



Epidemics and control of late blight in 2006 in European countries

Jens Grønbech Hansen & Huub Schepers



Late Blight Country Reports

General objective:

To provide an overview of the late blight season in Europe for the support of specific surveys (i.e. Eucablight results), scientific studies and scenario analysis.

Specific objective

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

Editors (original)

country	first name	last name
Austria	gottfried	besenhofer
Belgium (Flanders)	pieter	vanhaverbeke
Belgium (Wallonie)	jean-louis	rolot
Czech Republic	ervin	hausvater
Denmark	jens	gronbech hansen
England/Wales	nick	bradshaw
Estonia	mati	koppel
Finland	asko	hannukkala
France	ludovic	dubois
Germany	benno	kleinhenz
Hungary	zsolt	polgar
Ireland	leslie	dowley
Italy	riccardo	bugiani
Jersey	steve	thompson
Latvia	linda	ulmane
Lithuania	kestutis	tamosiunas
Netherlands	wim	nugteren
Northern Ireland	louise	cooke
Norway	arne	hermansen
Poland	jozefa	kapsa
Portugal	maria	ramalhete
Rumania	?	?
Russia	alexey	filippov
Scotland	ruairidh	bain
Slovakia	jan	heldak
Spain	raquel	marquinez
Sweden	bjorn	andersson
Switzerland	tomke	musa
Turkey	emel	cakir

**Thank you for
information!**


Late blight country reports

Entering information

EuroBlight - Microsoft Internet Explorer


Filer Rediger Vis Foretrukne Funktioner Hjælp

Adresse http://www.euroblight.net/EuroBlight.asp?TryLogin=yes



EuroBlight

EU.NET.ICP & EUCABLIGHT
Potato Late Blight Network For Europe



30 April 2007
Welcome
Jens Grønbech Hansen


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- News
- Events
- About EuroBlight
- Participating institutions
- People
- Links
- Related projects

Next Euroblight workshop to be held in Italy, 2-5 May, 2007. Registration has closed down

REGISTRATION

Registrations



Late Blight country report by Jens Grønbech Hansen

Select country and year: Austria 2006 Publish Help

Index: [Summary](#) | [First appearance](#) | [Weather](#) | [Fungicide](#) | [Organic](#) | [Tuber blight](#) | [Alternaria](#) | [Pathogen](#) | [Cultivar](#)

Summary [Back to top](#) Save

Write a short summary (max 200 words) about late blight development, fungicide use and control of late blight in the country and year selected

Select Font Size B I U x x² [Rich Text Editor]

Early outbreaks of potato late blight [Back to top](#) Save

Select the date for first observation of late blight in covered or very early planted potatoes

01-01-2006 [Calendar]

RESTRICTED INFORMATION

- Subgroups
- Milestones
- Deliverables
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RESULTS

- EU.NET.ICP proceedings
- Fungicides
- Fungicide effectiveness
- Country report
- Summary report
- Weather report

DATA COLLECTION

- Country report

Web site provided by University of Aarhus, Faculty of Agricultural Sciences, INFO Research Group. Report technical problems to webmaster: Poul.Lassen@agrsci.dk. Optimized for screen size 1024x768

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Late blight country reports

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20 February 2007
Welcome
Poul Lassen


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Next Euroblight workshop to be held in Italy, 2-5 May, 2007:

REGISTRATION

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- Registrations



First appearance

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Select a date for first observation of blight in covered or very early planted potatoes

Disease source for these attacks
 Seed Cull pile Volunteer plants Covered crop Waste pile
 Oospores Indications of oospores Other Not known

Select a date when first infections were reported in more than 5 conventional, normally planted potato fields

Disease source for these attacks
 Seed Cull pile Volunteer plants Covered crop Waste pile
 Oospores Indications of oospores Other Not known

Write a short text (max 100 words) about early attacks in your country

In Denmark (2004) most crops emerged in the period May 15-30. During this period the weather conditions were relatively dry. The first infection was found on July 2. One week after that, more (11) infections were recorded. In 2004, there were no indications of early infections from oospores. In June, July and August the weather based risk of late blight development was moderate. In September the disease pressure was low. In 2005, most crops emerged in the period May 15-30. During this period the weather conditions

Logout

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- Fungicides

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- Country report
- Show country report

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30 April 2007

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Country report


Select year and country

Summary

Most of the crops in England & Wales had been planted by the end of May having recovered from earlier delays caused by heavy rain in several areas. First early plantings were 70-90% ground cover unfleeced crops and 100% ground cover in fleeced crops. Growth and development of second early and maincrops varied considerable as would be expected at that stage of the season. Spring of 2006 was generally considered late and crop development was 7-10 days behind 'normal'. Conditions during early May were not considered conducive to blight due to low night (and sometimes day) temperatures. Nevertheless, there were four confirmed outbreaks on dumps in Kent (x2) on 10/11 May, Suffolk on 12 May and in Lincolnshire on 24 May. Apart from the southwest and the south coast of England, conditions were not considered favourable for blight at the start of the season. Very hot dry weather in June and the first half of July was a feature of the 2006 season with temperatures over 30°C at times clearly halting the development of foliar blight. Another important feature of 2006 also resulting from the dry weather was the predominance of stem lesions. This gives the disease the potential for survival during the unfavourable conditions. By mid August the weather had returned to 'normal' and in the unsettled conditions blight activity revived. Over the period 17-20 August, BlightWatch reported Smith criteria being met in up to 396 of the 652 postcode areas for England, Scotland & Wales. The dry conditions also caused ridges to develop large cracks and as the end of the season approached, there was concern that this may lead to tuber infection should the epidemic continue to develop. (British Potato Council funded fungicide trials have shown that even small amounts of foliar blight can result in high levels of tuber infection). During 2006, there were a total of 142 outbreaks confirmed in the BPC Fight against Blight Campaign which was on a par with the previous highest total recorded in 2004.

Early outbreaks of potato late blight

First observation of blight in covered or very early planted potatoes was on 01/06/2006. First infections were reported in more than 5 conventional, normally planted potato fields on 07/06/2006.



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RESULTS

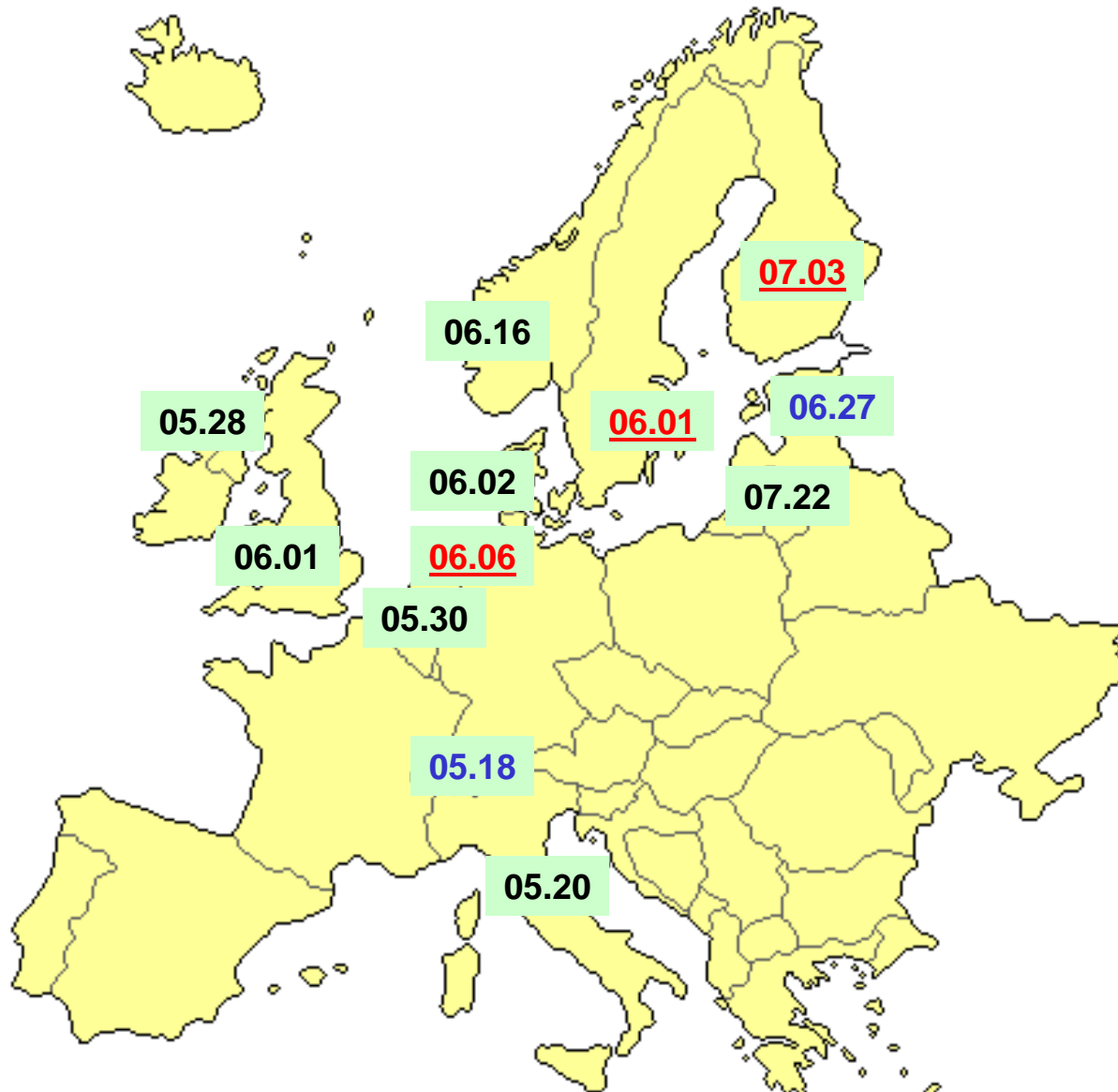
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- Country report
- Summary report
- Weather report

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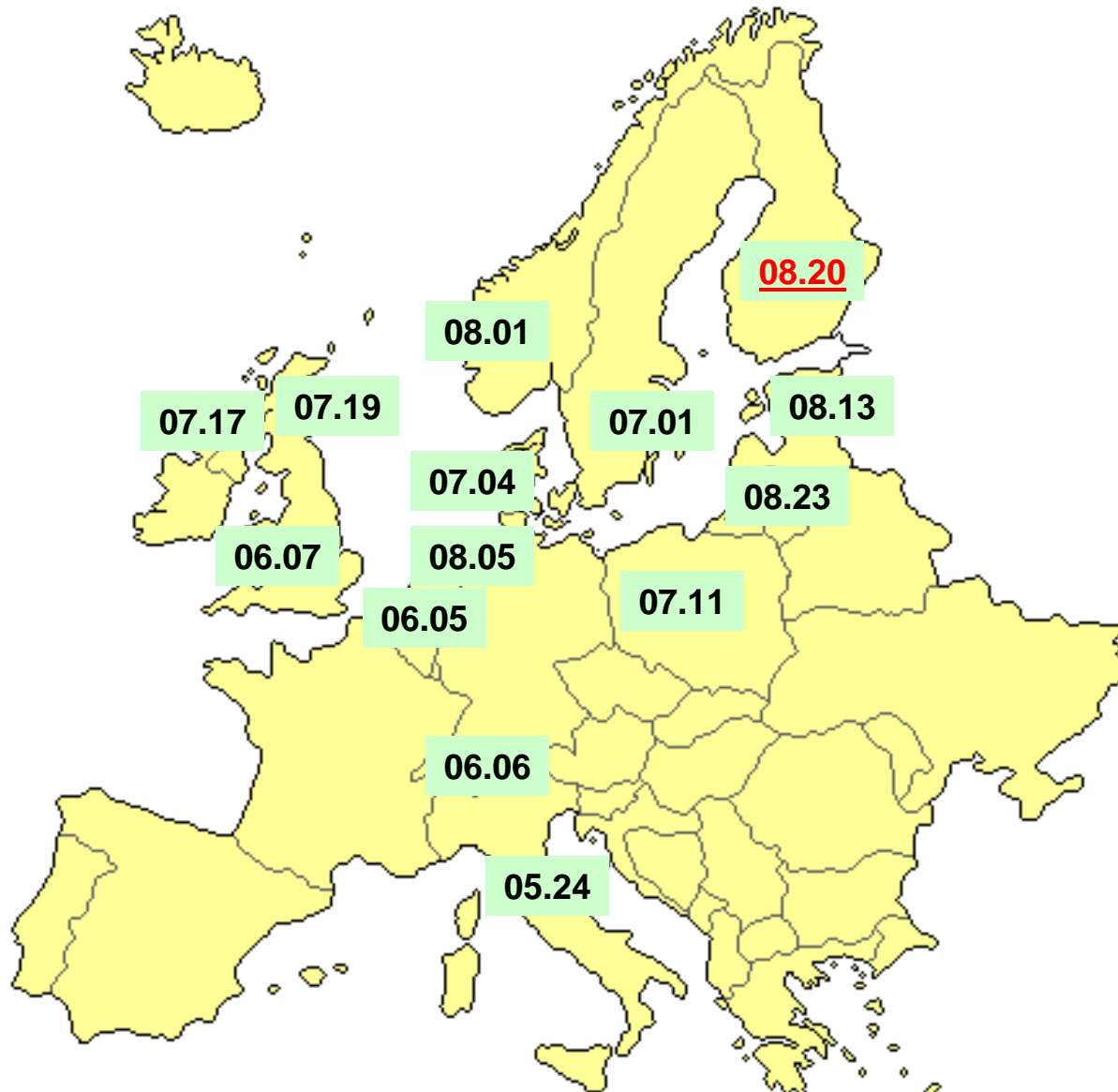


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First observation of late blight in covered or very early planted potatoes

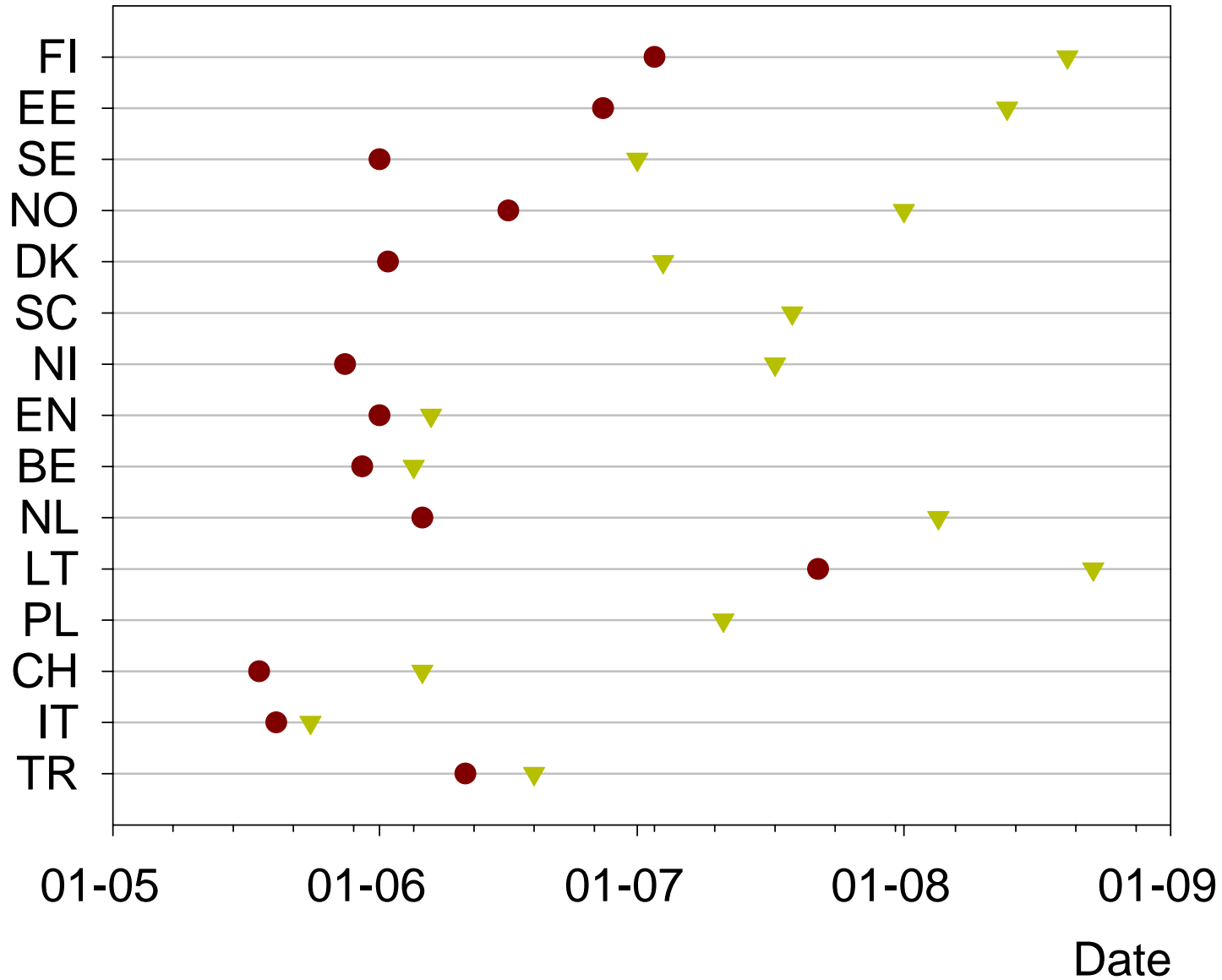


Date when first infections were reported in more than 5 conventional, normally planted potato fields



First infections

● = Early potatoes ▼ = attacks in several conventional potato fields

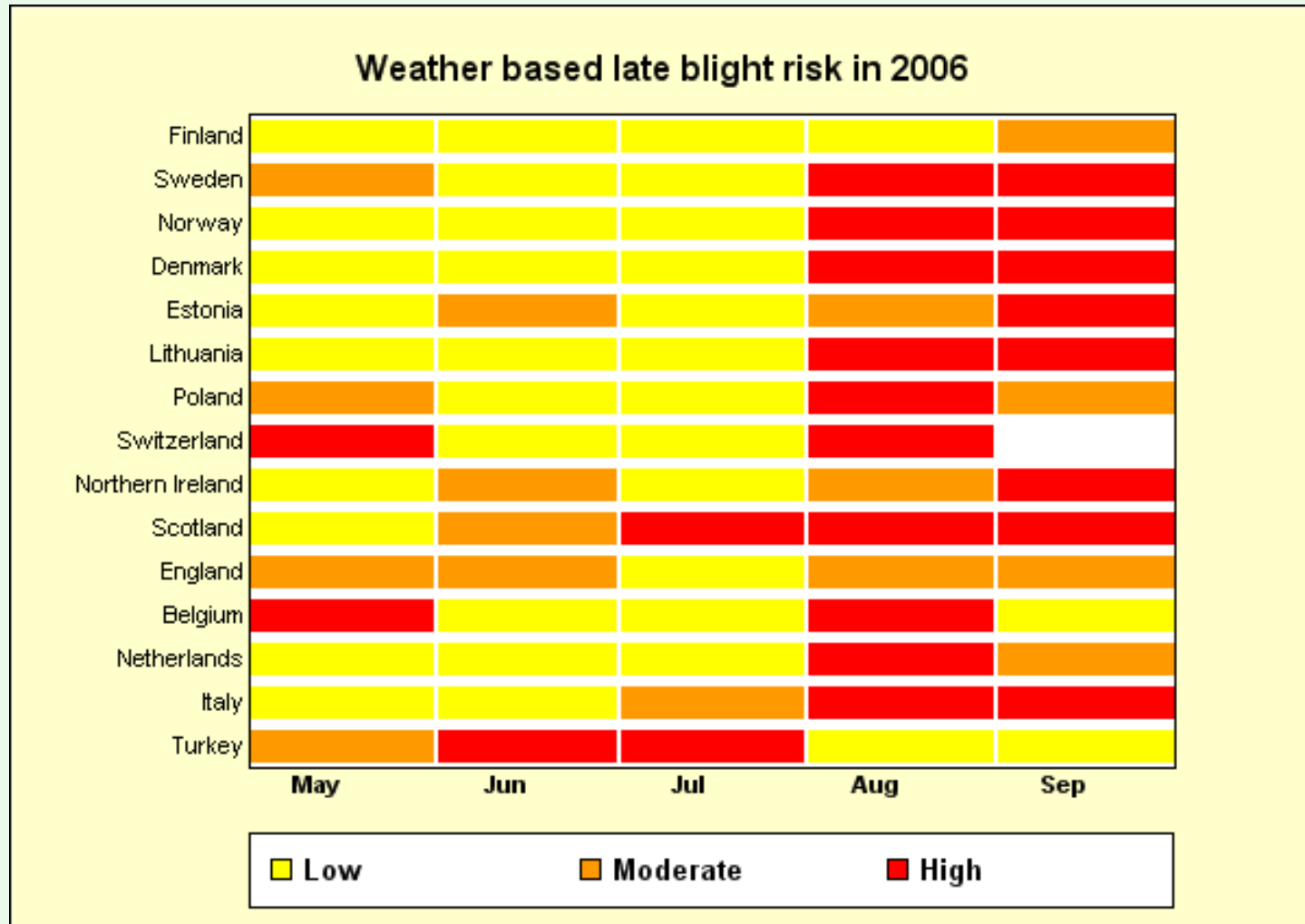


Indications on attacks from Oospores

Photo by Jens G. Hansen



Weather based late blight risk



Dry in July

Cracks in the
ridges -
A way for
the sporangia
to the tubers?





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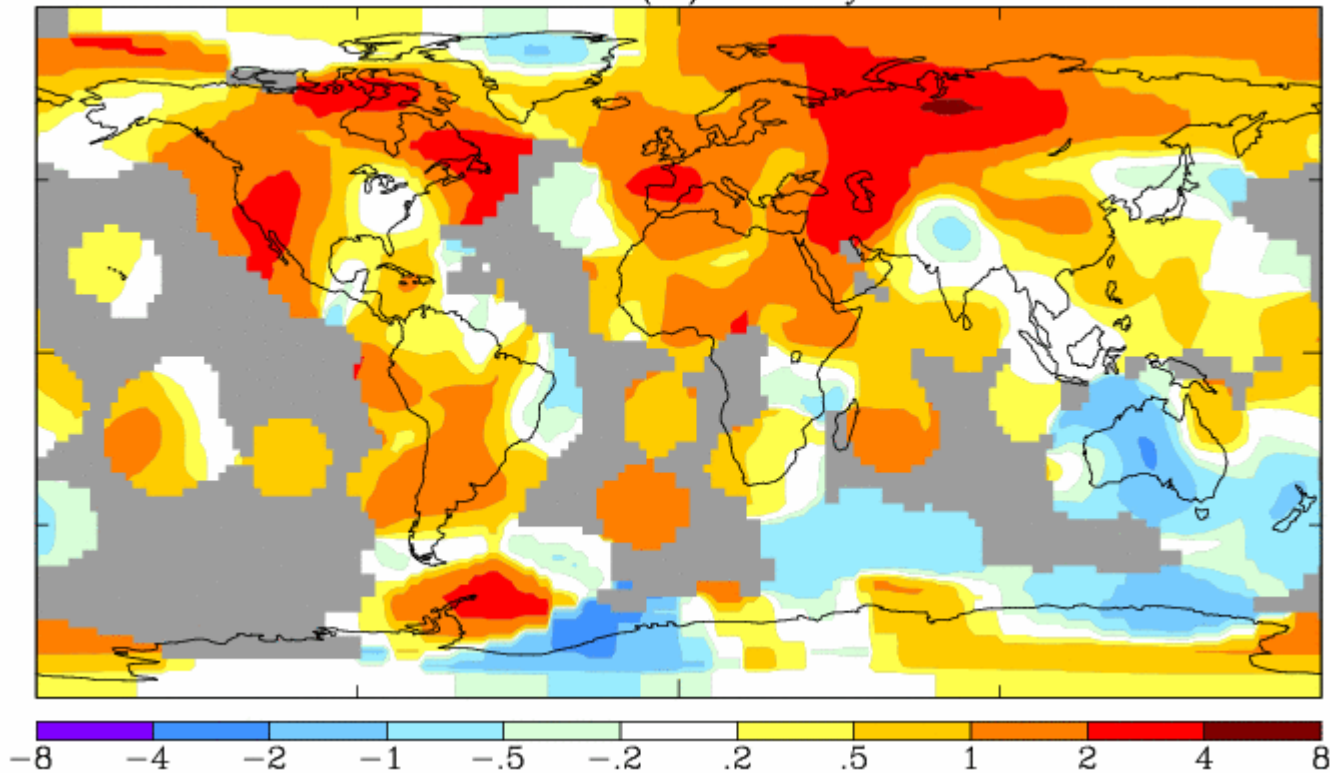
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June 2006

Tsurf(°C) Anomaly vs 1961–1990

.55





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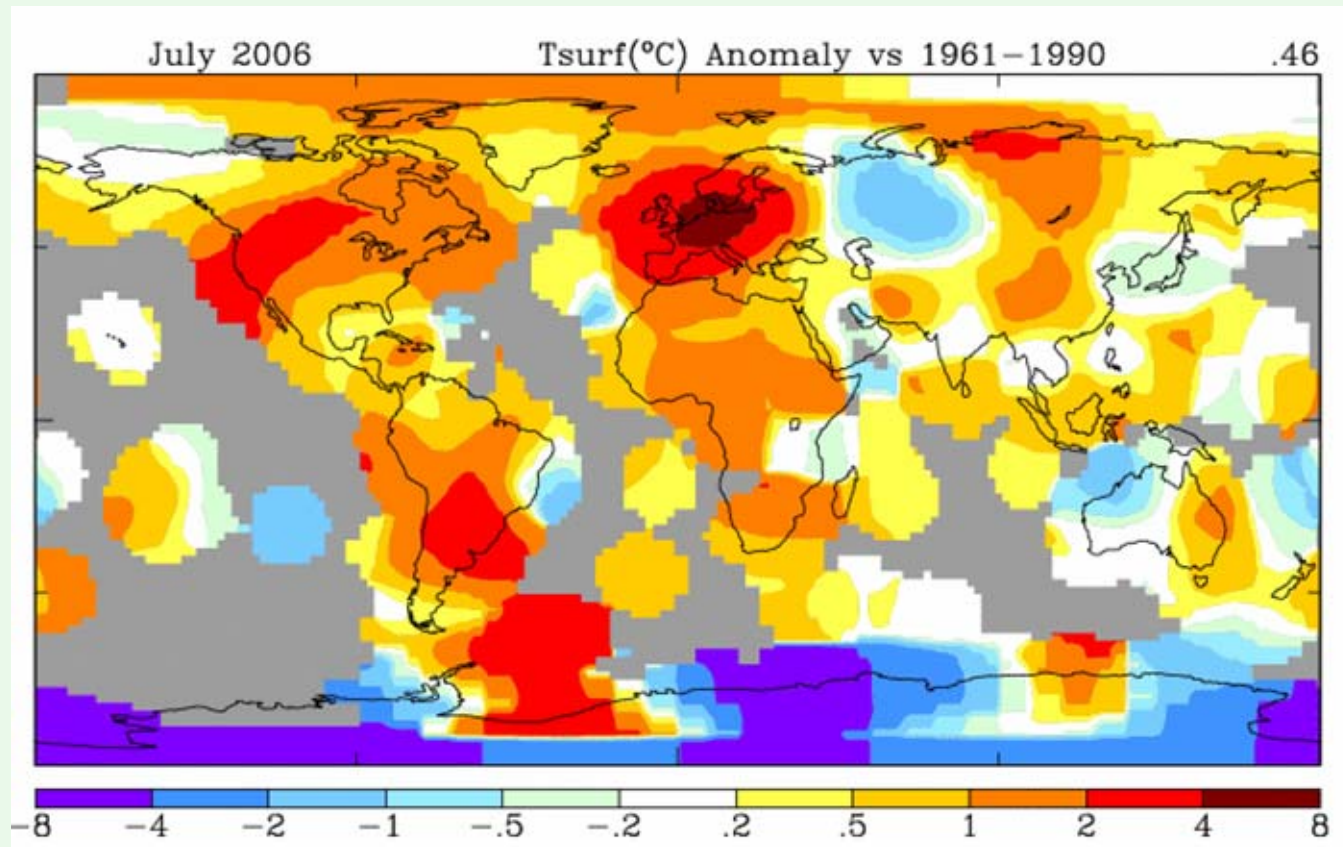
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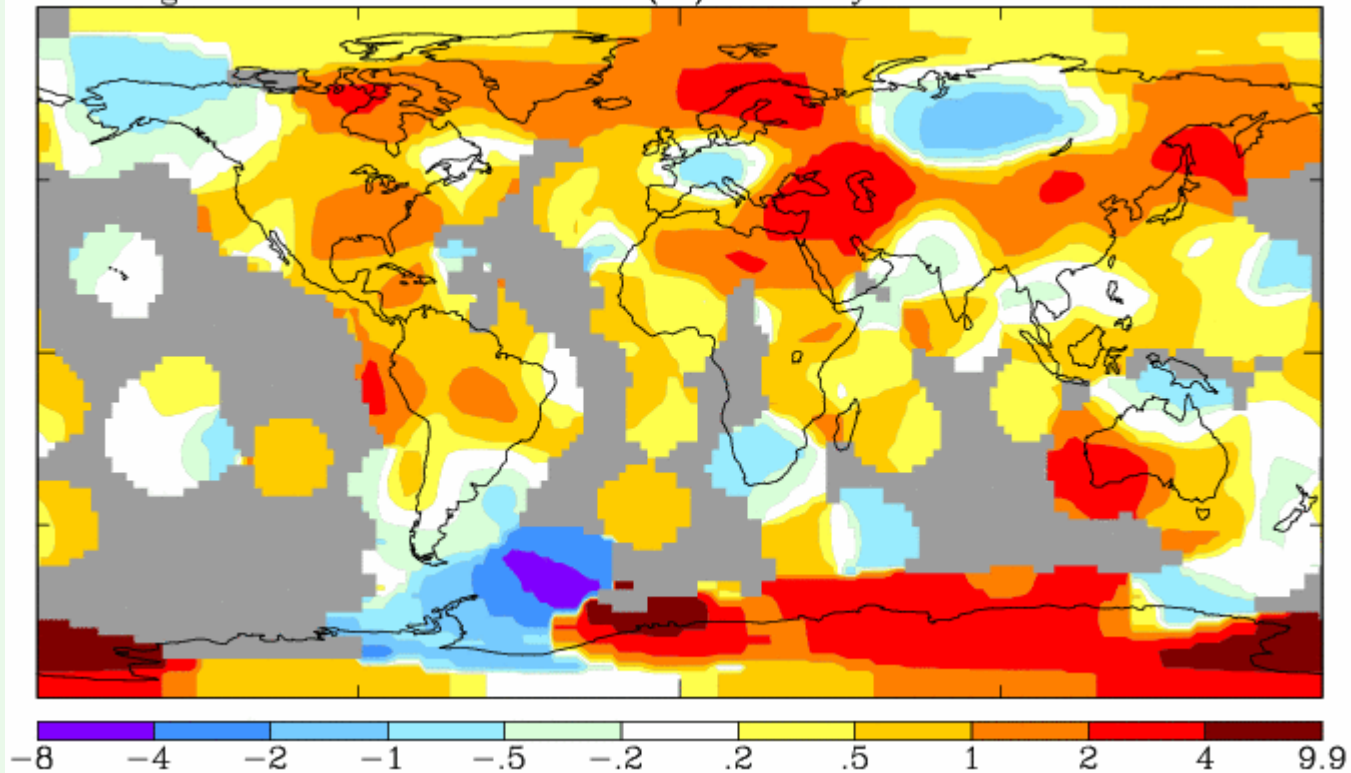
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August 2006

Tsurf(°C) Anomaly vs 1961–1990

.61



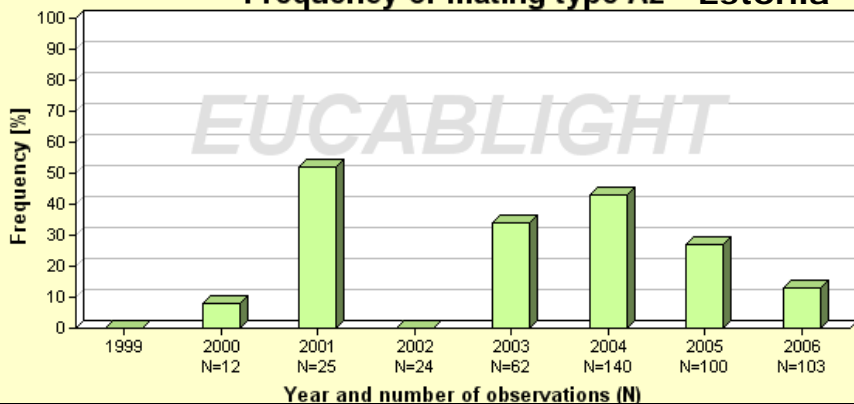
Fungicide use

Fungicide

Country	Number of fungicide applications used in ware potatoes			Number of fungicide applications used in all potatoes		
	min	max	mean	min	max	mean
Belgium	12	16	14			
Czech Republic						
Denmark	4	7	5	5	16	9
England	8	12	10	8	12	10
Estonia		6	2		6	2
Finland	1	4	3		5	3
Italy	5	9	7	5	11	8
Lithuania				1	4	2.5
Netherlands	7	20	15	6	20	13
Northern Ireland	5	14	9	5	14	9
Norway	2	8	5	2	8	5
Poland	1	8	2			
Russian Federation						
Scotland						
Slovakia						
Sweden	5	18	8	5	18	8
Switzerland			7			
Turkey	2	6	4	2	6	4

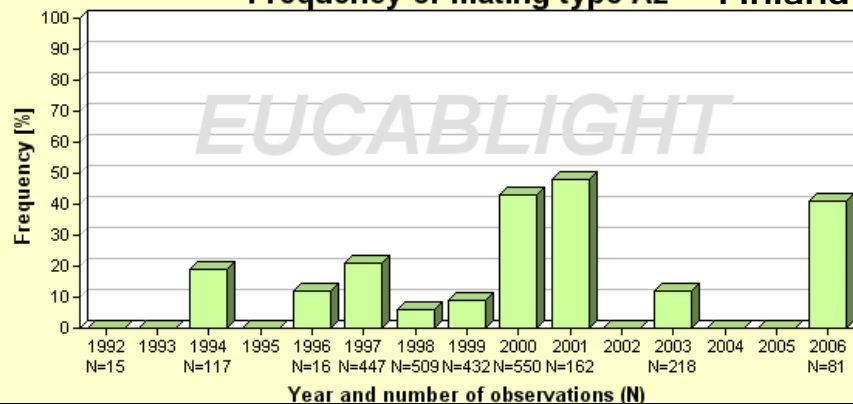
Frequencies of mating type A2

Frequency of mating type A2 Estonia



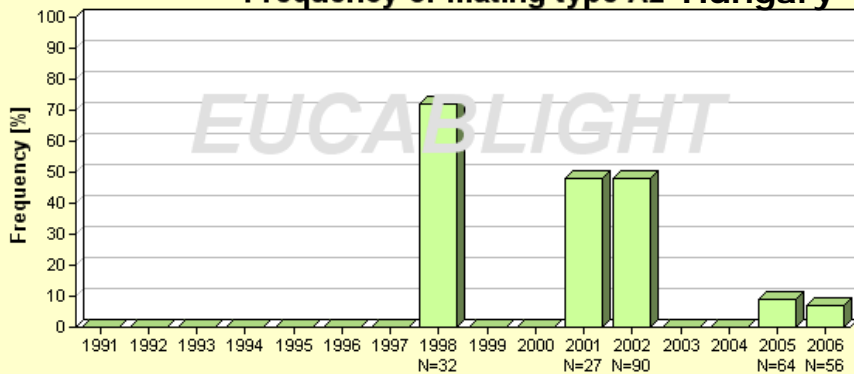
Year and number of observations (N)

Frequency of mating type A2 Finland



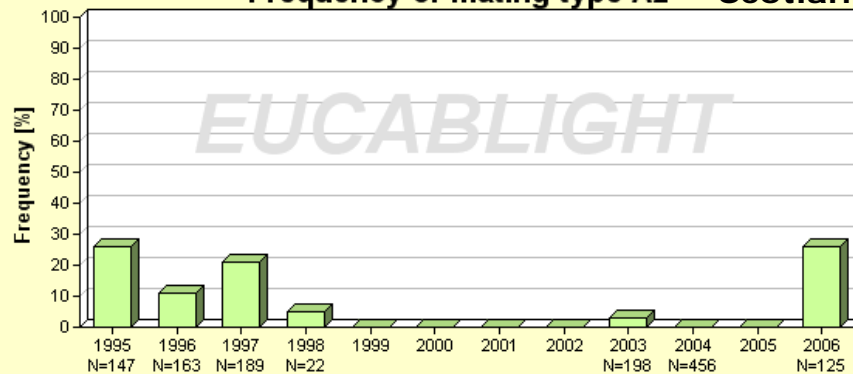
Year and number of observations (N)

Frequency of mating type A2 Hungary



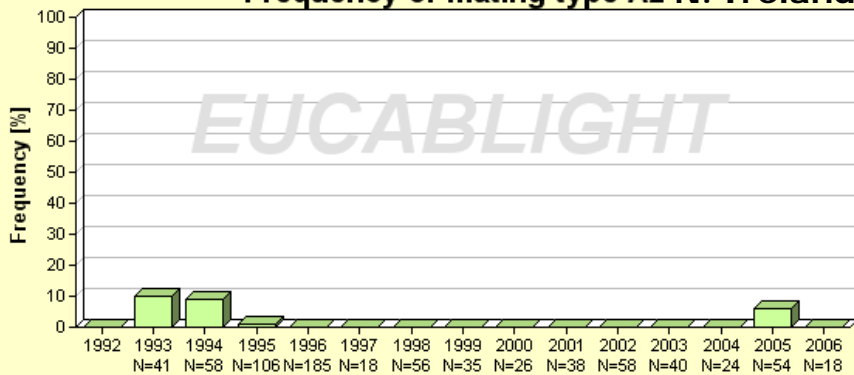
Year and number of observations (N)

Frequency of mating type A2 Scotland



Year and number of observations (N)

Frequency of mating type A2 N. Ireland



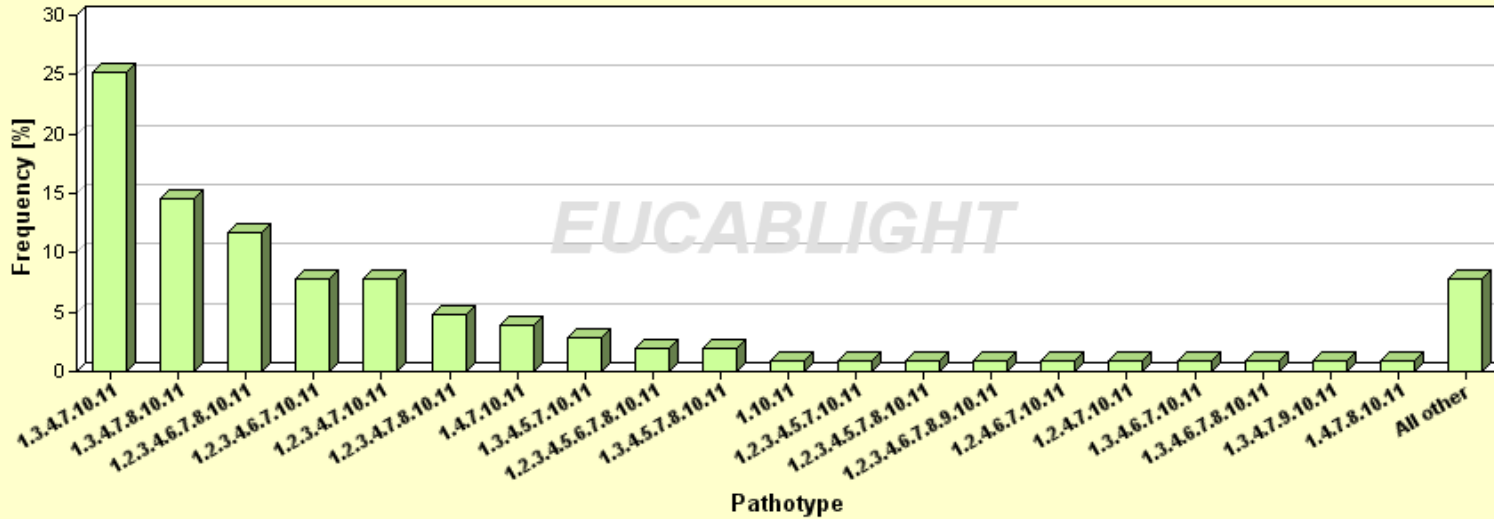
Year and number of observations (N)

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Virulence Pathotypes

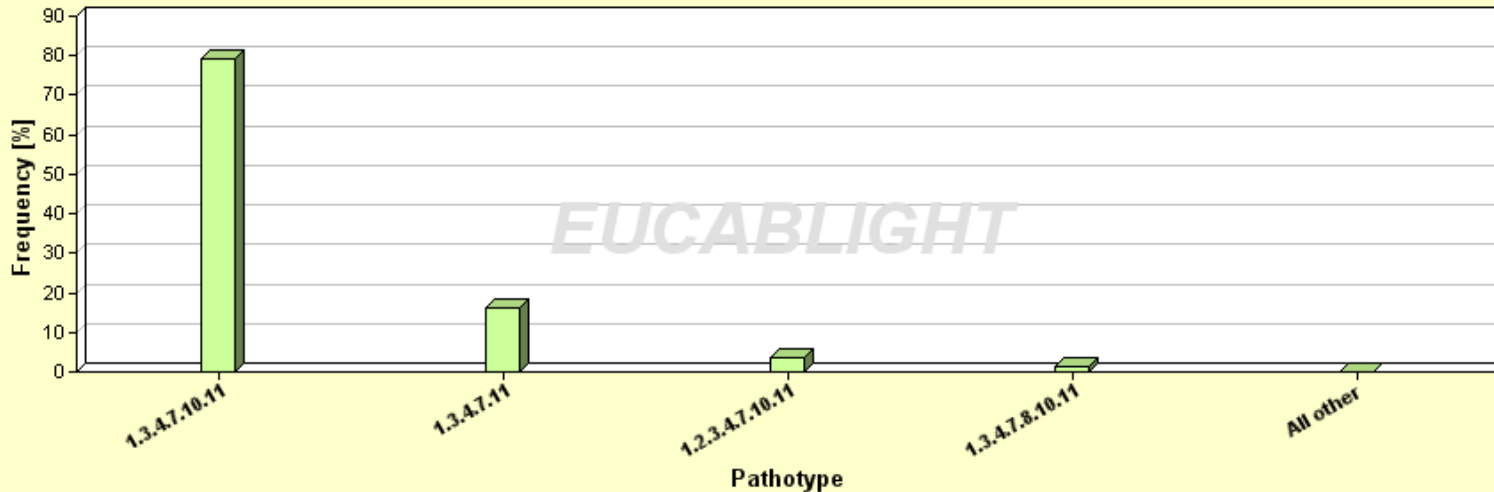
Frequency of pathotypes [Estonia - 2006]



Number of isolates: 103
Number of pathotypes: 28

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Frequency of pathotypes [Finland - 2006]



Number of isolates: 86
Number of pathotypes: 4

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**Different
Sampling
Strategy?**

Late Blight Country Reports conclusions

Weather based late blight risk:

Low – medium risk in June

”very low” during July

High risk in August

Late but dramatically severe epidemics

Tuber blight problems in many but not all countries

Storage problems

Late Blight Country Reports

Advantages:

Dedicated country editors (1-2 people/country)

More than one can work on the same report

Dedicated report form – comparable information

Information can be updated at any time

Integration of photos, links etc.

Links with data from the Eucablight database

We developed a draft version

Should it continue – who will use this information?