

F129L monitoring in Germany, Austria and Poland

Birgit Adolf, Jürgen Leiminger, Andrea Volz, Nicole Metz,
Andrea Klaus, Anna Livic, Hans Hausladen

EuroBlight – Early blight subgroup meeting

May 9th 2016, Schiphol, Netherlands



Methods

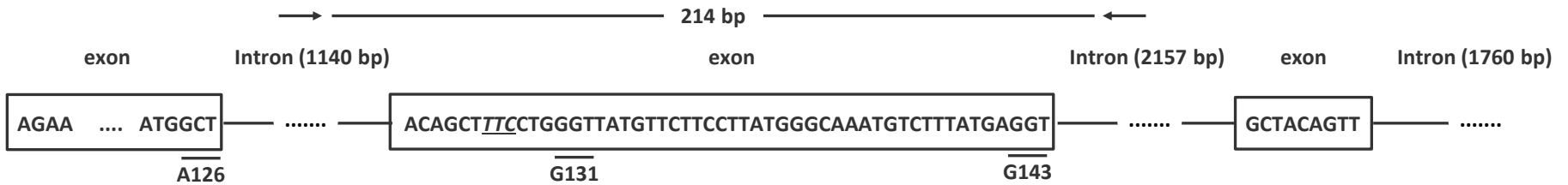
Methods

cytochrome b gene structure

Methods

cytochrome b gene structure

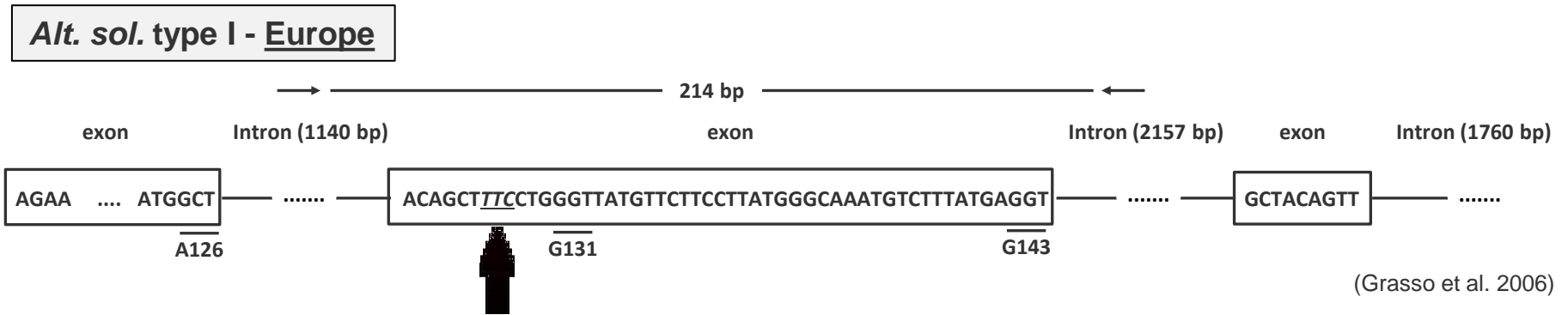
***Alt. sol.* type I - Europe**



(Grasso et al. 2006)

Methods

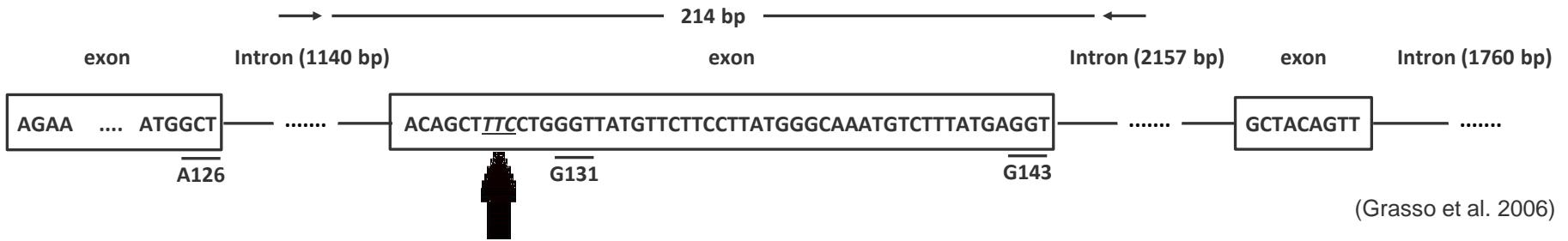
cytochrome b gene structure



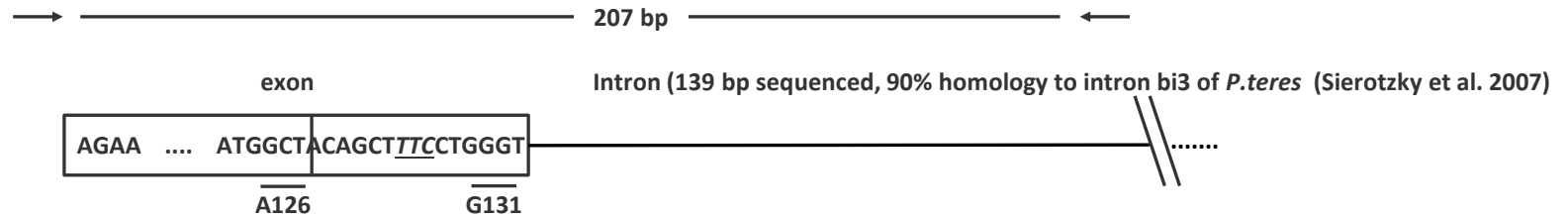
Methods

cytochrome b gene structure

Alt. sol. type I - Europe



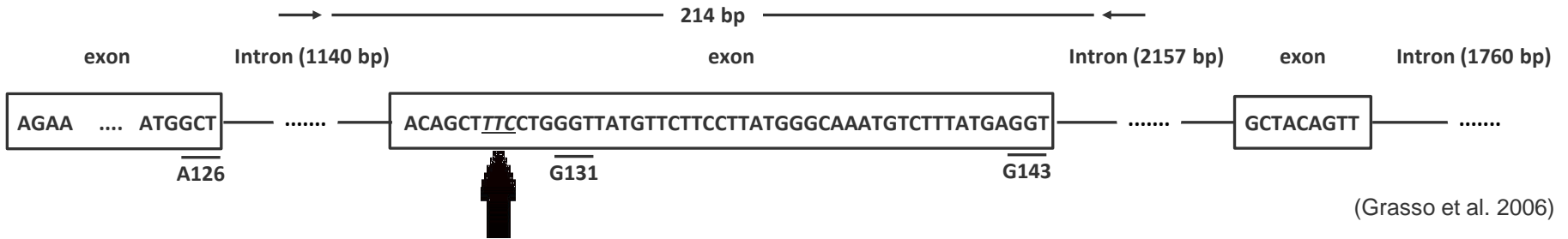
Alt. sol. type II - USA



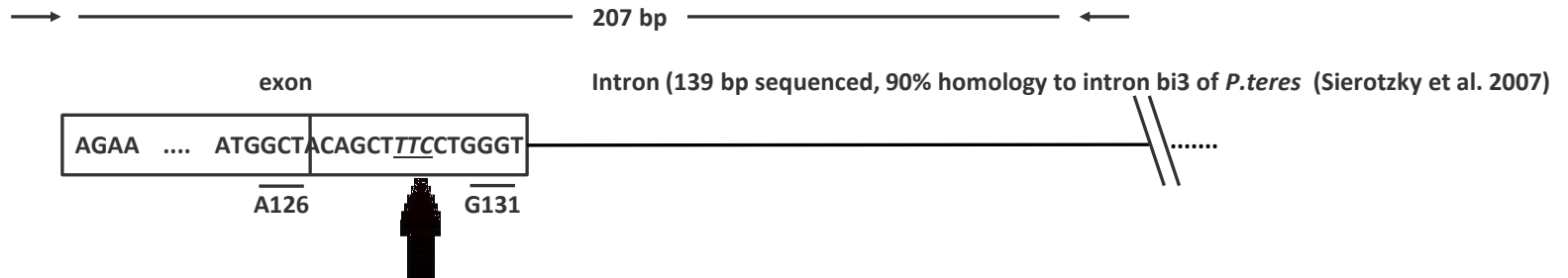
Methods

cytochrome b gene structure

Alt. sol. type I - Europe



Alt. sol. type II - USA



Methods

- type I isolates: Primers and PCR conditions as published by Leiminger et al. 2013, sequencing of the 214pb product

Methods

- type I isolates: Primers and PCR conditions as published by Leiminger et al. 2013, sequencing of the 214pb product
- type II isolates: Primers and PCR conditions as published by Pasche et al. 2005, sequencing of the 207pb product

Results

Occurrence of the F129L mutation in *A. solani* :

Results

Occurrence of the F129L mutation in *A. solani* :

2005 (baseline)

Results

Occurrence of the F129L mutation in *A. solani* :

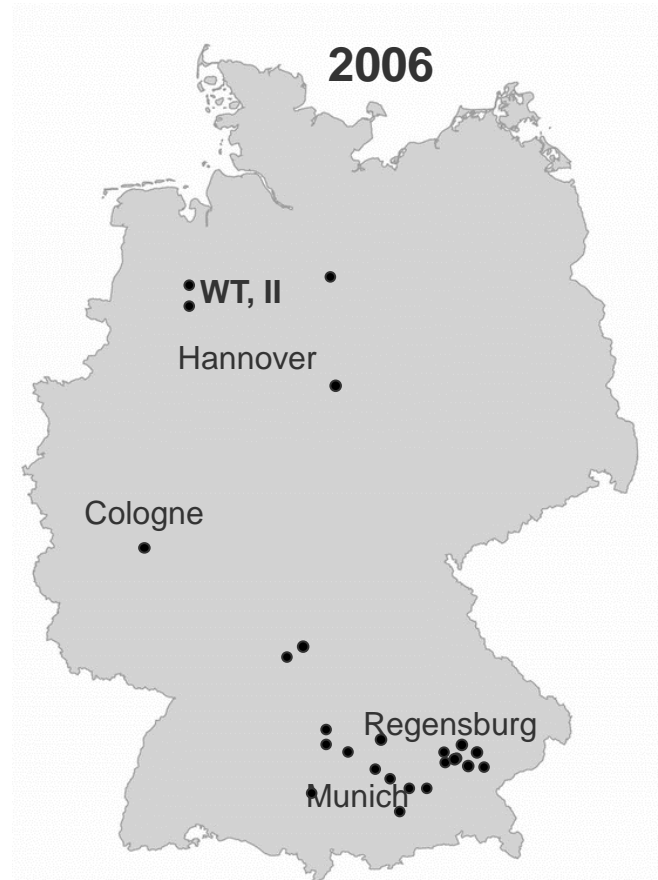
- 6 isolates
- 2 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 24 isolates,
23 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 20 isolates,
12 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 5 isolates,
3 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 39 isolates,
21 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 39 isolates,
21 locations
2 mutants in 1 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

- 10 isolates,
7 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 10 isolates,
7 locations
2 mutants in 2 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

- 99 isolates,
12 locations



Results

Occurrence of the F129L mutation in *A. solani* :

- 99 isolates,
12 locations
74 mutants in 8 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

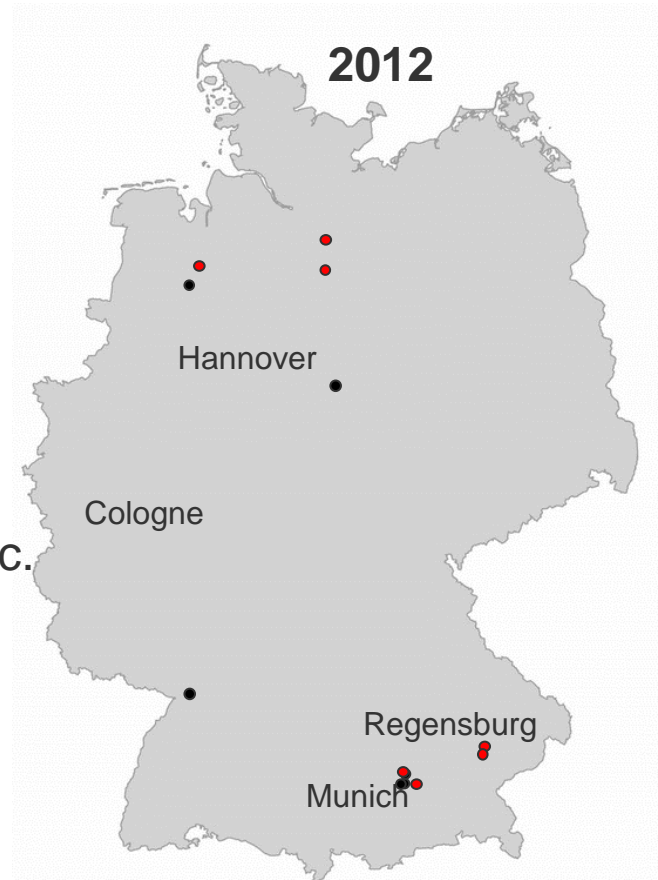
- 94 isolates,
10 locations



Results

Occurrence of the F129L mutation in *A. solani* :

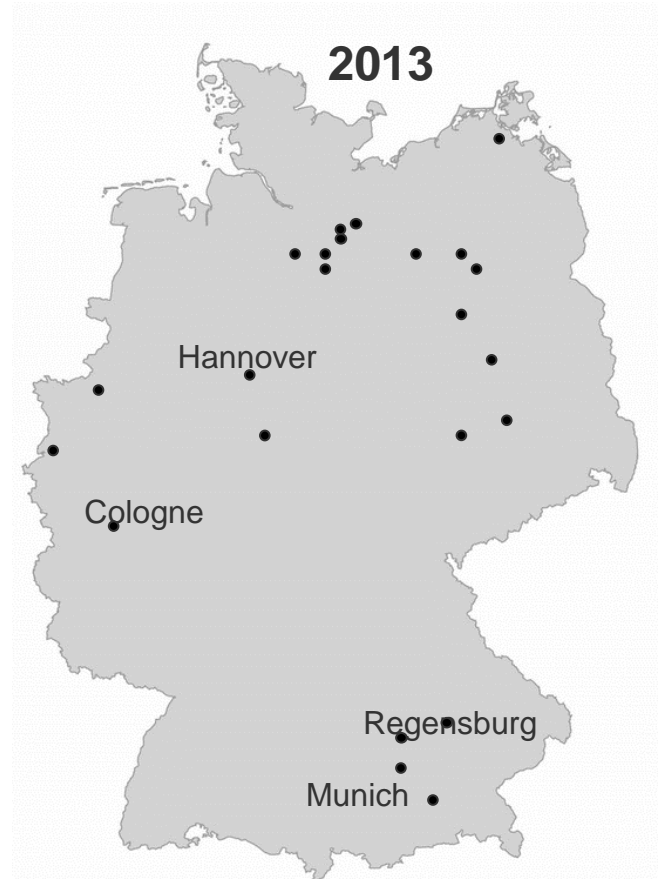
- 94 isolates,
10 locations
15 mutants in 8 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

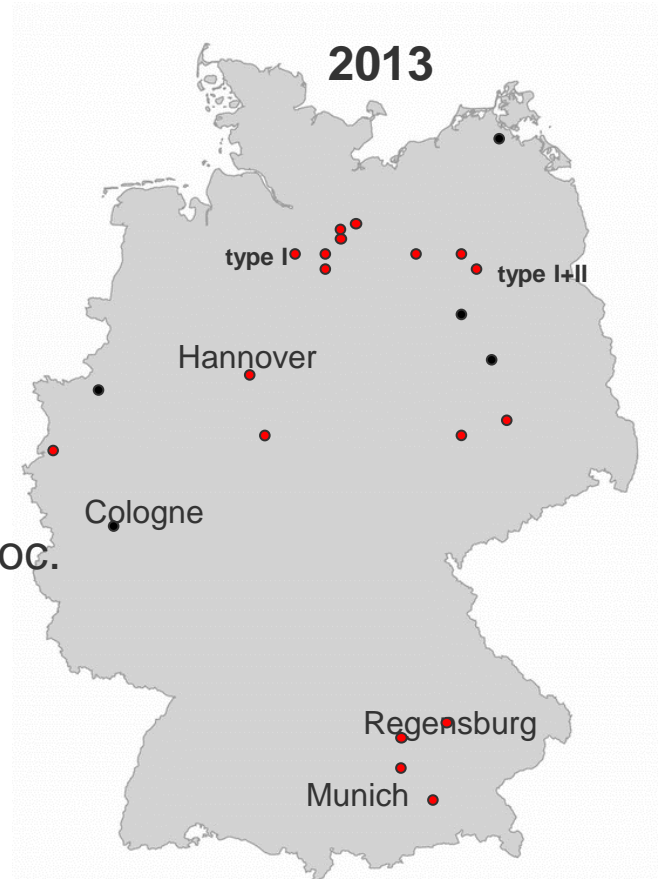
- 266 isolates,
24 locations



Results

Occurrence of the F129L mutation in *A. solani* :

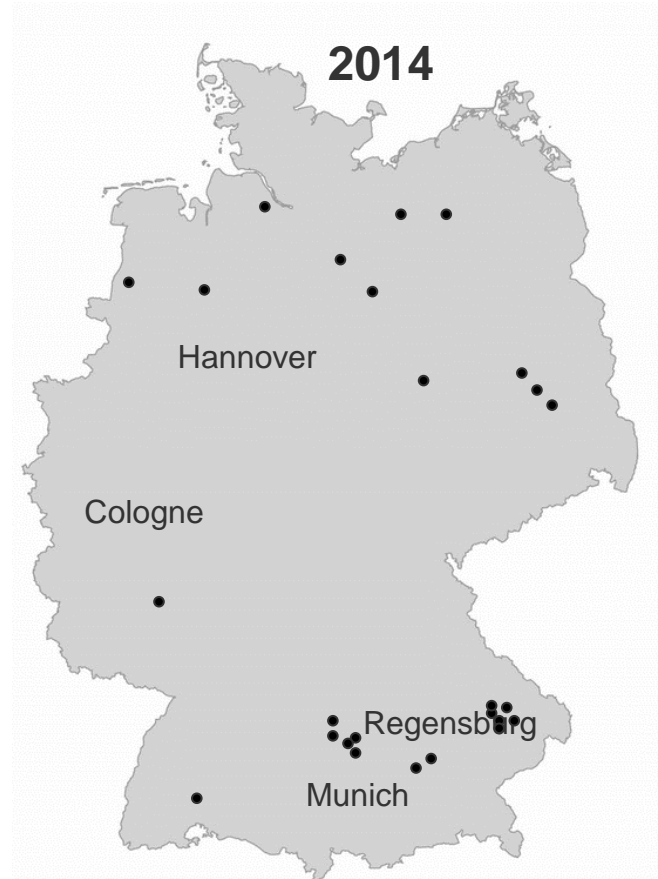
- 266 isolates,
24 locations
72 mutants in 20 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

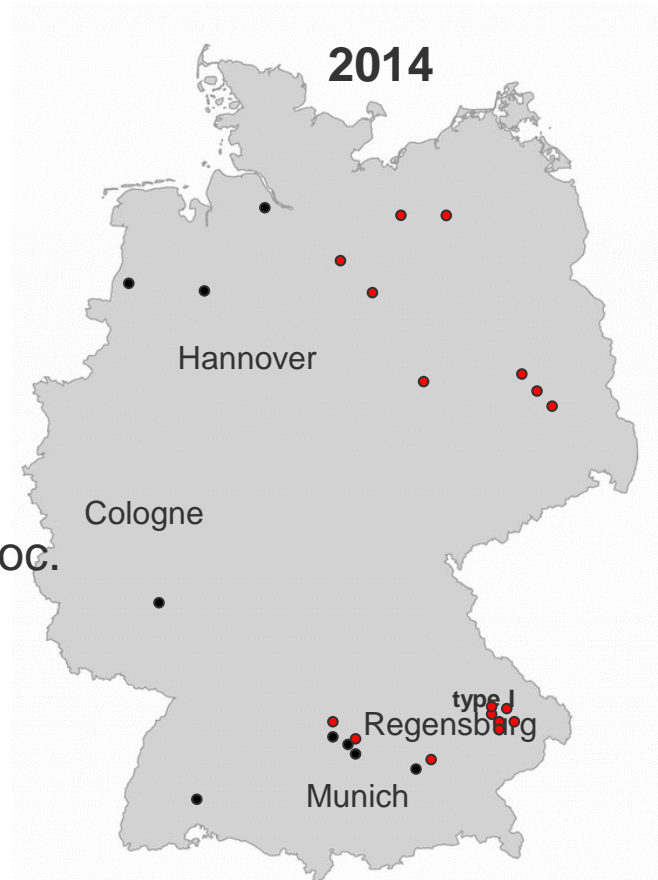
- 67 isolates,
30 locations



Results

Occurrence of the F129L mutation in *A. solani* :

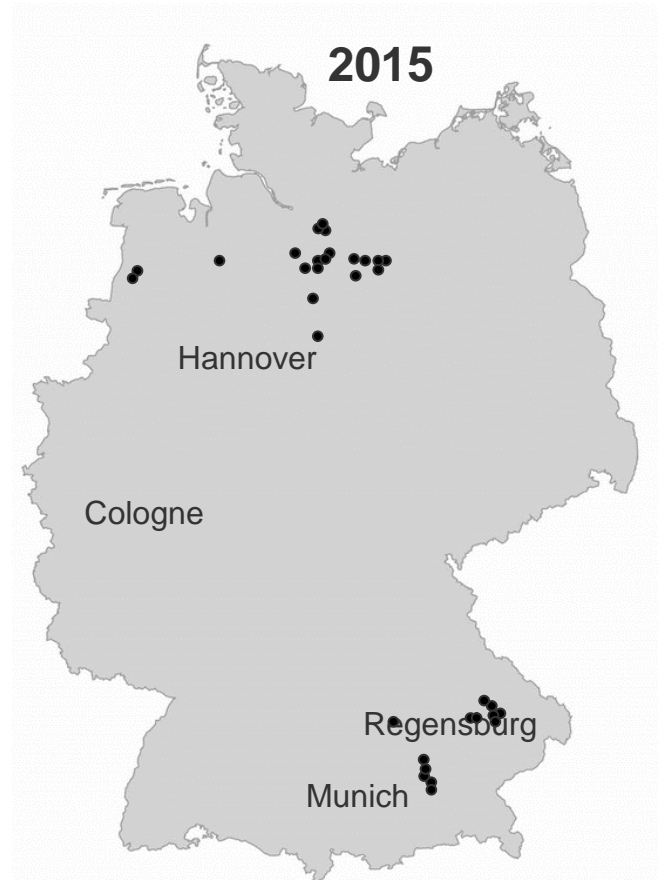
- 67 isolates,
30 locations
20 mutants in 18 loc.



Results

Occurrence of the F129L mutation in *A. solani* :

- 196 isolates
- 34 locations

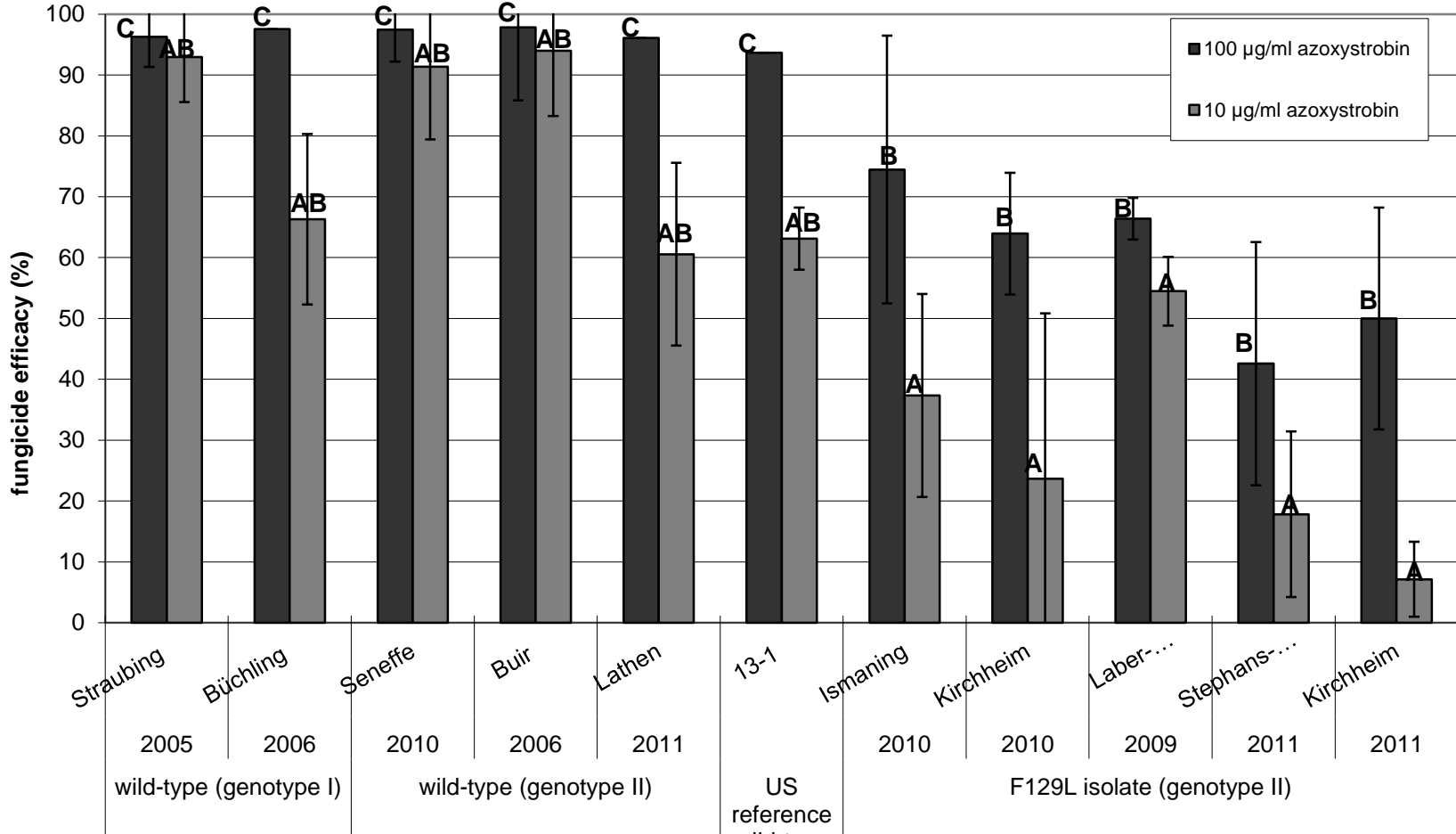


Results

EC50 in vitro tests

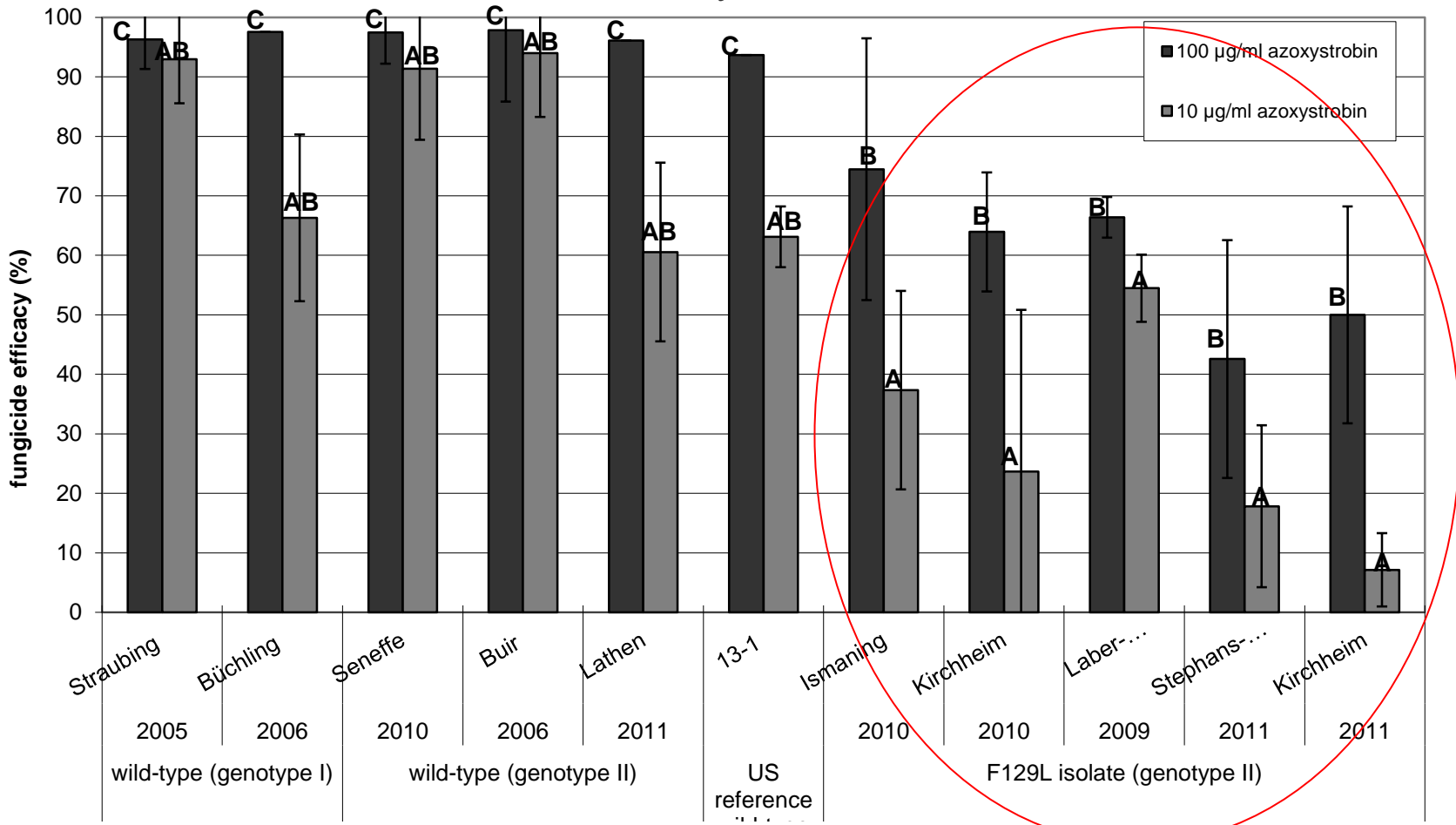
Results

sensitivity in vivo tests



Results

sensitivity in vivo tests



Austria 2015

Austria 2015

locations	samples	isolates screened			F129L mutants
Breitstetten			genotype I		
			genotype II		

Austria 2015

locations	samples	isolates screened			F129L mutants
Breitstetten	2		genotype I		
			genotype II		

Austria 2015

locations	samples	isolates screened			F129L mutants
Breitstetten	2	4	genotype I		
			genotype II		

Austria 2015

locations	samples	isolates screened			F129L mutants
Breitstetten	2	4	genotype I	0%	-
			genotype II	100%	100%

Poland 2015

Poland 2015

locations	samples	isolates screened			F129L mutants
Koirmika, Prenzchno			genotype I		
			genotype II		

Poland 2015

locations	samples	isolates screened			F129L mutants
Koirmika, Prenzchno	6		genotype I		
			genotype II		

Poland 2015

locations	samples	isolates screened			F129L mutants
Koirmika, Prenzchno	6	28	genotype I		
			genotype II		

Poland 2015

locations	samples	isolates screened			F129L mutants
Koirmika, Prenzchno	6	28	genotype I	60%	-
			genotype II	40%	100%

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