

# The influence of crop rotation and cultivar resistance on the onset of early blight (*Alternaria solani*)



# Objective & Hypotheses

## Objective

- to determine the influence cropping history on the occurrence potato early blight.

## Hypotheses

- at least two years without potato will delay the onset of early blight attack.
- Continuous potato on the same field will lead to earlier attacks as fields that were cropped with potato in the previous year, regardless of whether potato was grown continuously or intermittently.

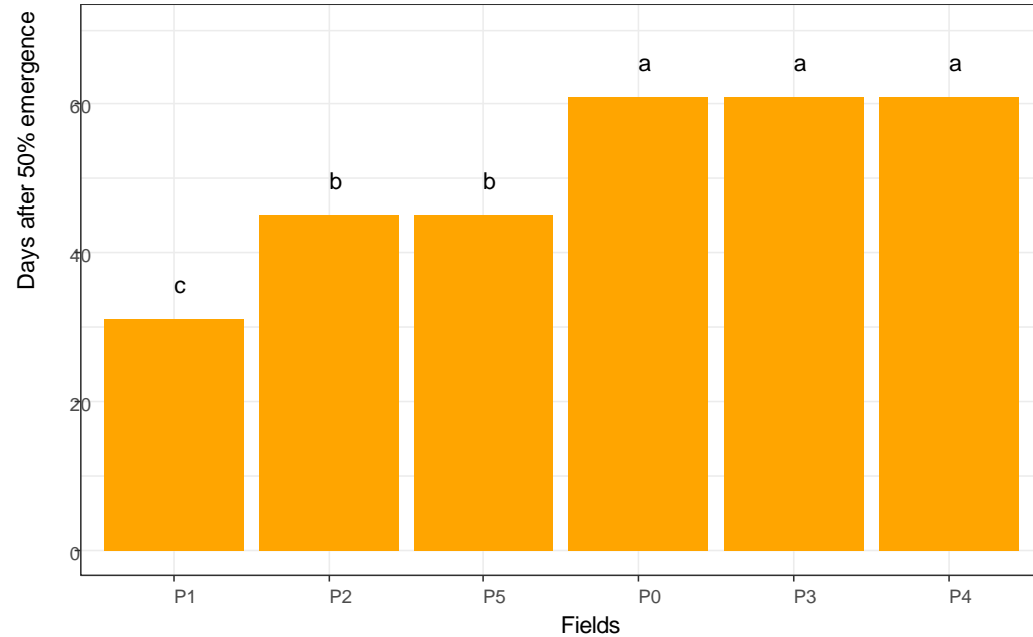
# Materials & Methods

Trial site	Cropping history <sup>a</sup>	Previous Crop <sup>b</sup>	Early blight <sup>c</sup>
F0	> 5 years without potato	Fallow	None
F1	2015	Potato	High
F2	2014	Barley	High
F3	2013	Barley	High
F4	2012	Barley	High
F5	Continuous rotation	Potato	Low

- **Varieties**
  - Agata (Very susceptible)
  - Sava(moderately slow blighting)
  - Kuras(slow blighting)
- RCBD with 4 replicates in each field
- 2 rows per plot, 9m x 3.75m plots
- Late blight control with 0.6l/ha Revus
- Assessment of EB symptoms every 2-3 days.

# Results

- No significant effect cultivar ( $p=0.347$ )
- No significant effect of cultivar X field ( $p=0.867$ )
- Significant effect of field ( $p<0.001$ )



# Conclusions

- The choice variety is not important in delaying the onset of early blight.
- At least 2 years potato free will be enough to markedly delay the onset of early blight.
- Planting potato after potato will increase the chance of early onset of early blight but this also was dependent on the previous severity of early blight.
- Thus for fields with low incidence of early blight, crop rotation may be of little significance.



Thanks for your attention





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