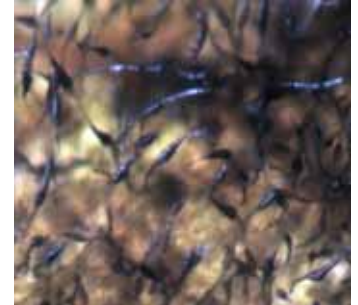


Efficacy of different fungicides
on the control of
early blight

J. Leiminger, H. Hausladen



early blight - a challenge for potato cultivation?!

- Increasing importance of early blight in Germany and also in other European countries
- significant yield losses; up to 30% and more
- application of fungicides most efficient for disease control
- monitoring documents widespread pathogen occurrence

„The fear of Alternaria!“
Top Agrar 6/2008

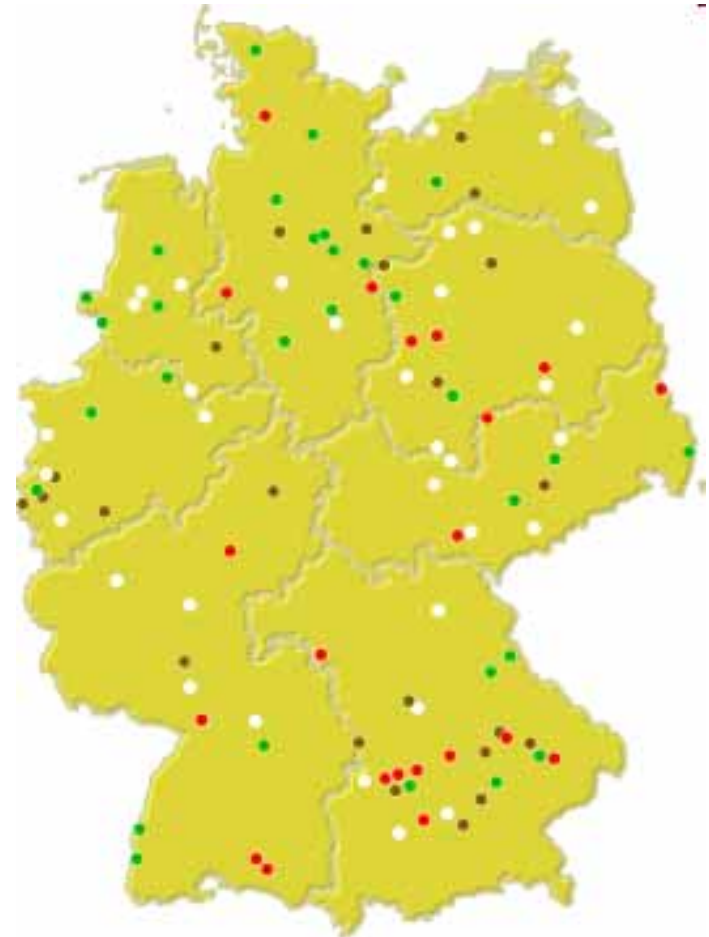
„Alternaria – a problem in potatoes?“
Top Agrar 12/2005





Disease rating: 31 august, 2008

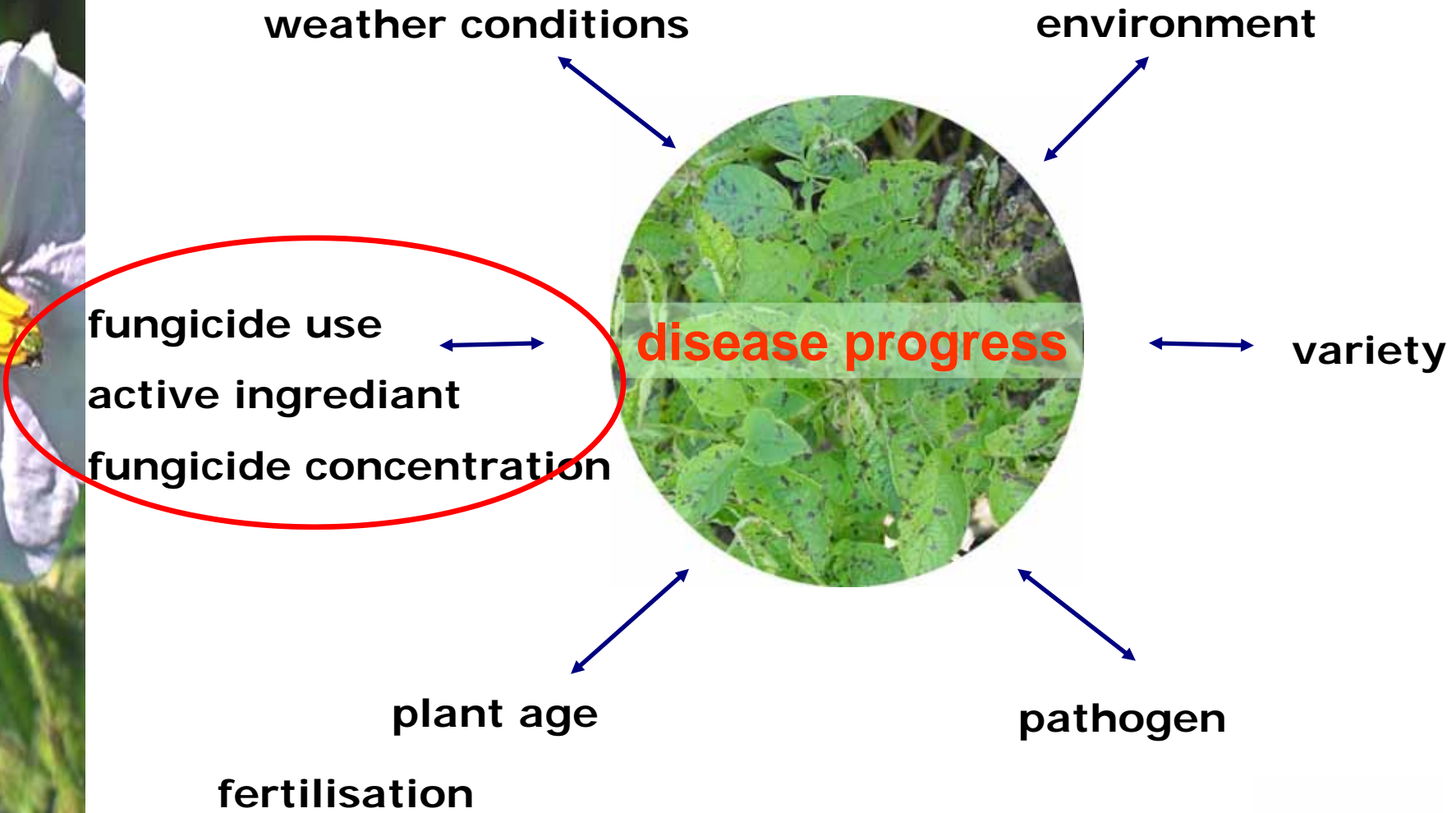
- No disease infestation
- Low disease
- Moderate disease
- High disease



source: www.krautfaeule.de



early blight - a complex disease



material and methods

Field trials with different active ingredients

potato variety: Kuras
repetition: 2007 and 2008



Coverspray (weekly): Ranman (0,2 +0,15 l/ha)
specific treatments against early blight:
3 times, according to weather conditions and disease progress

Ranman (early blight control)

Mancozeb	1350 g/ha and application
Chlorthalonil	1000 g/ha
Fenamidone	200 g/ha
Pyraclostrobin + Boscalid	16,75 +66,7 g/ha (Signum)
Azoxystrobin	125 g/ha (Ortiva)
Kresoxim-methyl	} 125 g/ha
Trifloxystrobin	
Pyraclostrobin	



further investigations on *Alternaria* species

Does the fungicide treatment influence the occurrence of *Alternaria* species (*Alternaria solani*, *Alternaria alternata*) ?



Sampling of infected leaflets

20 leaflets/replication

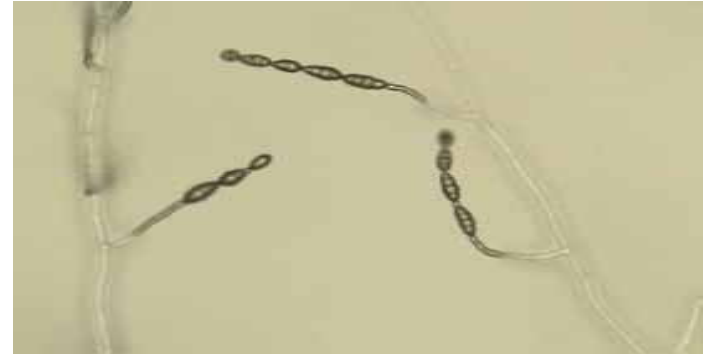
2x/season

Incubation for three days

Morphological analyse



further investigations on *Alternaria* species



morphological analysis of infected leaf samples

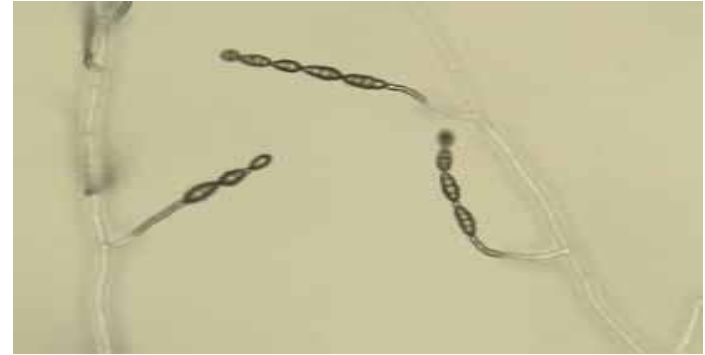
Early blight control Mancozeb Chlorothalonil Fenamidon Kresoxim-methyl Trifloxystrobin Pyraclostrobin Pyraclostrobin +Boscalid Azoxystrobin

A. solani ✓

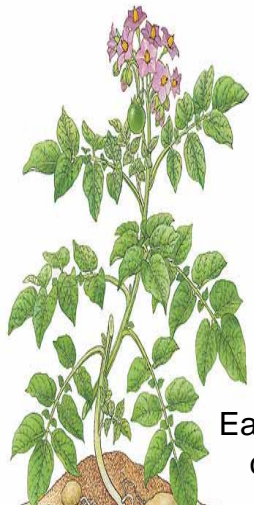
A. alternata ✓



further investigations on *Alternaria* species



morphological analysis of infected leaf samples



Early blight control Mancozeb Chlorothalonil Fenamidon Kresoxim-methyl Trifloxystrobin Pyraclostrobin Pyraclostrobin +Boscalid Azoxystrobin

A. solani ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

A. alternata ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓



conclusion

- different efficacy of active ingredients in field trials
- insufficient control results in significant yield losses
- complex of the two pathogens *A. solani* and *A. alternata* in the field
- specific rating of fungicides against *A. solani* and *A. alternata* under controlled conditions (artificial inoculation)
- harmonised protocol usefull for fungicide test against early blight in field



Thanks for your attention !

