 2010 - 2010 <b>Responsibility</b> Bent J. Nielsen [bent.nielsen@agrsci.dk]	
  Sustainable resistance against Phytophthora in potato through cisgenic marker-free modification (DuRPh)	In field experiments and simulation studies the use of different sets of resistance genes in space and time is investigated.	<b>Duration</b> 2006 - 2016 <b>Responsibility</b> Anton Haverkort [anton.haverkort@wur.nl]	GMO Potato Host resistance
  Control of late blight in organic potatoes	In field experiments, strategies with low amounts of copper and other products are investigated.	<b>Duration</b> 2008 - 2010 <b>Responsibility</b> Kees Bus, Huub Schepers [kees.bus@wur.nl]	Copper Organic potato
  Fungicide trials	Test efficacy of new fungicides and or new strategies to control late and early blight in potato	<b>Duration</b> 2010 - 2010 <b>Responsibility</b> Harro Spits, Bert Evenhuis, Huub Schepers [harro.spits@wur.nl]	Fungicide efficacy
  Optimizing DSS including lower dose rates of fungicides	In 3 field trials and on 6 farmers fields different modules (including lower dose rates) of DSS are tested under practical conditions.	<b>Duration</b> 2010 - 2011 <b>Responsibility</b> Huub Schepers, Joanneke Spruijt, Bert Evenhuis, Huub Schepers, Joanneke Spr [joanneke.spruijt@wur.nl]	DSS Fungicides Reduced dose rate
  Proof of principle for a control strategy based on virulence monitoring within the local blight population	Two field trials with 6 varieties are surrounded by 50 monitoring plots with 6 varieties with R-genes. The presence of isolates in these plots influences the spray decisions in the control	<b>Duration</b> 2010 - 2011 <b>Responsibility</b>	DSS Host resistance Virulence

**Tank you for your attention !  
And thanks to all country editors**

