

Apple Scab Meeting

Norway
January 2015

Maya Bojesen



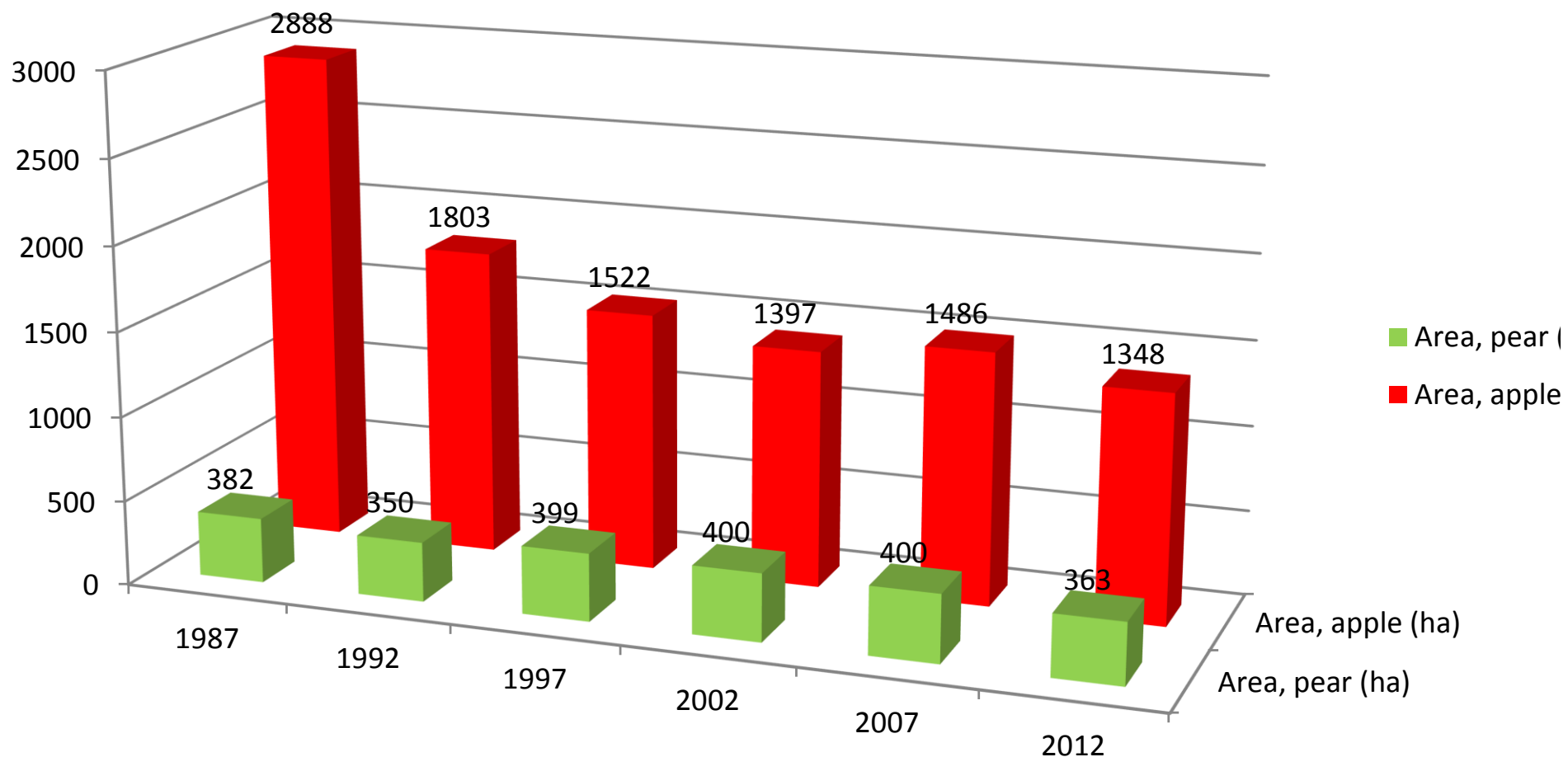
GartneriRådgivningen A/S

(HortiAdvice Scandinavia A/S)

Subjects

- Denmark and apple/pear production
- Ascospore discharge, rain and RIMpro at research center Årslev
- Diseases (?) in pears





Total area of conventional and organic apple and pear production in Denmark from 1987 to 2012



Apple

- Elstar: 20%
- Ingrid Marie: 10 %
- Jonagored, Aroma, Discovery, Cox la Vera, Junami
- Average yield: 20-25 ton/ha
- Elstar: 40+ ton/ha
- Organic apple: 300 ha
- Average yield: 5-10 ton/ha
- Organic pear: 20 ha

Best paid size. 45-55 mm



Clara Frijs



Clara Frijs



Clara Frijs

27-03-2014



01-04-2014

05-04-2014

09-04-2014

Discovery



13-04-2014



25-04-2014



07-05-2014

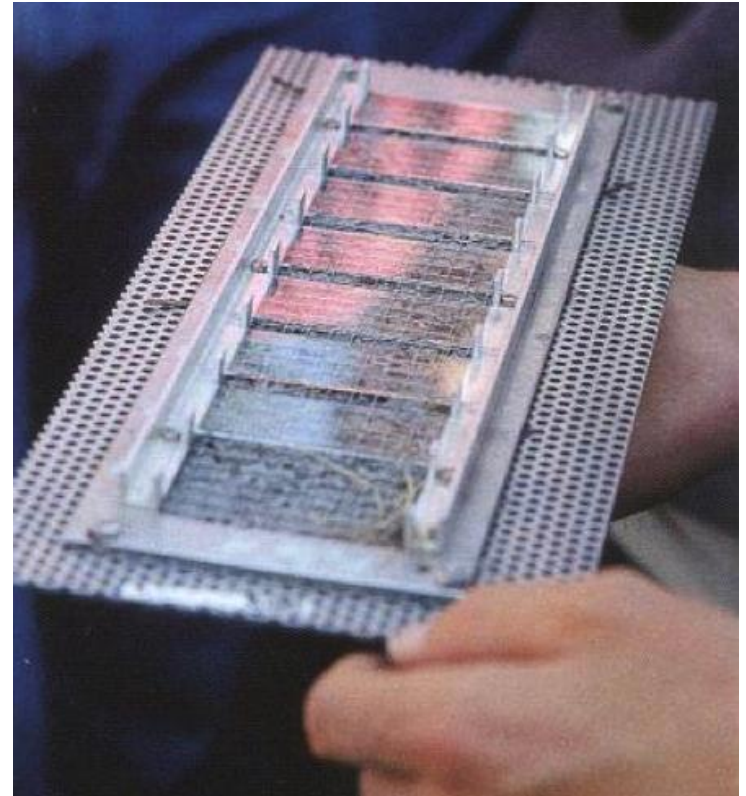


Ascopore discharge, rain and RIMpro at research center Årslev

- Wiesmann spore trap

Thanks to:

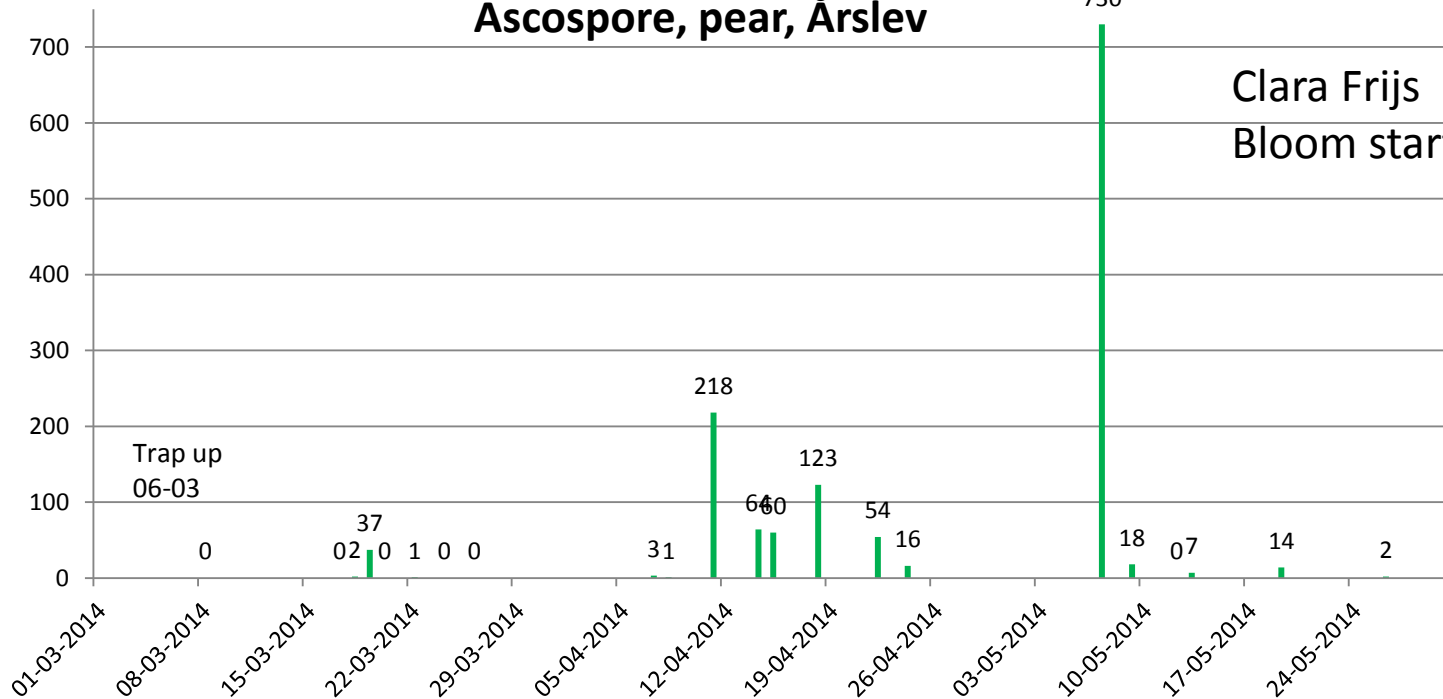
- Anette Sørensen, Årslev
- Hanne Lindhard, GartneriRådgivningen



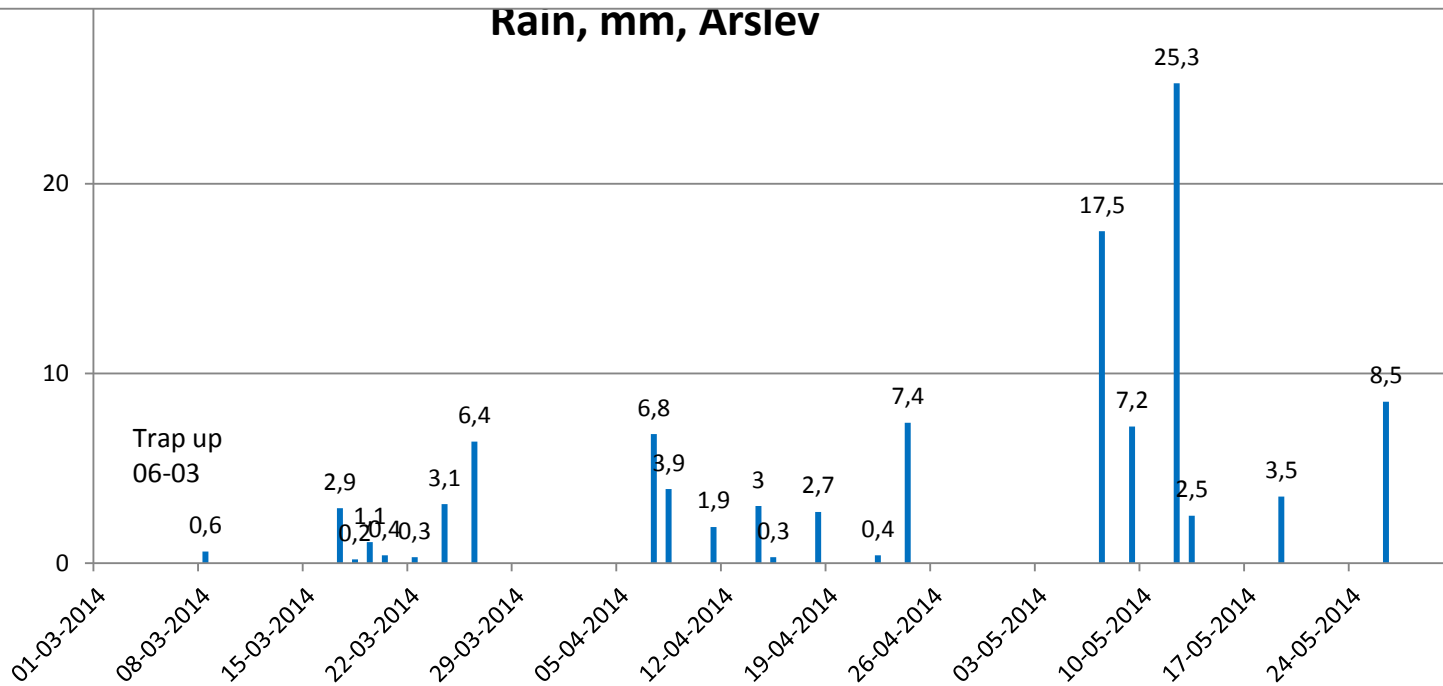
Ascospore, pear, Årslev

Clara Frijs

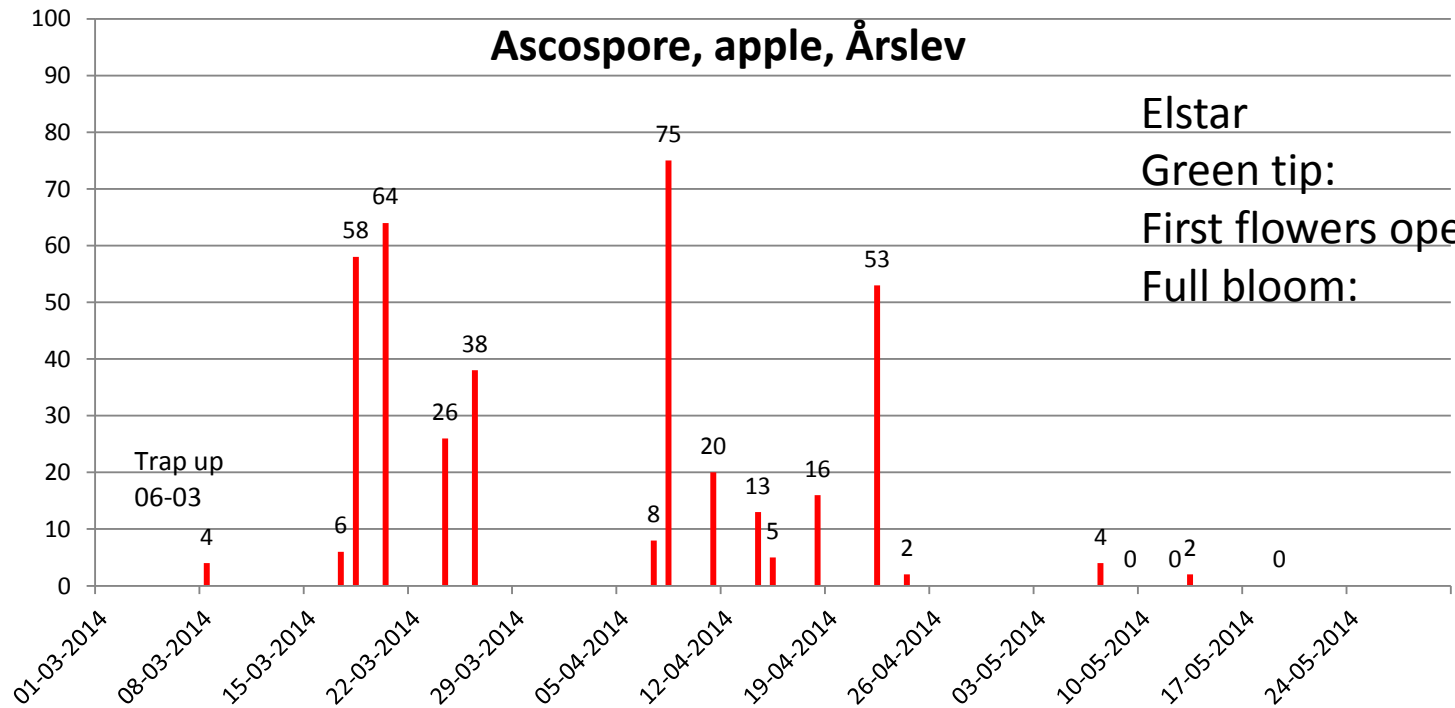
Bloom start ca 20-04



Rain, mm, Årslev



Ascospore, apple, Årslev



Elstar

Green tip:

First flowers open:

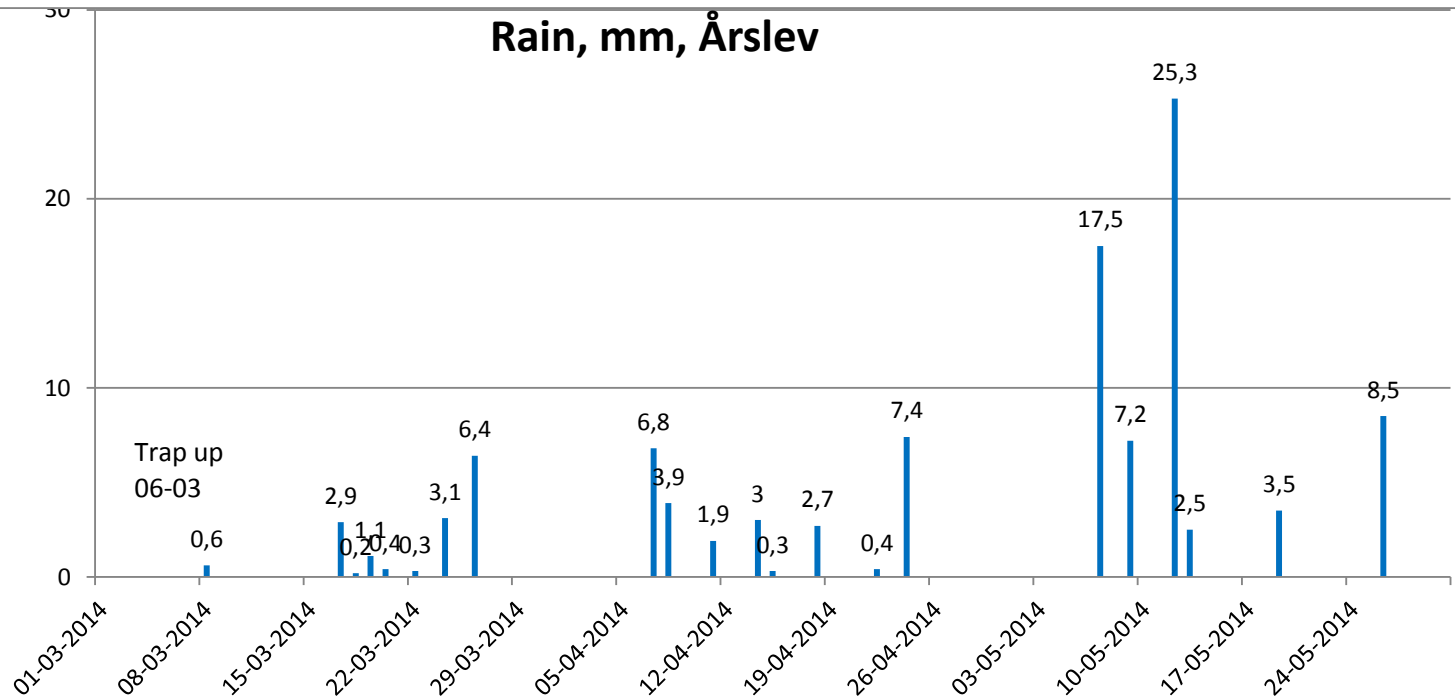
Full bloom:

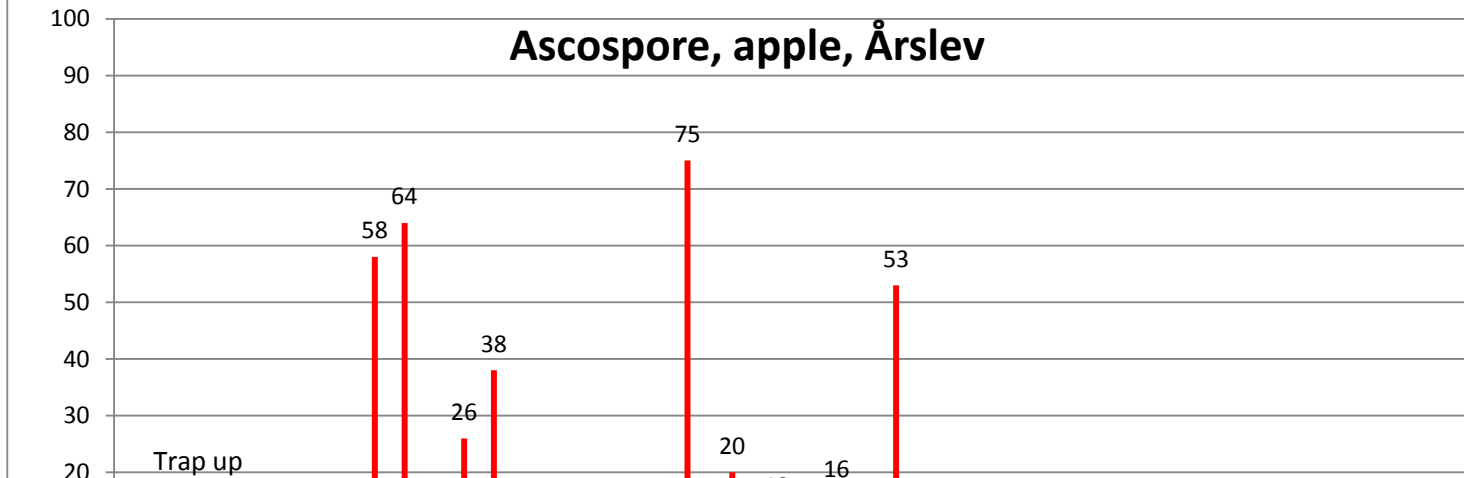
16-03

28-04

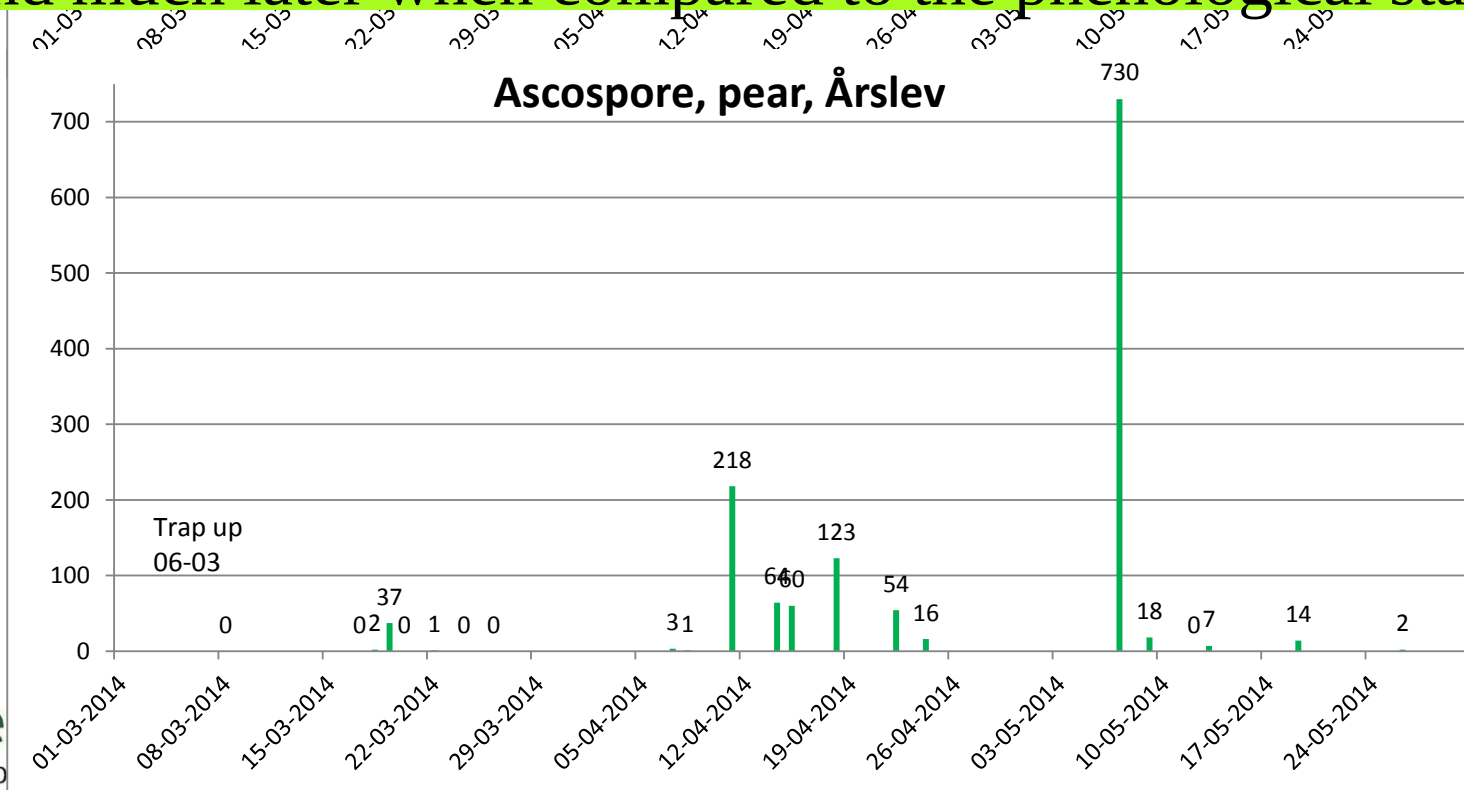
09-05

Rain, mm, Årslev





2014 Pear ascospores are later than apple ascospores
 – and much later when compared to the phenological stage

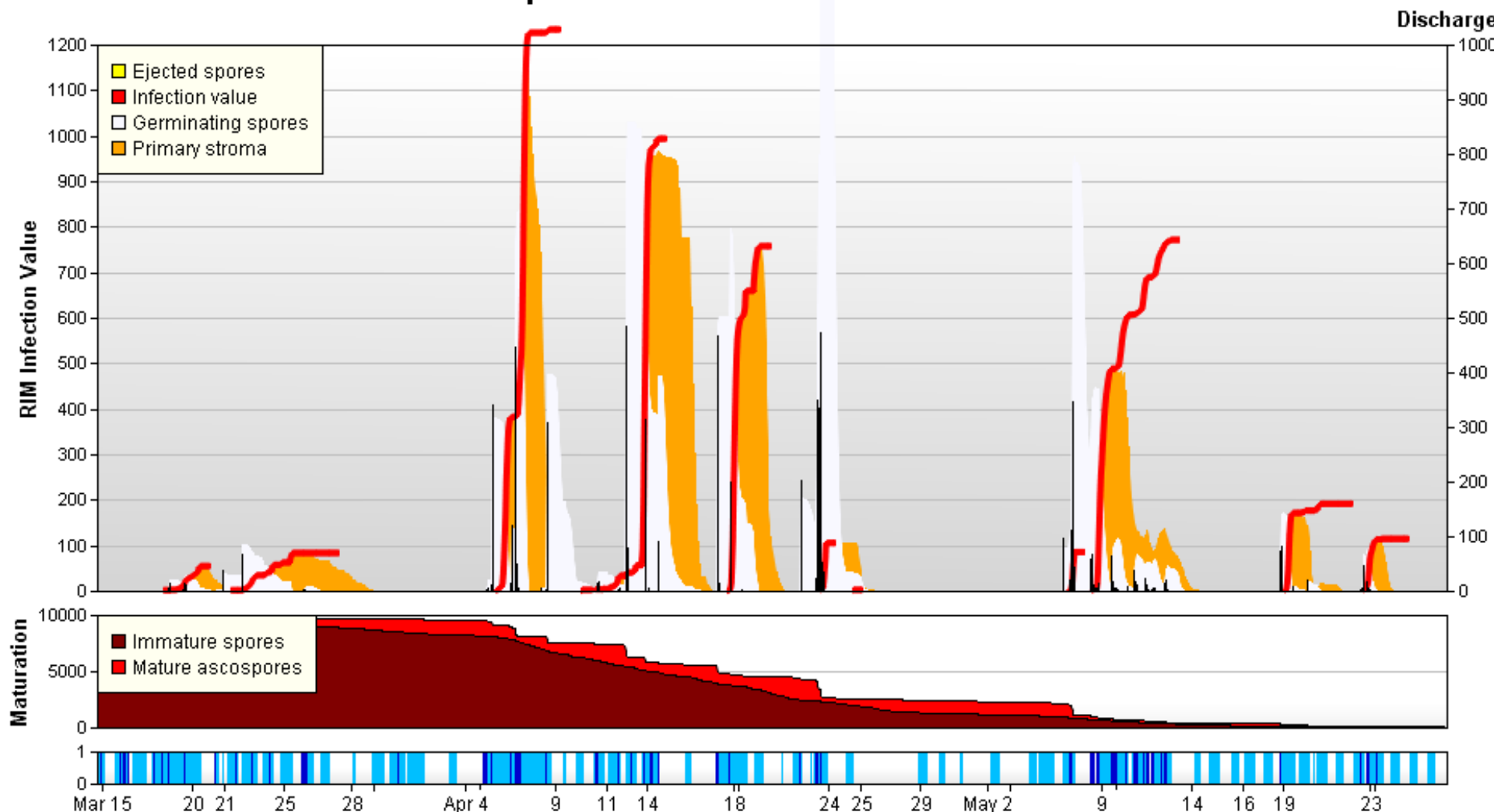


Biofix in RIMpro 2014

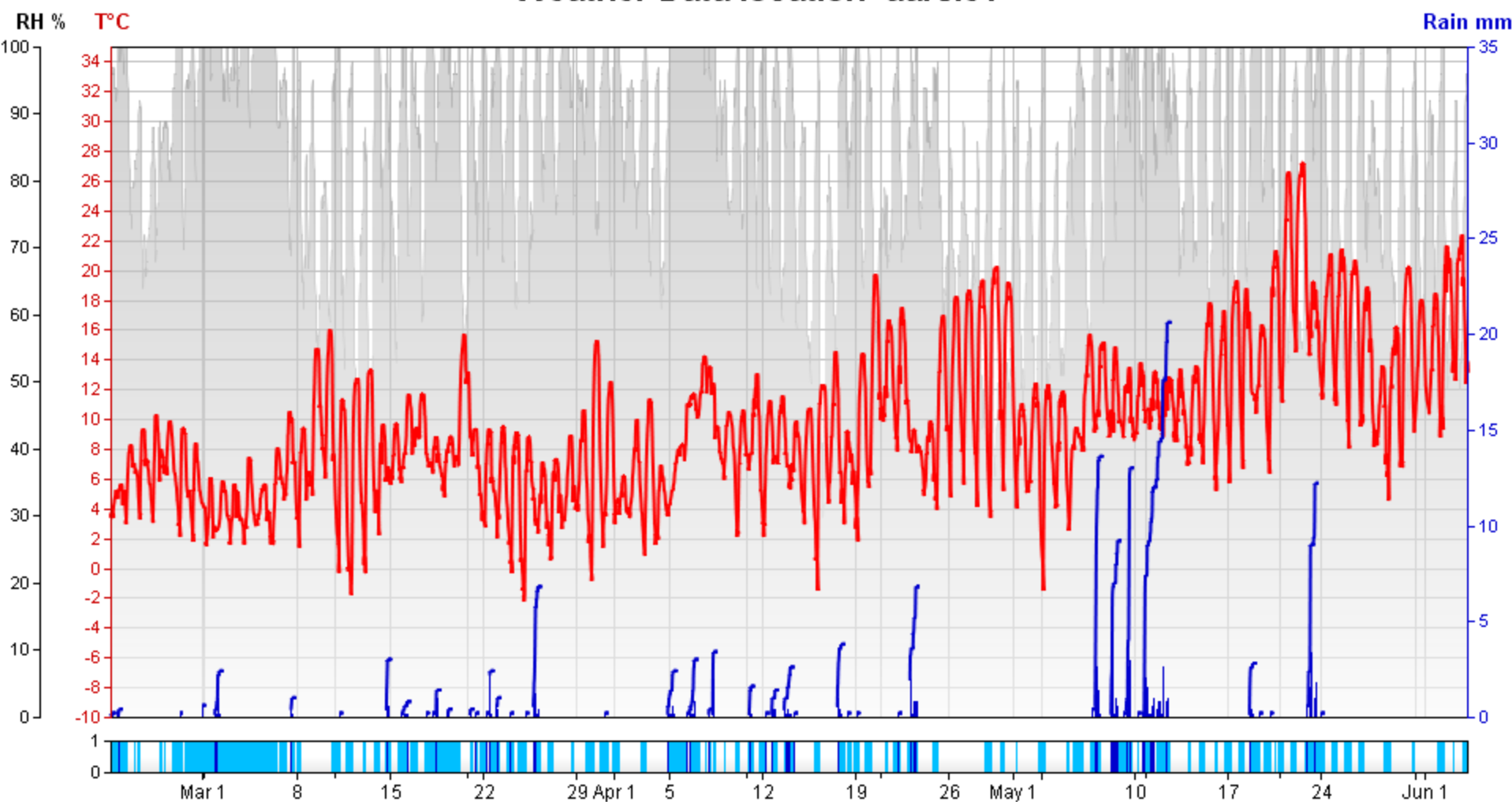
- First spores in trap (*after* rain/discharge!): 08-03
- Biofix in RIMpro: 07-03 then changed to: 16-03
- Two weather stations at Årslev:
- Denmark's Meteorological Institute $\Rightarrow$ Trap
- Davis weather station/Peter Maxim $\Rightarrow$ RIMpro
- (sometimes measures rain when no rain)



RIMpro-Venturia location: aarslev



Weather Data location aarslev



År	Første ascospore-udslyngning observeret	Dato for grøn spids i æblesorten 'Elshof'	Forskul i dage mellem første ascospore-udslyngning og grøn spids	RIMpro Biofix Første modne ascosporer fundet i laboratorium
2007	18. marts	7. april	-20	15. marts
2008	13. marts	29. marts	-16	10. marts
2009	23. marts	3. april	-11	20. marts
2010	29. marts	8. april	-10	25. marts
2011	31. marts	2. april	-2	24. marts

2007 and 2008

Mild winters

**Diseases (?) in pears
2014 and previous years**

Fire blight for sure





Pseudomonas

A. Lucas

27. april 2011

Pseudomonas



Clara Frijs
14. juni 2013

Clara Frijs 30. maj 2013



- A. Lucas
- 12. juni 2014



- A. Lucas
- 12. juni 2014



- A. Lucas
- 12. juni 2014



Clara Frijs
04. juli 2014



Clara Frijs
04. juli 2014



Clara Frijs
04. juli 2014

Clara Frijs
04. juli 2014



Clara Frijs 9. juli 2014

28. august 2014



28. august 2014



28. august 2014





Clara Frijs

4. September 2014

Clara Frijs

4. September 2014



Stemphylium

- Clara Frijs



Stemphylium



Foto: O. Andersen

Stemphylium - solutions



- Can we adopt/adapt conclusions/control strategies from abroad?
- Clara Frijs – susceptibility?
- Climate?
- Local herbaceous plants/Weeds/Dead plant material?

Thank you for your attention

The important thing is not to stop questioning.
Curiosity has its own reason for existing.

A. Einstein

