



Epidemics and control of early & late blight, 2015 & 2016 in Europe

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Late Blight Country Reports Objective

Objective:

- ✓ To provide an overview of the late blight seasons in Europe
- ✓ Support of The EuroBlight Monitoring initiative
- ✓ Improvement of DSS

- ✓ Full Report in the EuroBlight workshop proceedings



Country Profile Editors (2017)

Country	Name
Belgium (Flanders)	Pieter Vanhaverbeke
Denmark	Jens G. Hansen, Bent Nielsen, Isaac Abuley
England/Wales	Faye Ritchie
Estonia	Britt Puidet
Finland	Asko Hannukkala
France	Denis Gaucher
Germany	Hans Hausladen
Ireland	Steven Kildea
Latvia	Guntis Gulbis & Adrija Dorbe
Lithuania	Antanas Ronis
Netherlands	Kees Vogelaar
Norway	Håvard Eikemo
Poland	Jerzy Osowski
Russia	Alexey Filippov & Maria Kuznetsova
Scotland	Ruairidh Bain
Serbia	Žarko Ivanović & Jovana Blagojević
Sweden	Björn Andersson, Erland Liljeroth & Eva Edin
Switzerland	Tomke Musa

Thank you for information!

Late blight country reports - Questions

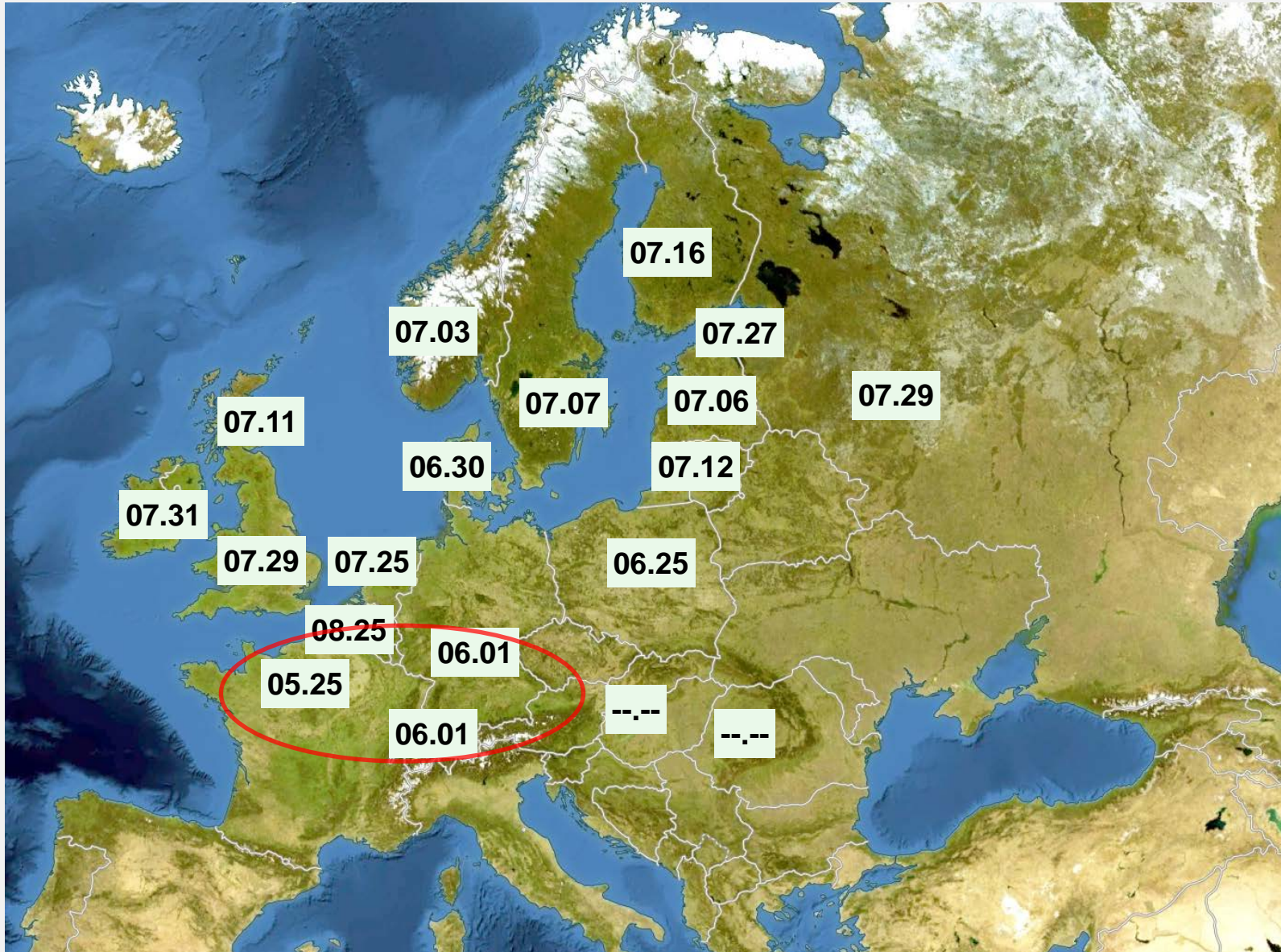
EuroBlight Country Profile Data

- **Summary**
- **Early outbreaks of potato late blight**
- **Weather conditions and late blight development**
- **Use of fungicides and control strategies**
- **Tuber blight**
- ***Alternaria ssp***
- **Characteristics of *Phytophthora infestans***
- **Use of DSS**

+

Date when Blight observed in > 5 conventional fields

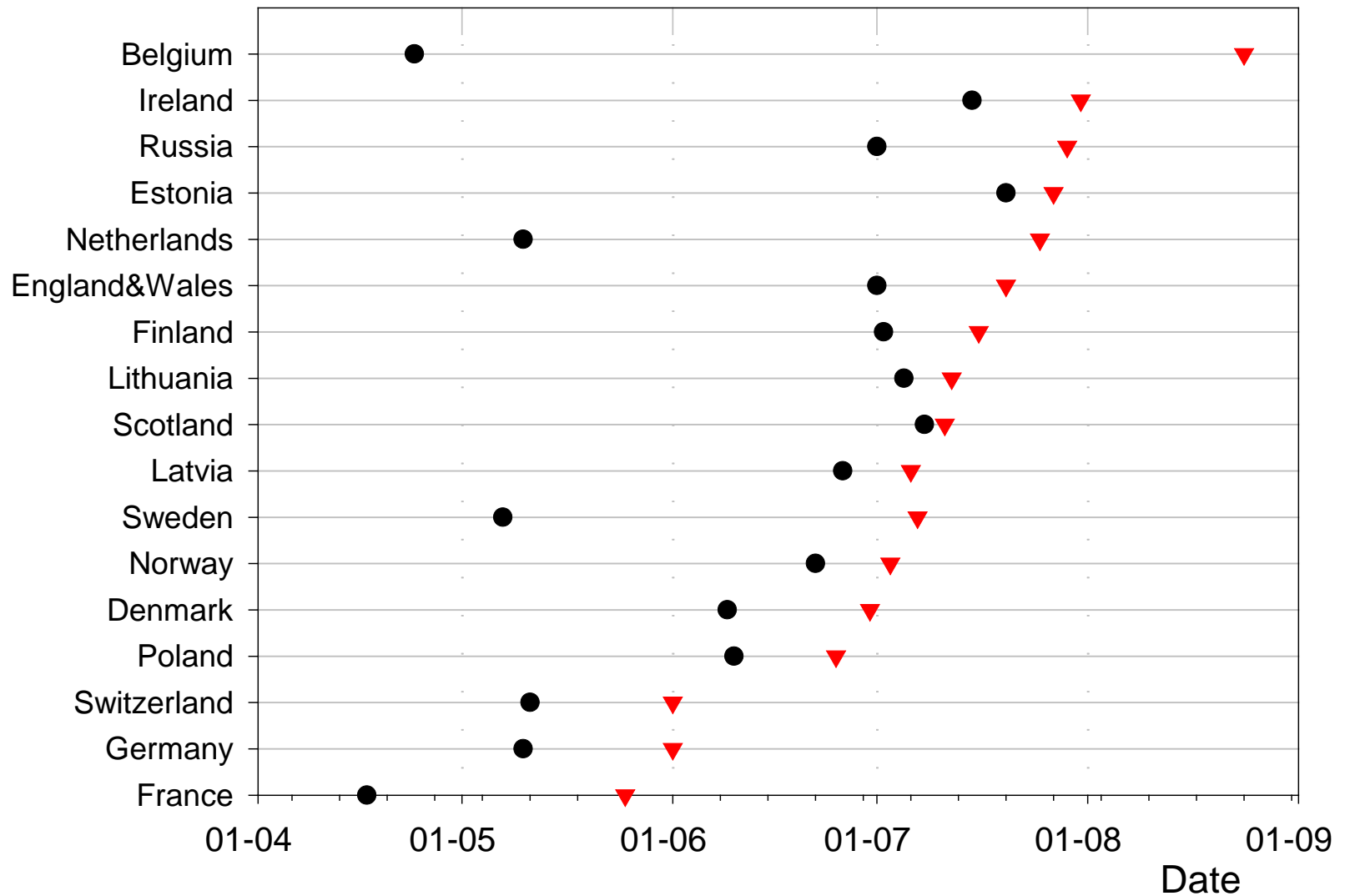
2015



First infections, 2015

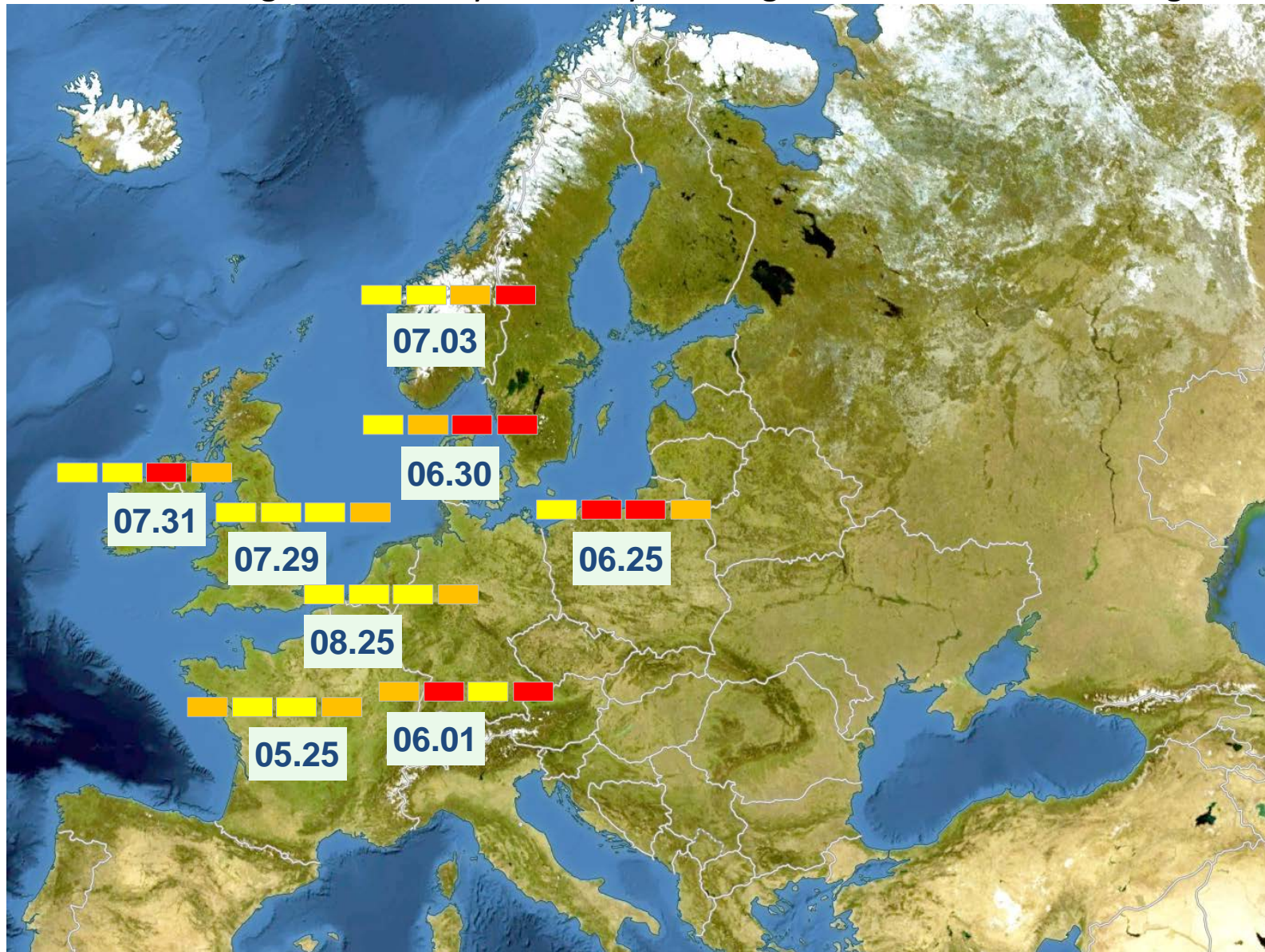
● = First attack

▼ = Attack in > 5 conventional fields



Blight weather – May, June, July and August and Attacks > 5 conventional fields

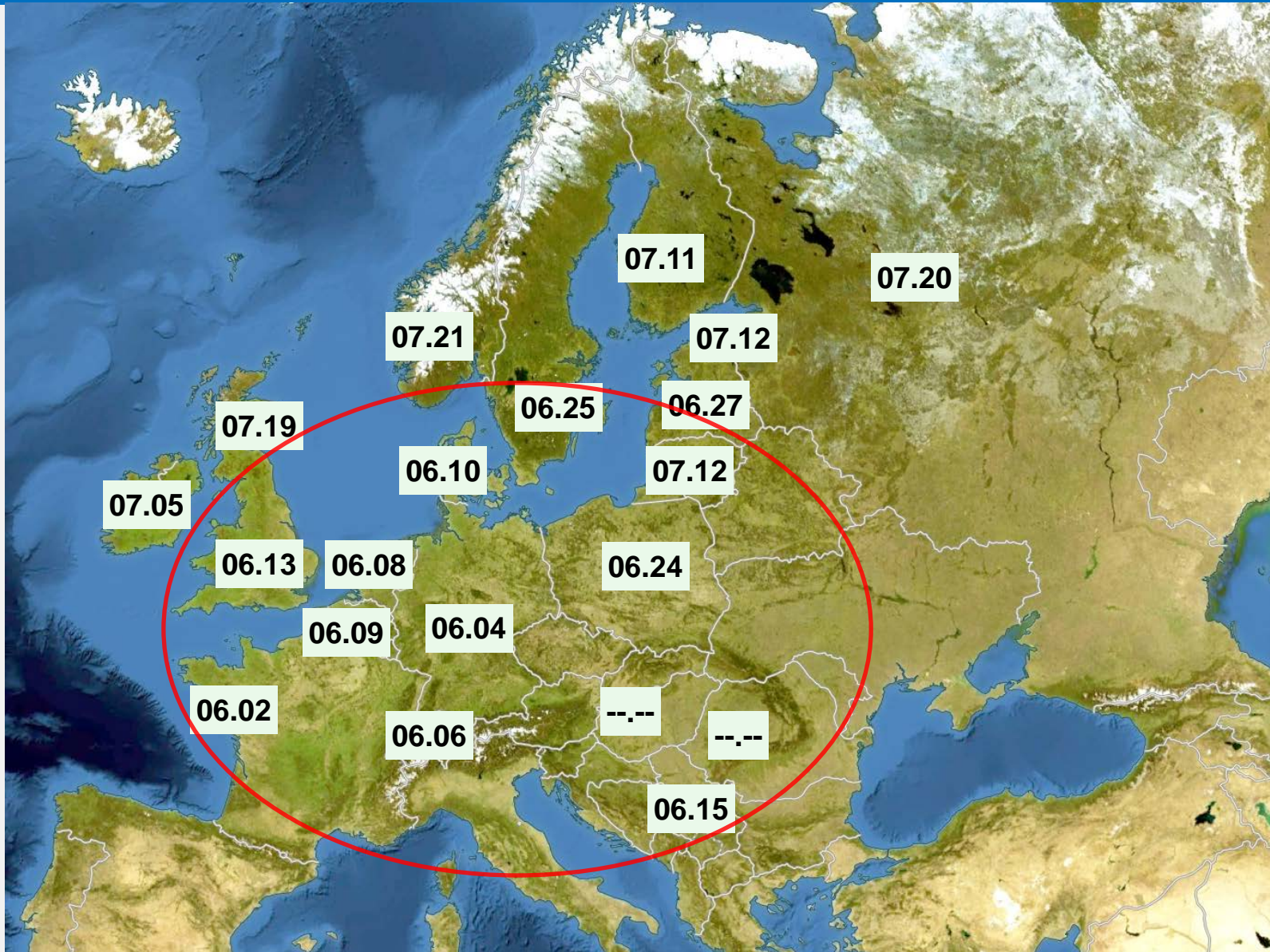
■ ■ ■ ■ ■ = Blight risk in May, June July and August as Low, medium or high risk



2015

Date when Blight observed in > 5 conventional fields

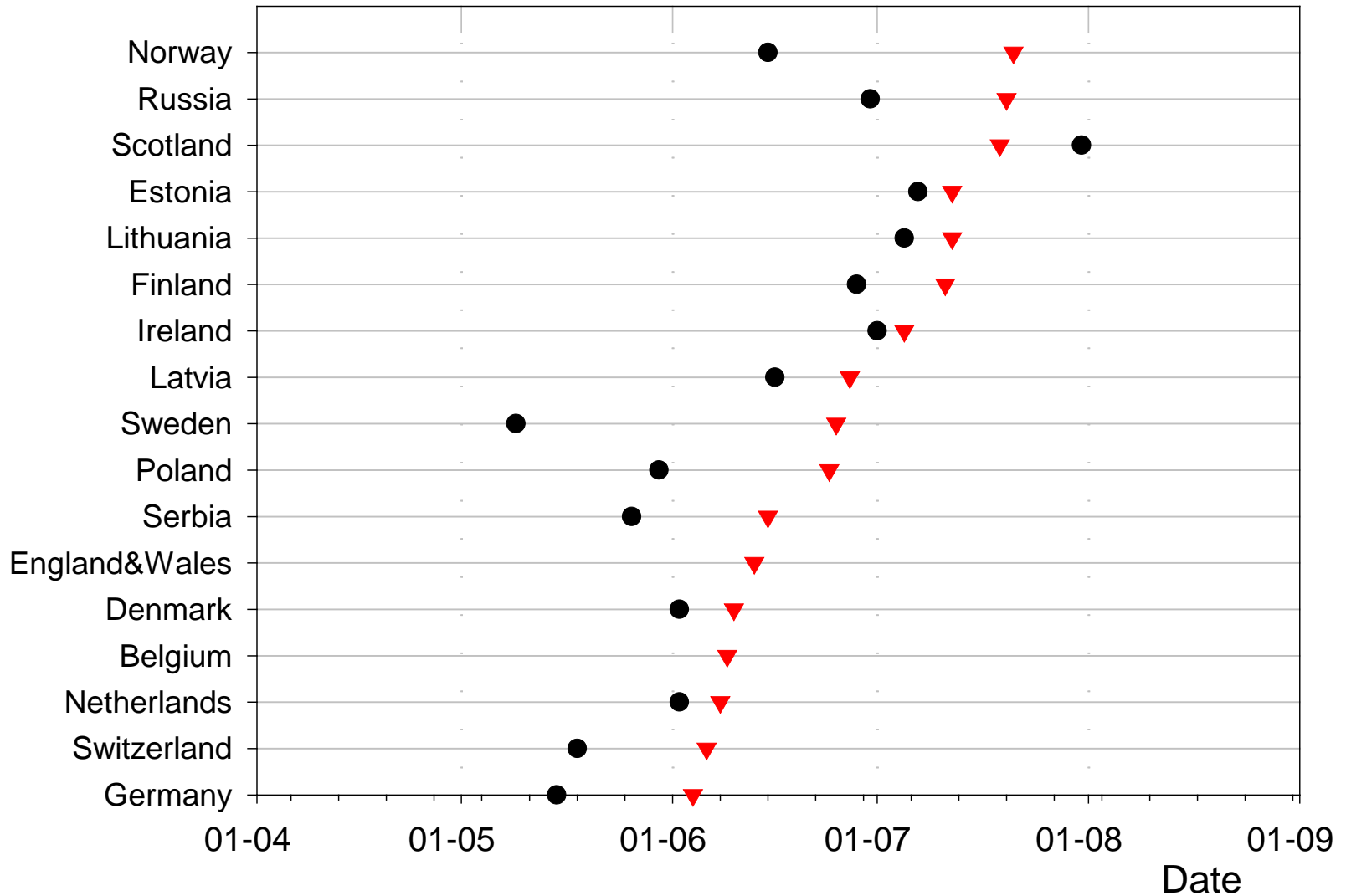
2016



First infections, 2016

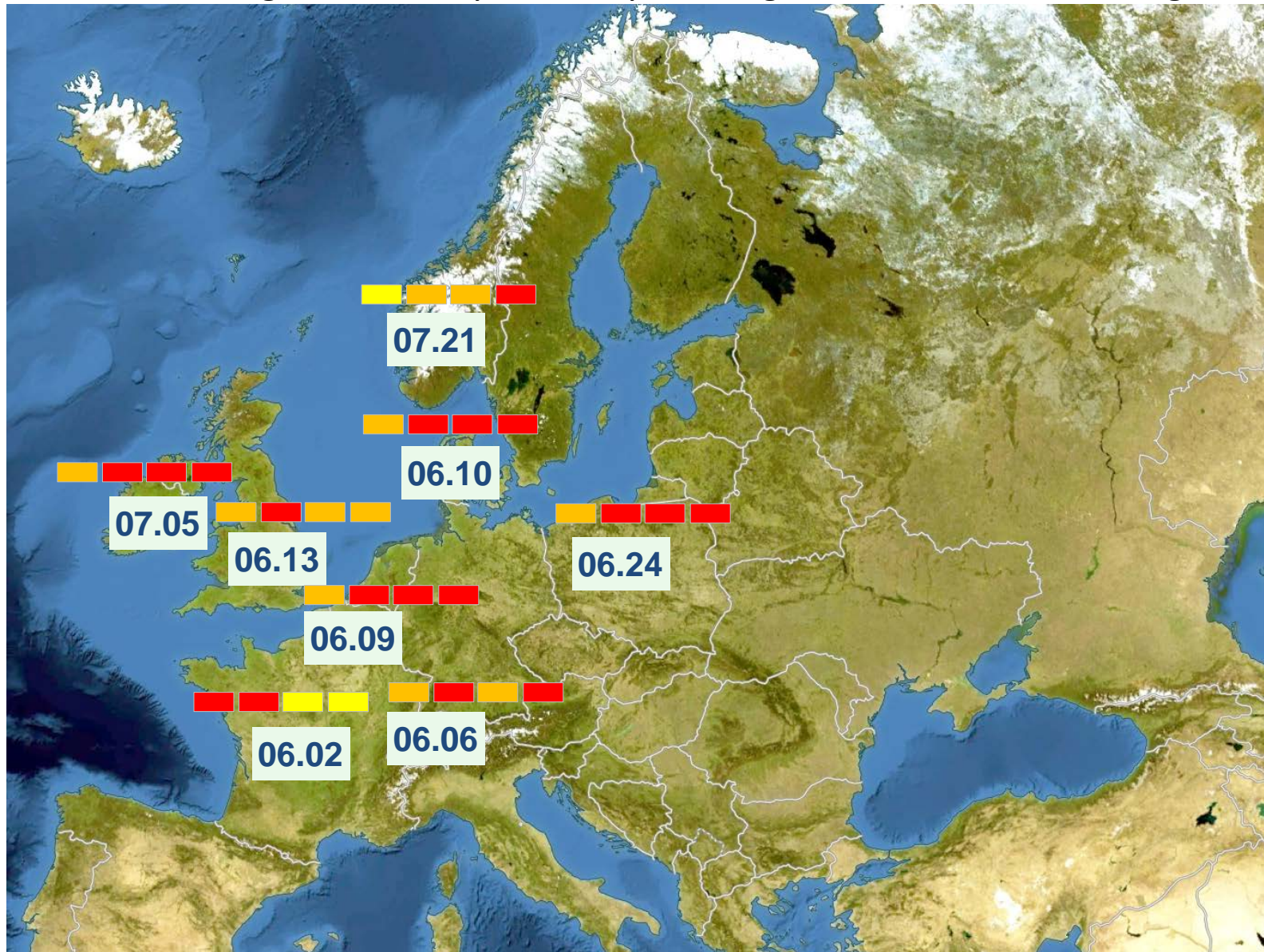
● = First attack

▼ = Attack in > 5 conventional fields



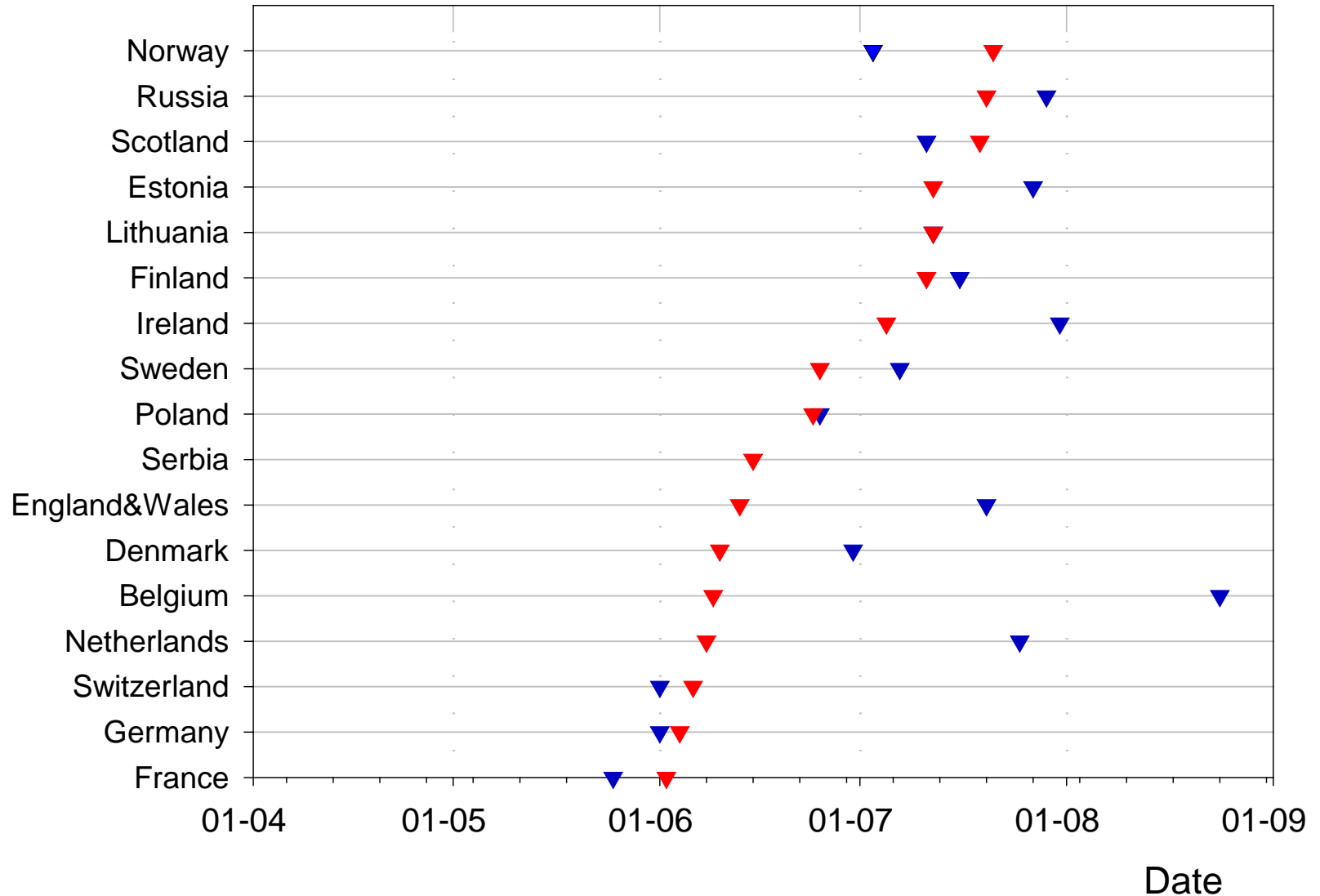
Blight weather – May, June, July and August and Attacks > 5 conventional fields

■ ■ ■ ■ ■ = Blight risk in May, June July and August as Low, medium or high risk



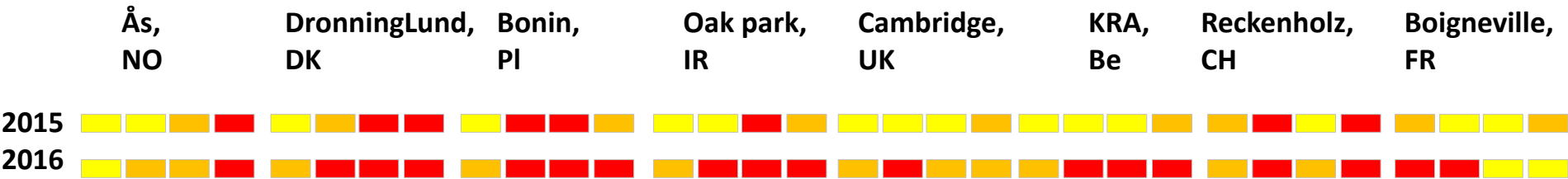
Compare 2015 with 2016

▼ = 2016, Attack in > 5 conventional fields ▼ = 2015, Attack in > 5 conventional fields



Blight weather – May, June, July and August

Eight locations and 2015 and 2016



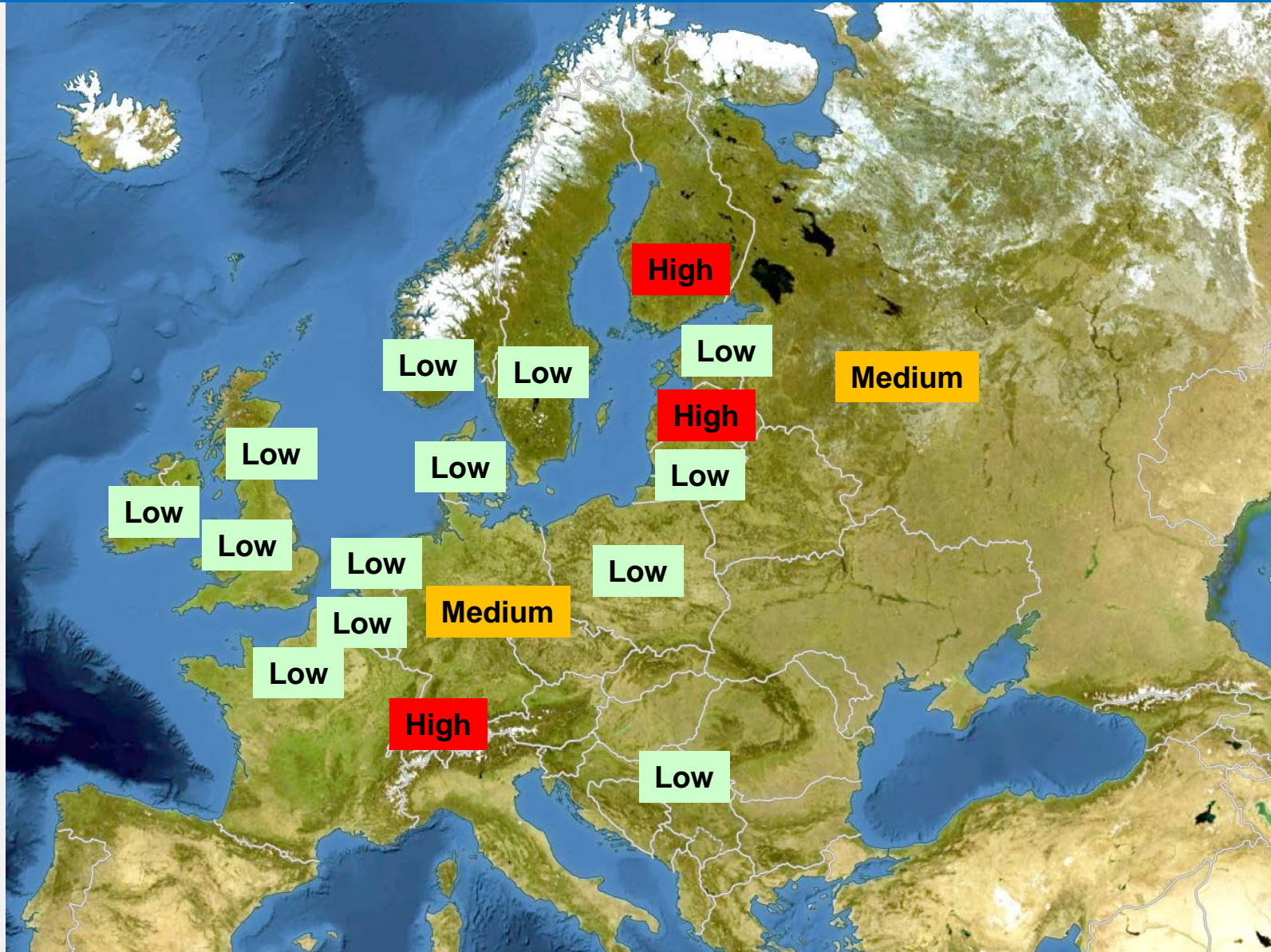
2015 Blight season characteristics:

2016 Blight season characteristics:

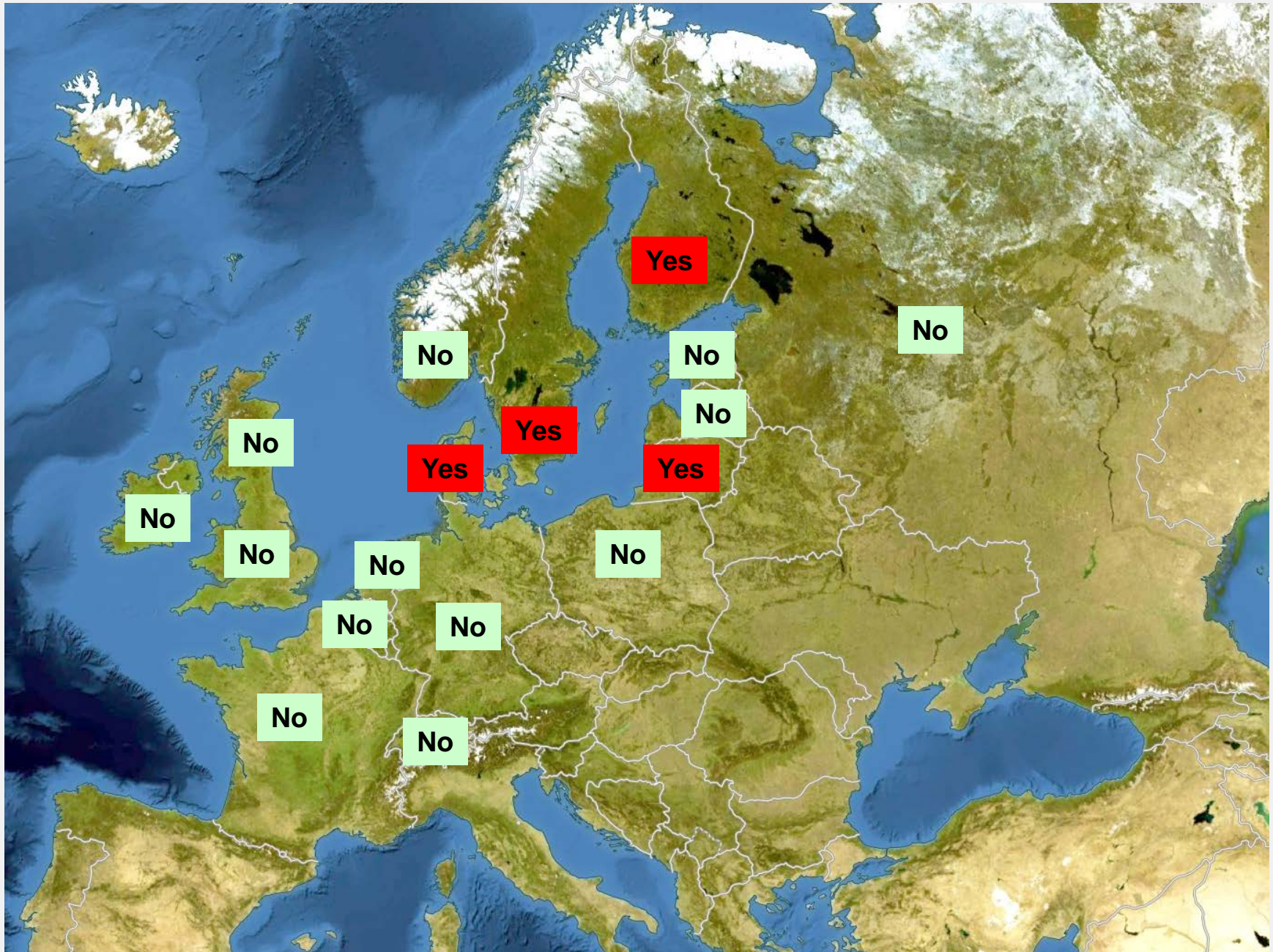
Problems with tuber blight, 2015 (compared to normal)



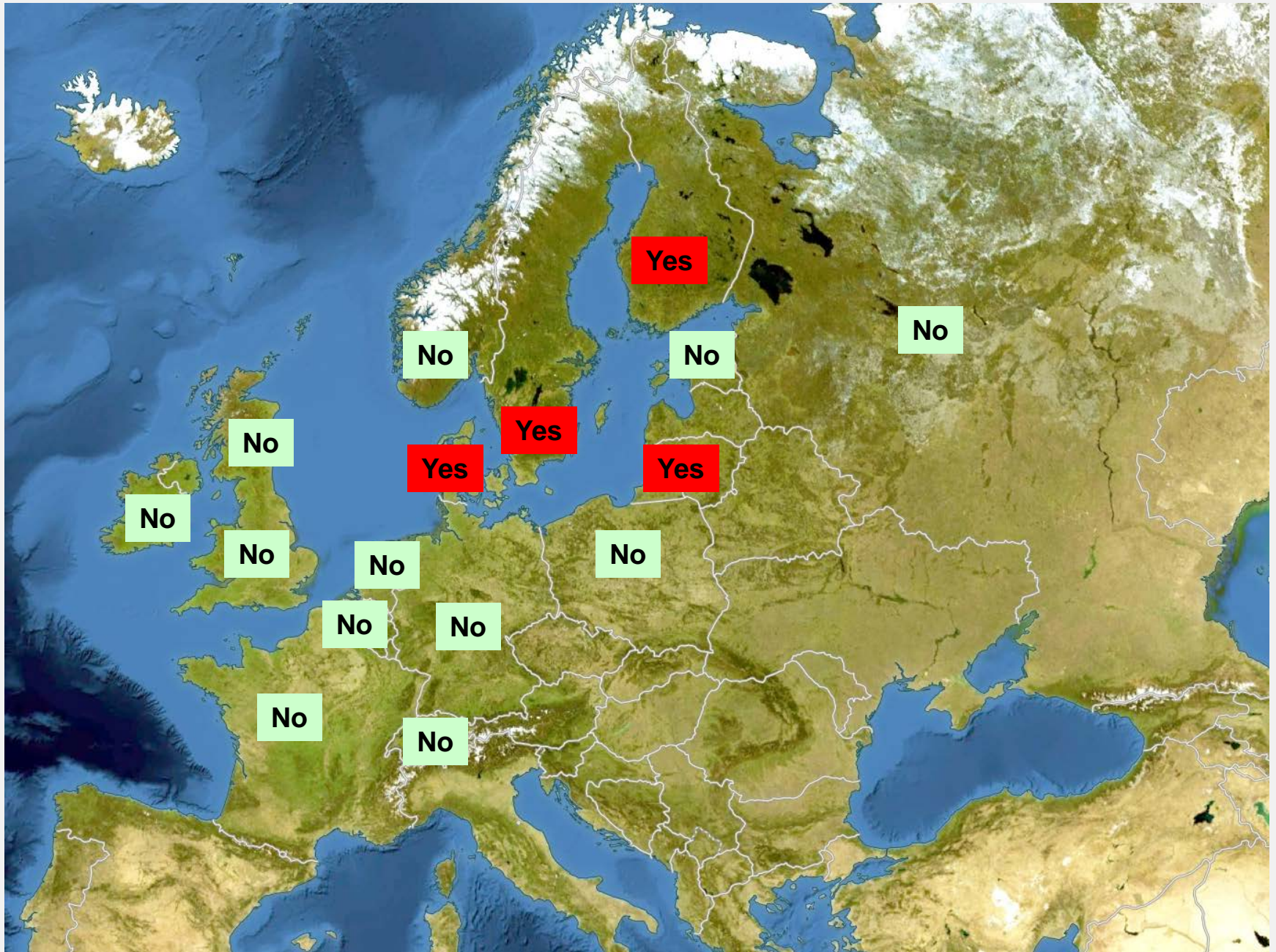
Problems with tuber blight, 2016 (compared to normal)



Indications of oospores, 2015



Indications of oospores, 2016



Use of DSS 2015-16

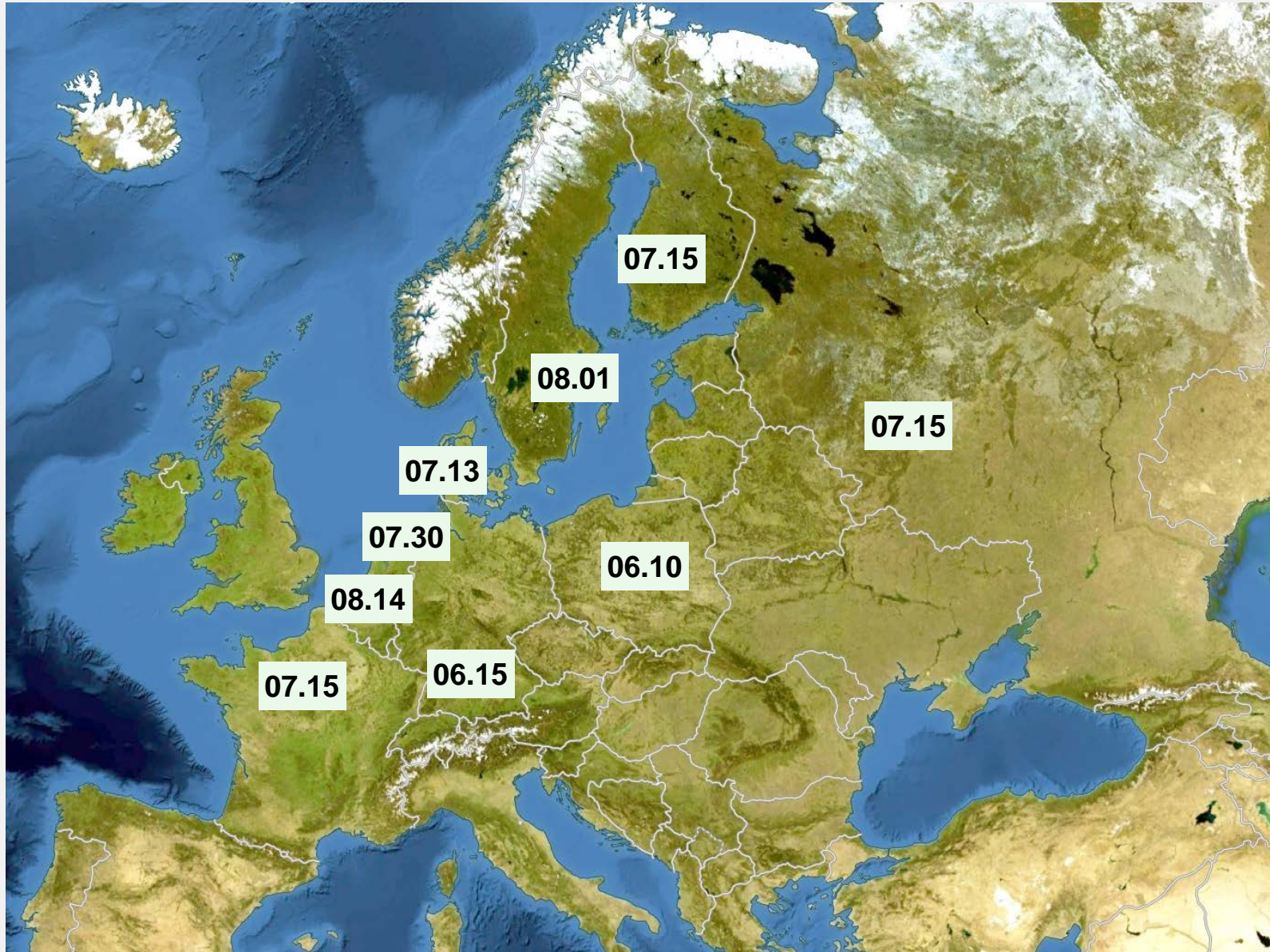
Belgium	Improved Guntz-Divoux
Denmark	Blight Management
England, Wales, Scotland	Blight-Watch (Hutton criteria), Plant Plus & BlightCAST
Estonia	Estonian Crop Research Inst.(13 met stat.)
Latvia	Plant Plus on some commercial farms
Finland	Natural Resource Institute: general LB warnings
France	Mileos®
Germany	PhytophthoraModel Weihenstephan, ISIP
Netherlands	ProPhy, Plant Plus, Akkerweb (WUR model)
Ireland	Irish met service based on Irish rules (Bourke)
Norway	VIPS (Nærstad model)
Russia	Plant Plus, VNIIFBlight
Sweden	Plant Plus, Blight Management (DK) & VIPS (NO)
Switzerland	PhytoPRE



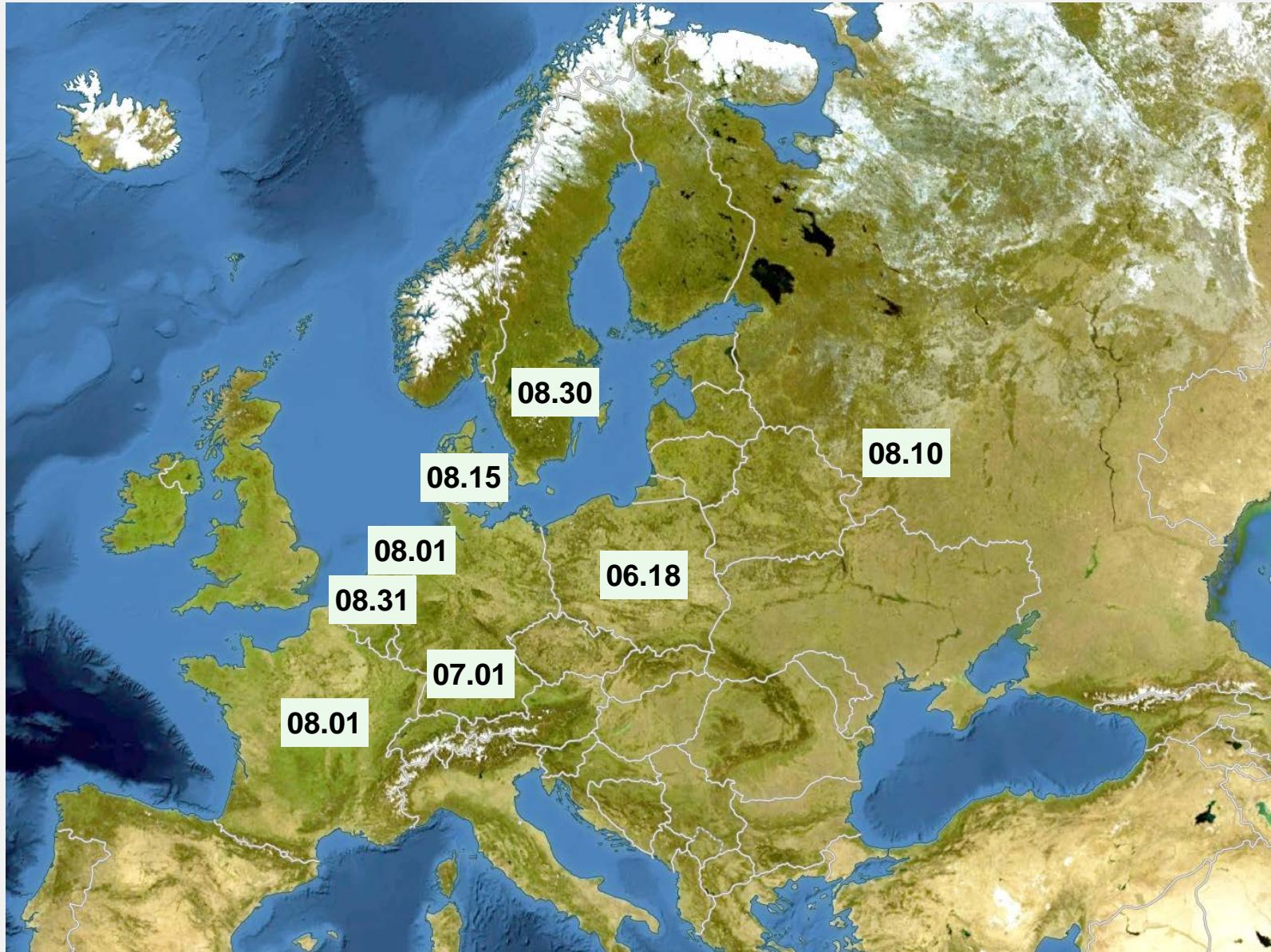
Epidemics and control of early blight, 2015 & 2016 in Europe



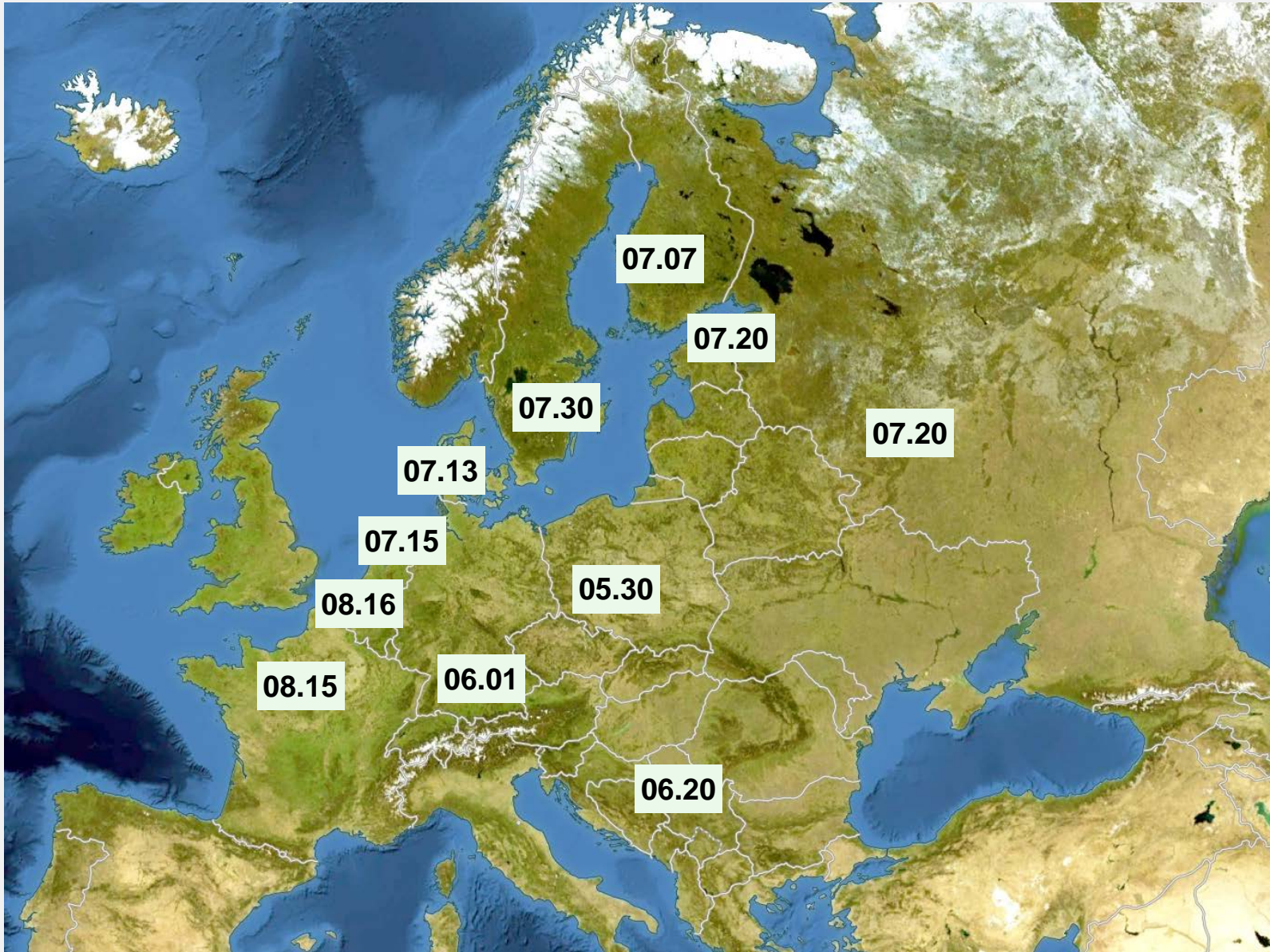
First observation of early blight 2015



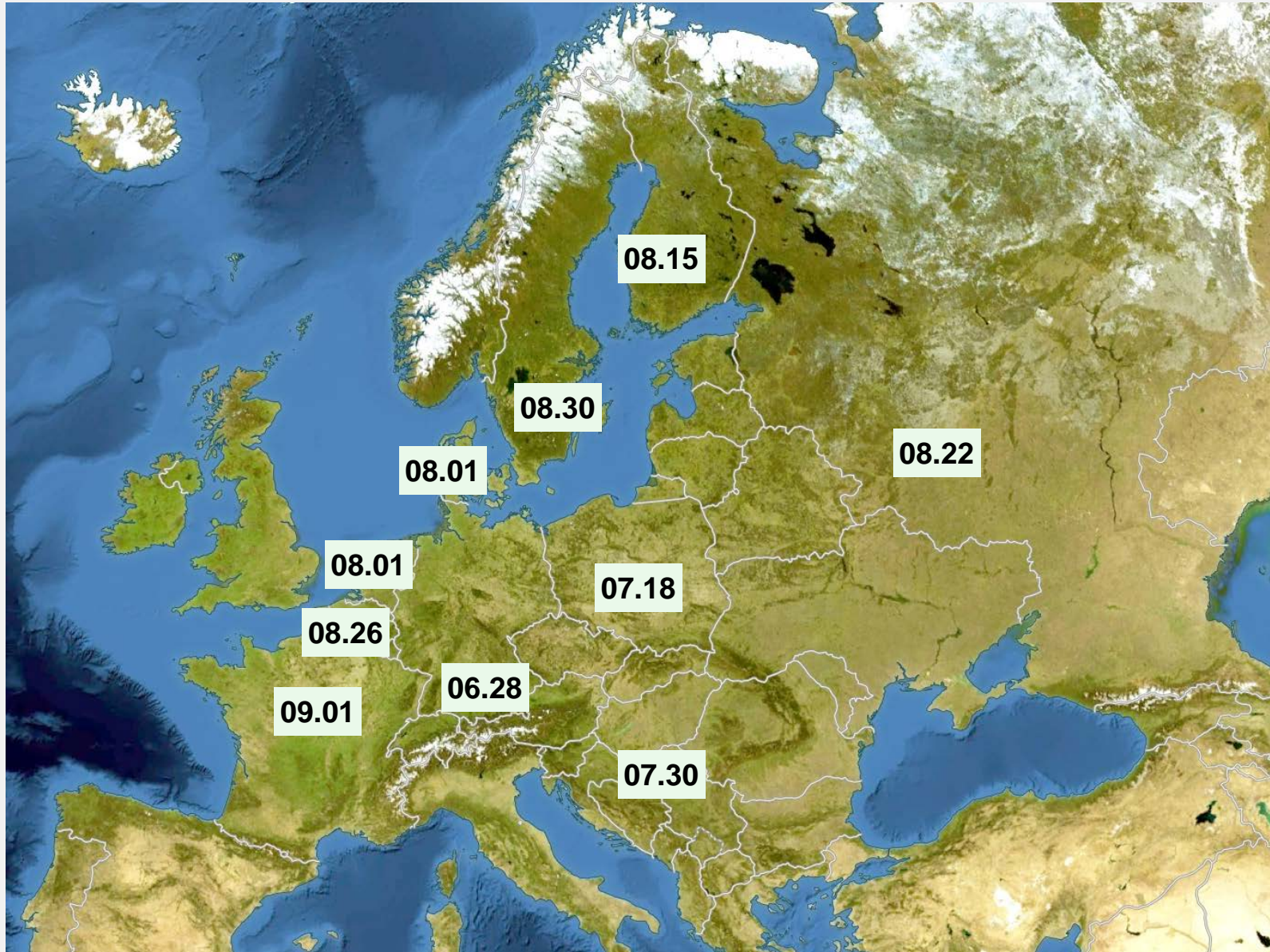
Disease epidemic of early blight 2015



First observation of early blight 2016



Disease epidemic of early blight 2016

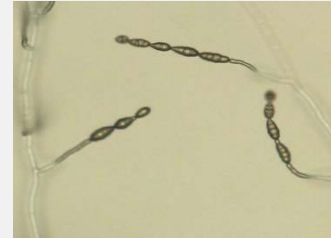


EB specific disease severity

- Low <20%
- Medium 20-50%
- High >50%
- no data, no eb

	disease severity				
	May	June	July	August	September
Finland	Low <20%	Low <20%	Low <20%	Low <20%	Low <20%
Norway	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
Sweden	Low <20%	Low <20%	Low <20%	Low <20%	Medium 20-50%
Denmark	no data, no eb	no data, no eb	Low <20%	Medium 20-50%	High >50%
Estonia	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
Lithuania	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
Scotland	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
Northern Ireland	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
England and Wales	Low <20%	Low <20%	Low <20%	Low <20%	Low <20%
Belgium	Low <20%	Low <20%	Low <20%	Medium 20-50%	Medium 20-50%
Netherlands	Low <20%	Low <20%	Low <20%	Medium 20-50%	Medium 20-50%
Germany	Low <20%	Low <20%	Medium 20-50%	High >50%	High >50%
Poland	Low <20%	Low <20%	Medium 20-50%	High >50%	High >50%
Switzerland	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
Czech republic	no data, no eb	no data, no eb	no data, no eb	no data, no eb	no data, no eb
France	Low <20%	Low <20%	Low <20%	Low <20%	Low <20%
Serbia	Low <20%	Low <20%	Low <20%	Medium 20-50%	Medium 20-50%
Russia	no data, no eb	Low <20%	Low <20%	Medium 20-50%	Medium 20-50%

identified Alternaria species



	A. solani	Jun	Jul	Aug	Sep
Finland					
Norway					
Sweden	√			√	√
Denmark	√		√	√	√
Estonia					
Lithuania					
Scotland					
Northern Ireland					
Ireland					
England & Wales					
Belgium	√		√	√	√
Netherlands	√		√	√	√
Germany	√		√	√	√
Poland	√		√	√	√
Switzerland					
Czech republic					
France	√			√	√
Serbia	√	√	√	√	√
Russia	√			√	√

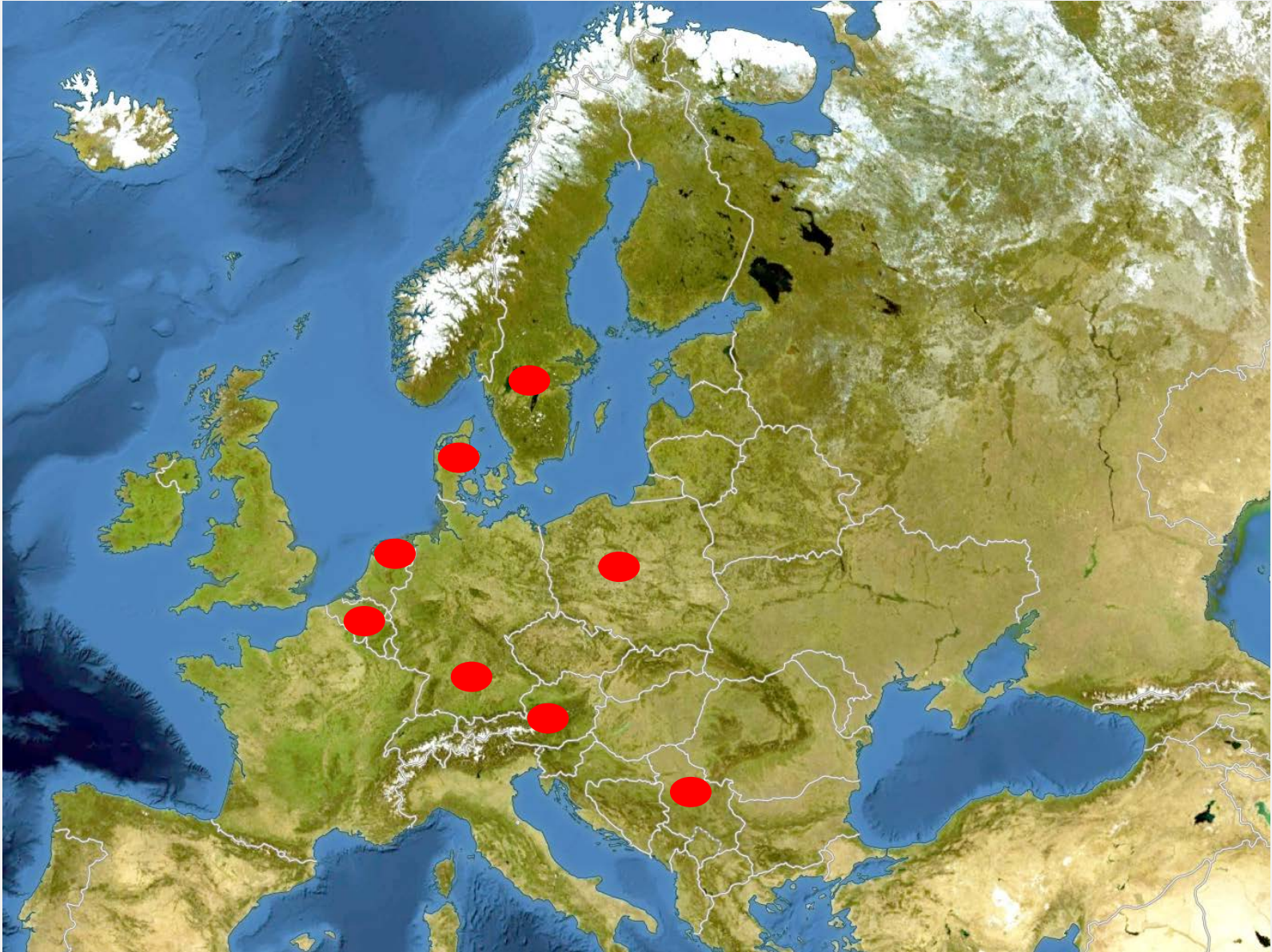
A. alternata	Jun	Jul	Aug	Sep
√		√	√	√
√		√	√	√
√		√	√	√
√	√	√	√	√
√	√	√	√	√
√		√		
√		√	√	√

applied fungicides to control EB

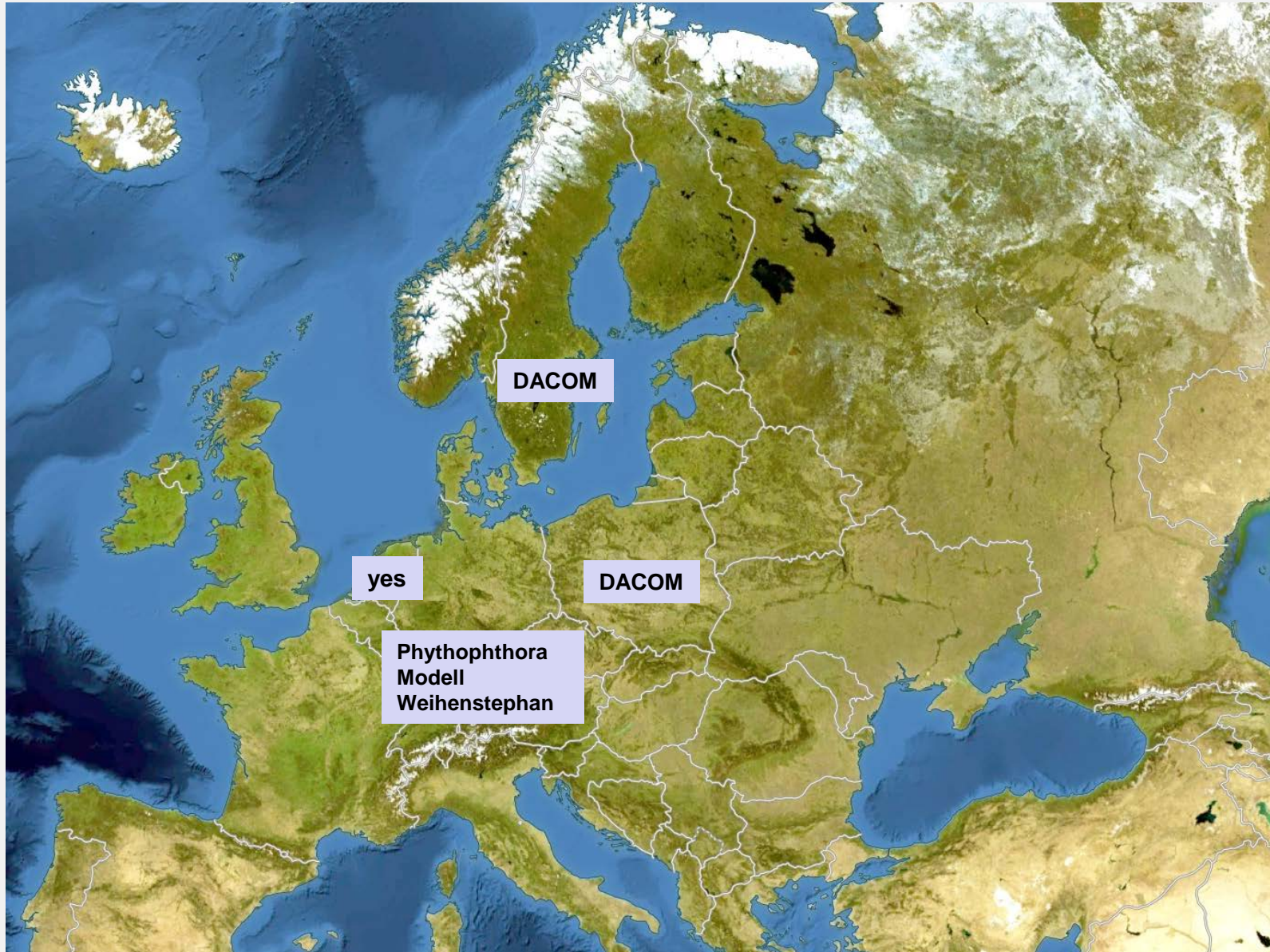
	mancozeb	azoxystrobin	azoxystrobin + chlorothalonil	boscalid + Pyraclostrobin	difenoconazol	mandipropamid + difenoconazole
Finland		✓		✓		✓
Norway						
Sweden				✓		✓
Denmark		✓		✓	✓	✓
Estonia						
Lithuania						
Scotland						
Northern Ireland						
Ireland						
England & Wales	✓		✓	✓	✓	
Belgium						
Netherlands		✓		✓	✓	
Germany	✓	✓		✓		✓
Poland	✓	✓		✓		✓
Switzerland						
Czech republic				✓		✓
France	✓			✓	✓	
Serbia	✓	✓		✓		
Russia				✓		✓

occurrence of F129L isolates

F129L



use of DSS models to control EB



observed tuber infections



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

