Alternaria monitoring 2014 - 2015

Distribution and frequency of F129L mutation

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Aim

- EuroBlight Brasov
  - Survey of Alternaria isolates in Europe
  - Check genotype I or II
  - Check F129 L mutation
- Isolate collection in liquid nitrogen at Wageningen UR

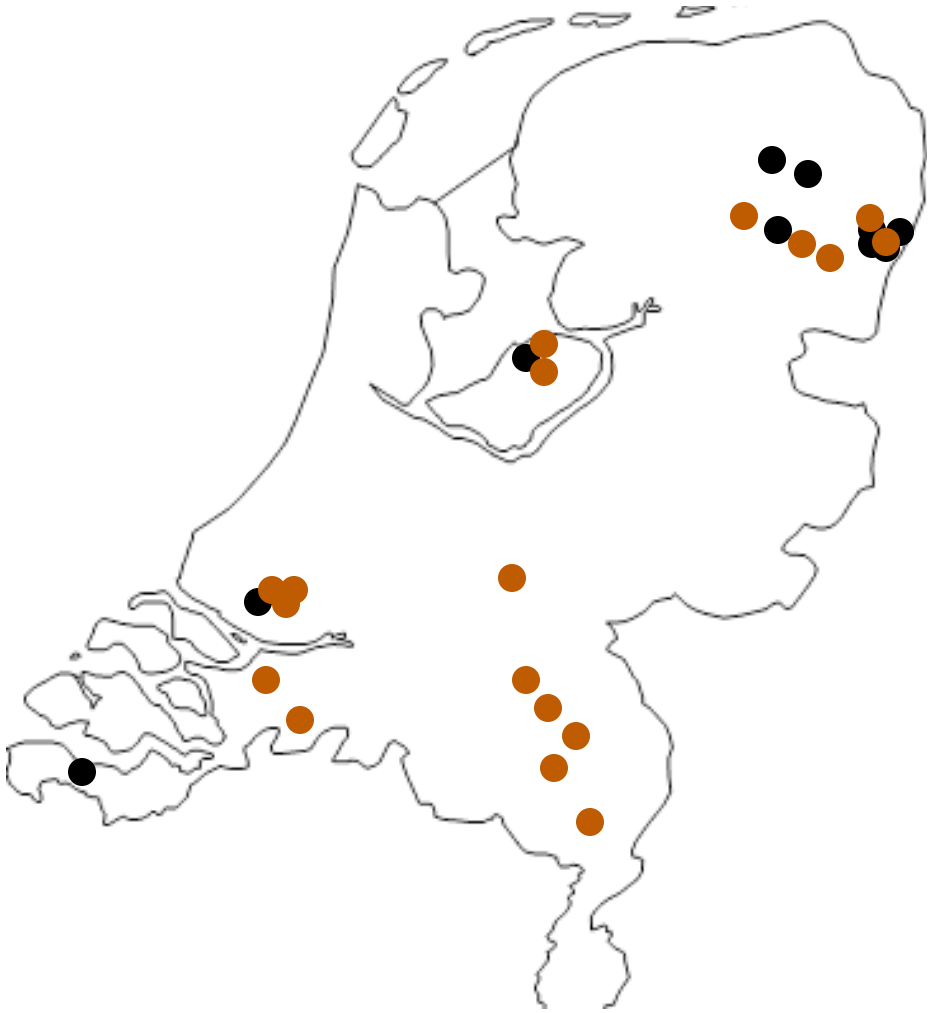
In de middelentabel voor 2016 zijn geen verschuivingen in het aanbod ten opzichte van vorig jaar. Telers houden een brede keuze aan Phytophthoramiddelen. Wel wordt dit jaar expliciet gewezen op de gevaren van het relatief smalle aanbod van middelen tegen Alternaria. Resistentiemanagent is noodzakelijk en dat betekent op tijd beginnen en werkzame stoffen afwisselen.

Alternaria: wissel fungiciden af

Aardappeltelers moesten afgelopen seizoen bovengemiddeld vaak ingrijpen tegen Alternaria. Dat percelen desondanks vervroegd afstierven, kan te maken hebben met een verminderde gevoeligheid voor Alternariamiddelen. Daarvoor waarschuwt nu ook de nieuwe middelentabel. 'Wissel af', luidt het advies.

Sampling the Netherlands

- For *Alternaria* no regular sampling is in place
- Samples were collected
  - Field experiments
  - Practise
- Sampling may have been biased
  - 2014 ●
  - 2015 ●



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Method

- Leaves with lesions were sent in dry
- *Alternaria solani* was isolated from the potato leaf
- DNA extracted
- 2 PCR's (Pasche et al., 2004; Leiminger et al., 2014)
- PCR product was sequenced

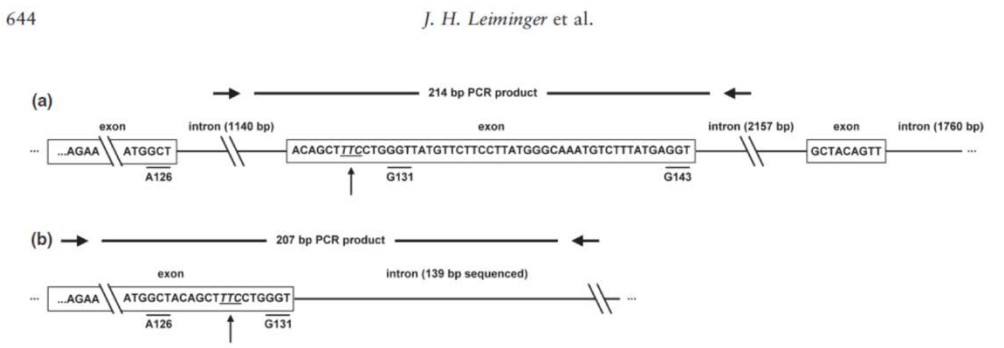
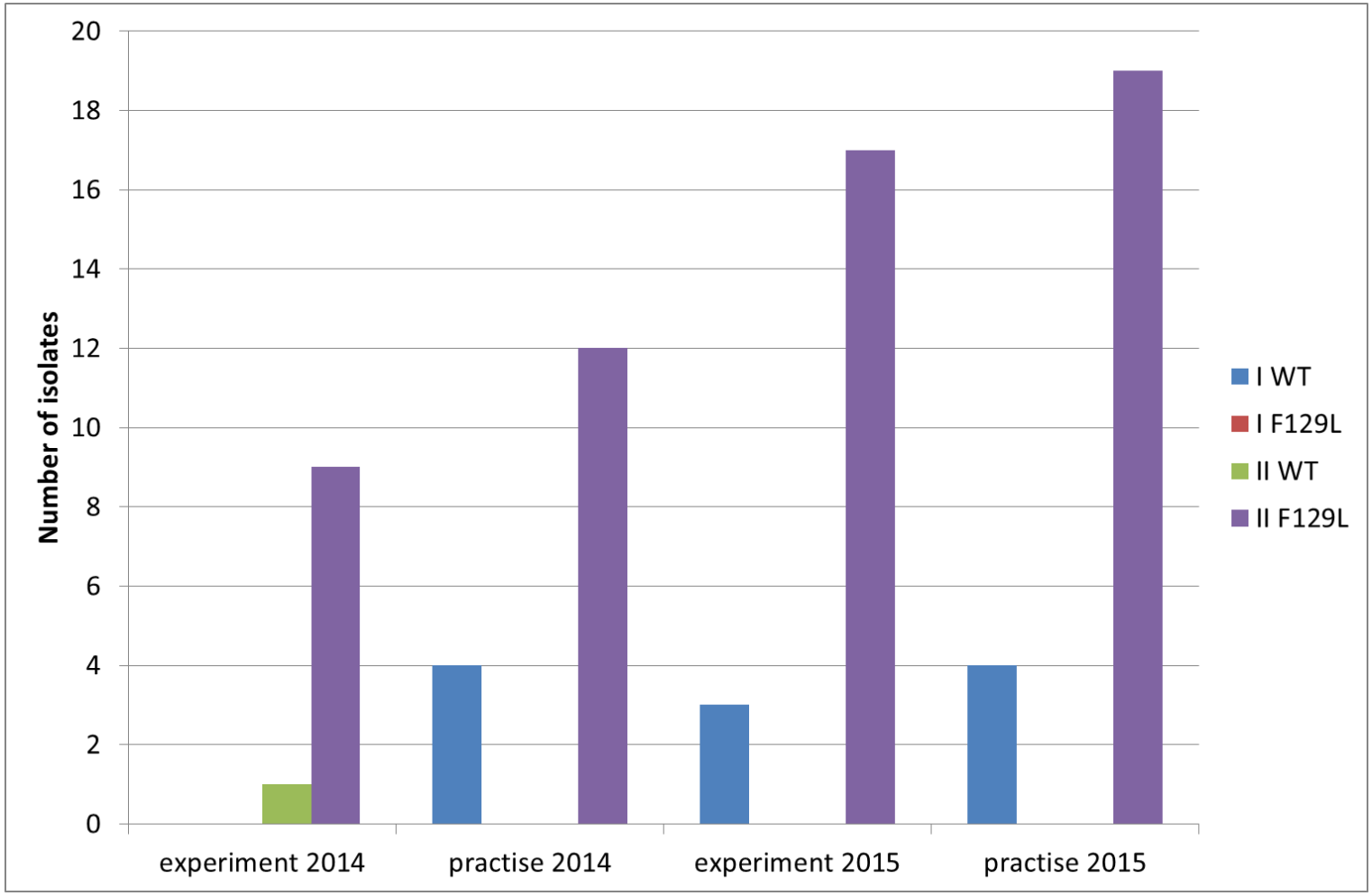


Figure 1 Schematic representation of a part of the cytochrome *b* gene of different German *Alternaria solani* isolates. (a) Genotype I or 'European genotype' (b) genotype II or 'US genotype'. Arrows indicate the base triplet (underlined and in italics) which is the site of mutation in F129L mutants. A126: alanine at amino acid position 126; G131, G143: glycine at amino acid positions 131 and 143. Horizontal arrows in (a) indicate the position of primers AS-Gf and As-Gr used to amplify a 214 bp PCR fragment for genotyping. Horizontal arrows in (b) indicate the position of primers As-5f and As-5r used to amplify a 207 bp fragment.

Results 2014 & 2015



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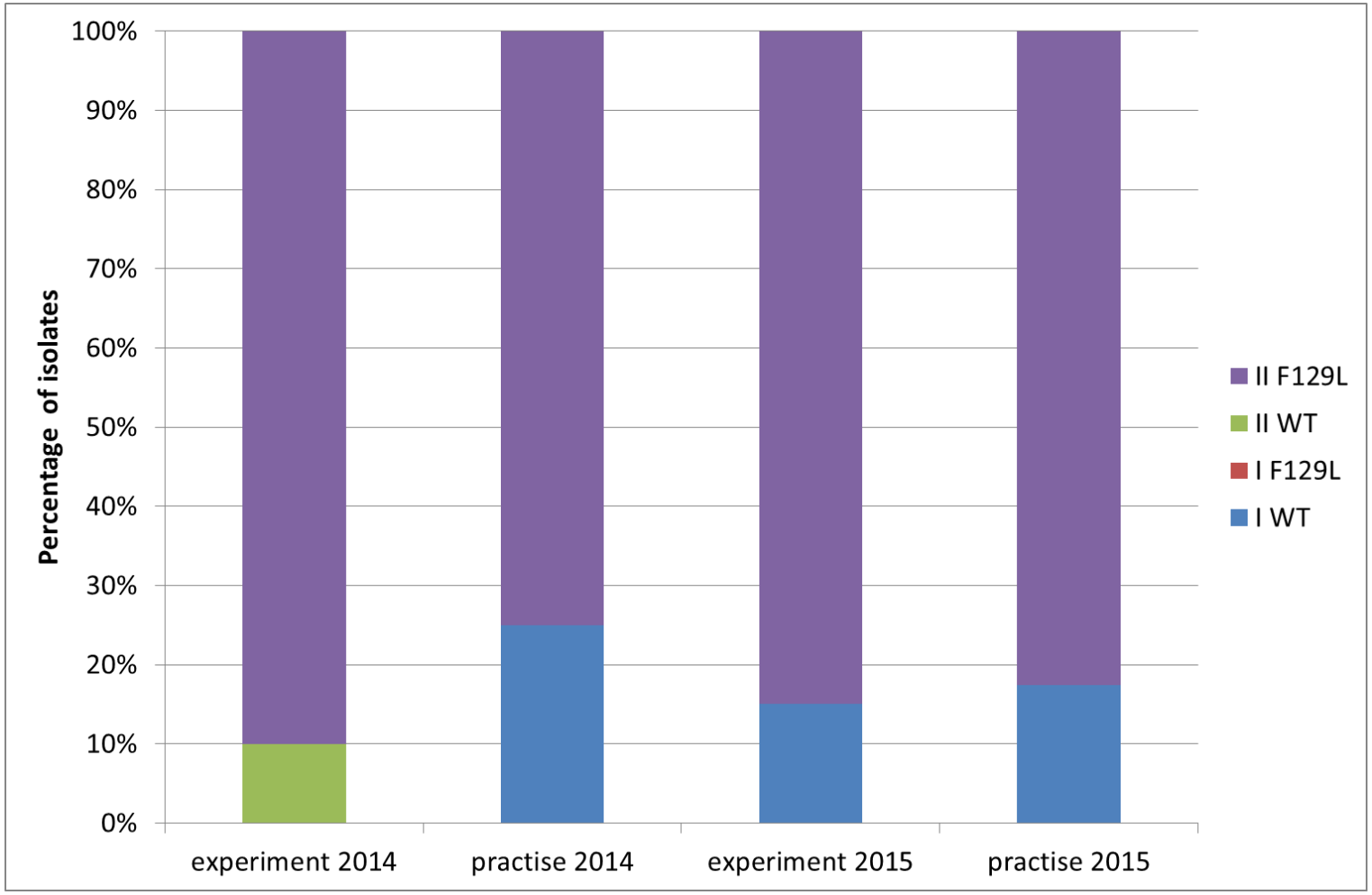
Results frequency



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Discussion

- The number of isolates analysed is limited
- Quite a lot from field experiments
  - Higher selection pressure than practise?
- Practise
  - Some really random
  - Some might have been associated with problems
- Overall the situation in practise concerning the F129L frequency is not different from the field experiments.

Conclusions

The F129L mutation is present in the Dutch *Alternaria solani* population

Resistance management strategies are recommended