

# Designing tailored climate change adaptation measures to COMBIned weather related RISks in crop production at local scales in Austria (COMBIRISK)



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- **Project aims and Contents**

- Data Acquisition
- Data Digitisation
- Data Processing
- Selection of Parameters
- **Analysis of the relationship between weather conditions and damages**
- **Delivery of data lists to data providers**
- Dissemination

# Selection of Parameters (AGRANA, LAPRO)

- Assessments of damages on **potato tubers**
  - **Wireworm** (AGRANA, LAPRO)
  - **Rhizoctonia** (AGRANA, LAPRO)
  - **Green potato tubers** (AGRANA, LAPRO)
  - **Brown rot Phytophthora** (LAPRO)
  - **Wet rot Erwinia** (LAPRO)
  - **Dry rot Alternaria** (LAPRO)
  - **Dry rot Fusarium** (LAPRO)
- Classification of farming system (LAPRO)
  - **Conventional**
  - **Organic**

- **Project aims and Contents**
  - Data Acquisition
  - Data Digitisation
  - Data Processing
  - **Selection of Parameters**
  - Analysis of the relationship between weather conditions and damages
  - Evaluation of models used in practice
  - Delivery of data lists to data providers
  - Dissemination

# Selection of Parameters at the monitoring sites (Chamber of Agriculture for Lower Austria)

- **Characterisation of site and weather conditions**
  - Soil type
  - Soil moisture
  - Drying
  - Moisture condition (waterlogging, flood, irrigation)
- **Soil and Crop Management**
  - Preceding crops
  - Tillage
  - Manuring
- **Assessments of damages on above-ground parts of potato plants**
  - **Phytophthora**
  - **Alternaria**
  - **Potato beetle**
  - Withering
  - Botrytis
  - Virosis
  - Drought damage



# Climate Relevance of *Phytophthora infestans*

**Phytophthora**

Air temperature  
Humidity

Precipitation

Dew

Water retention

Drought

Frost

Soil moisture

Soil temperature



# Climate Relevance of Alternaria

**Alternaria**

Air temperature

Humidity

Precipitation

Dew

Water retention

Drought

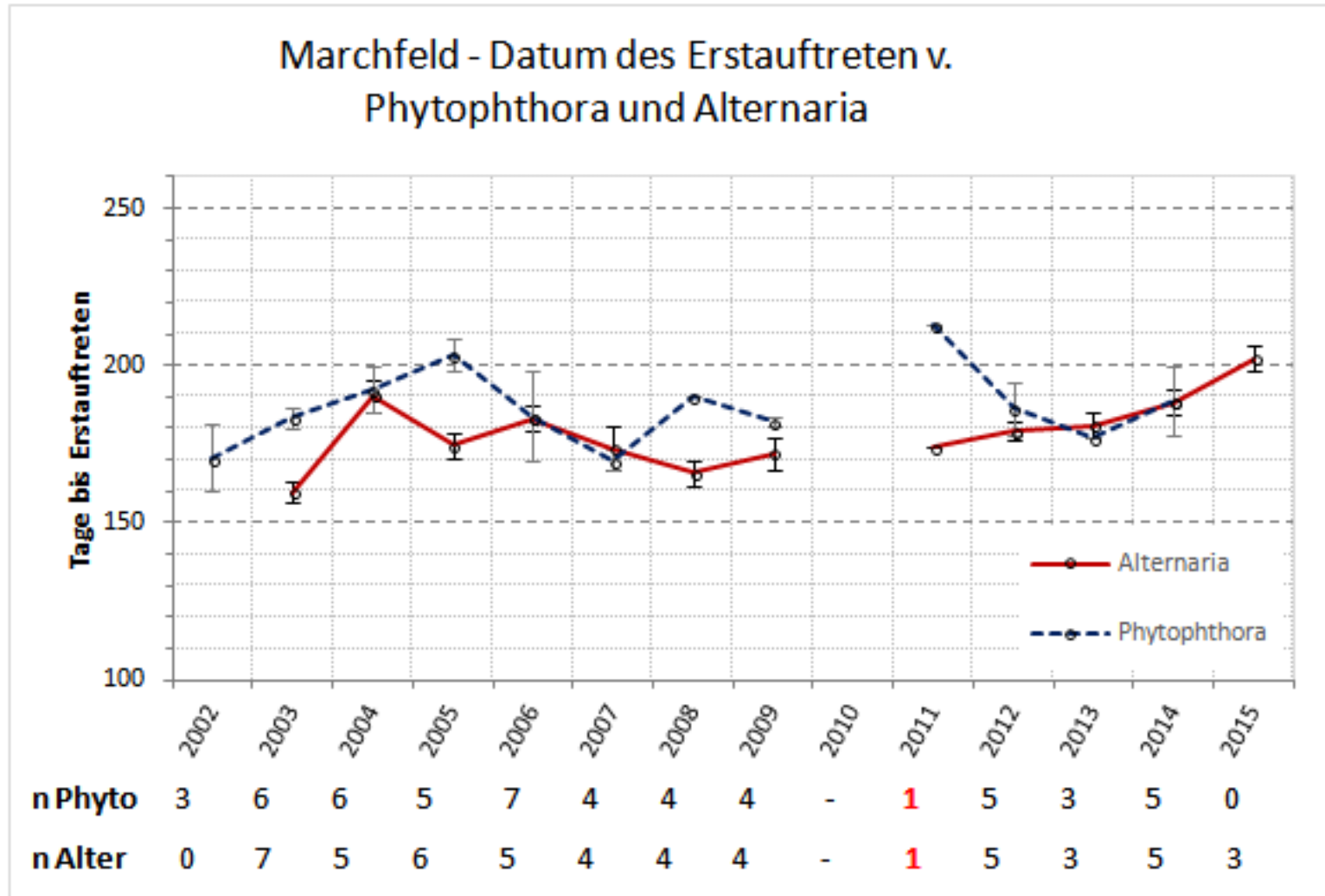
Frost

Soil moisture

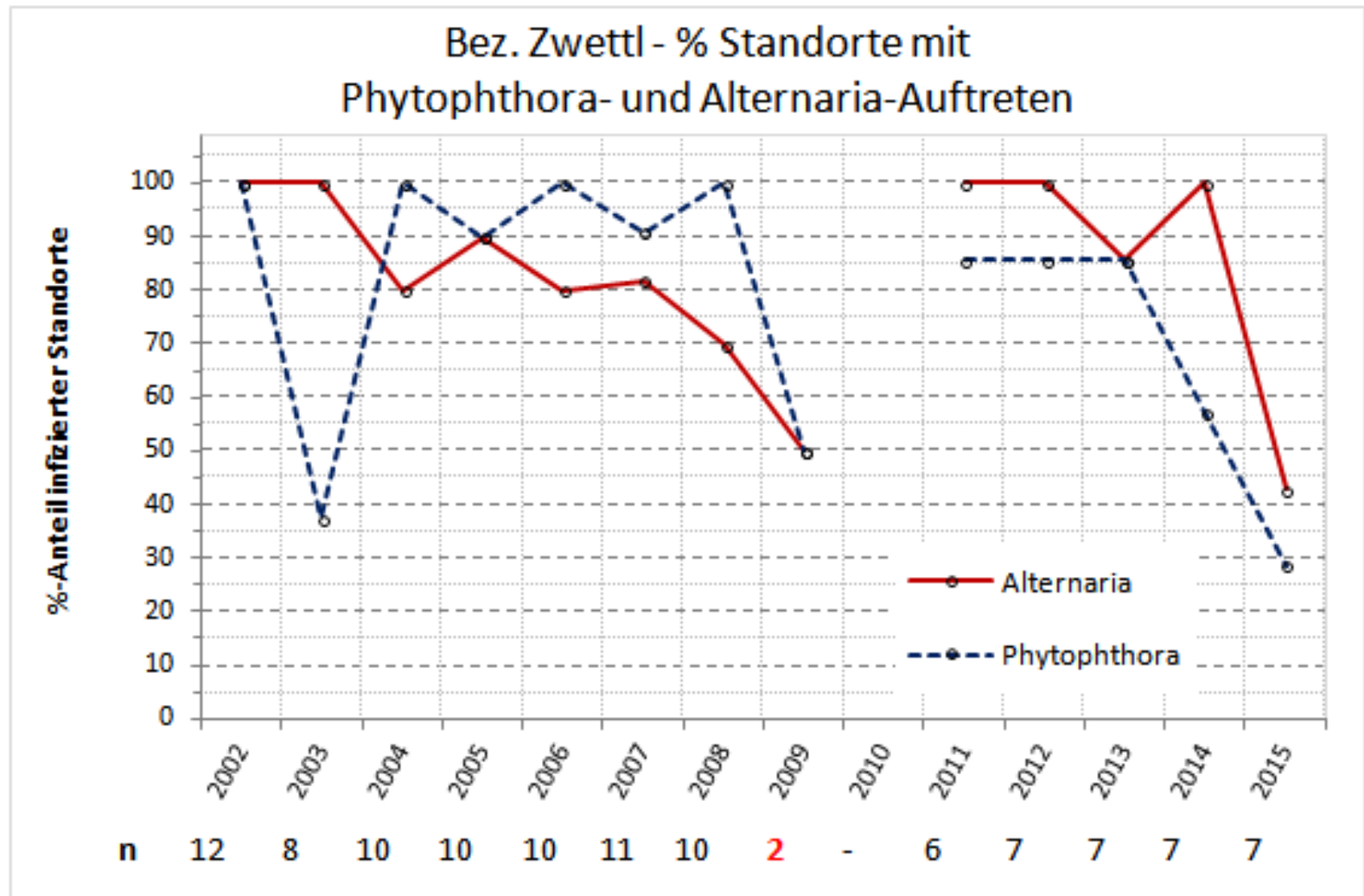
Soil temperature



# Marchfeld - Average Initial Occurrence of *Phytophthora* and *Alternaria*



# District Zwettl - % of Monitored Sites Infected by *Phytophthora* and *Alternaria*





# Climate Relevance of Wireworm assessments



**Wireworm**



Air temperature  
Humidity

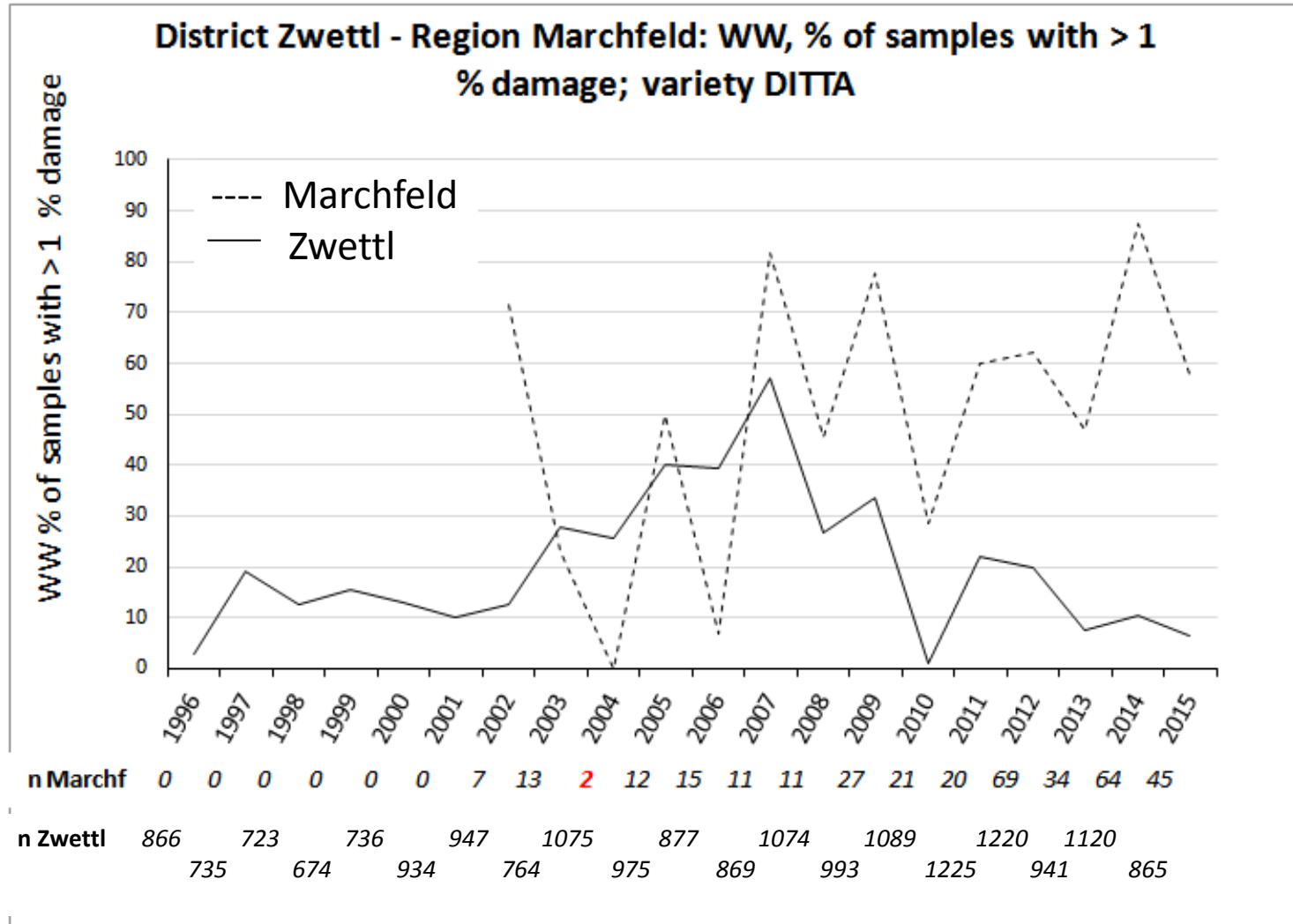
Precipitation  
Dew  
Water retention

Drought

Frost

Soil moisture  
Soil temperature

# % of Samples > 1% Wireworm Damages of the Delivered Potato Harvest Yields



# Restrictions

- Potato varieties
- Impact of the damaging parameters
- Sample size
- Interesting key parameters

# List of Parameters

- **Climatic parameters**
- **Characterisation of site and weather conditions**
  - Soil type
  - Soil moisture
  - Drying
  - Moisture condition (waterlogging, flood, irrigation)
- **Soil and Crop Management**
  - Potato varieties
  - Preceding crops
  - Tillage
  - Manuring
  - Plant protection
- **Classification of farming system**
  - Conventional
  - Organic

- **Project aims and Contents**
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**Thank you**

for your attention!

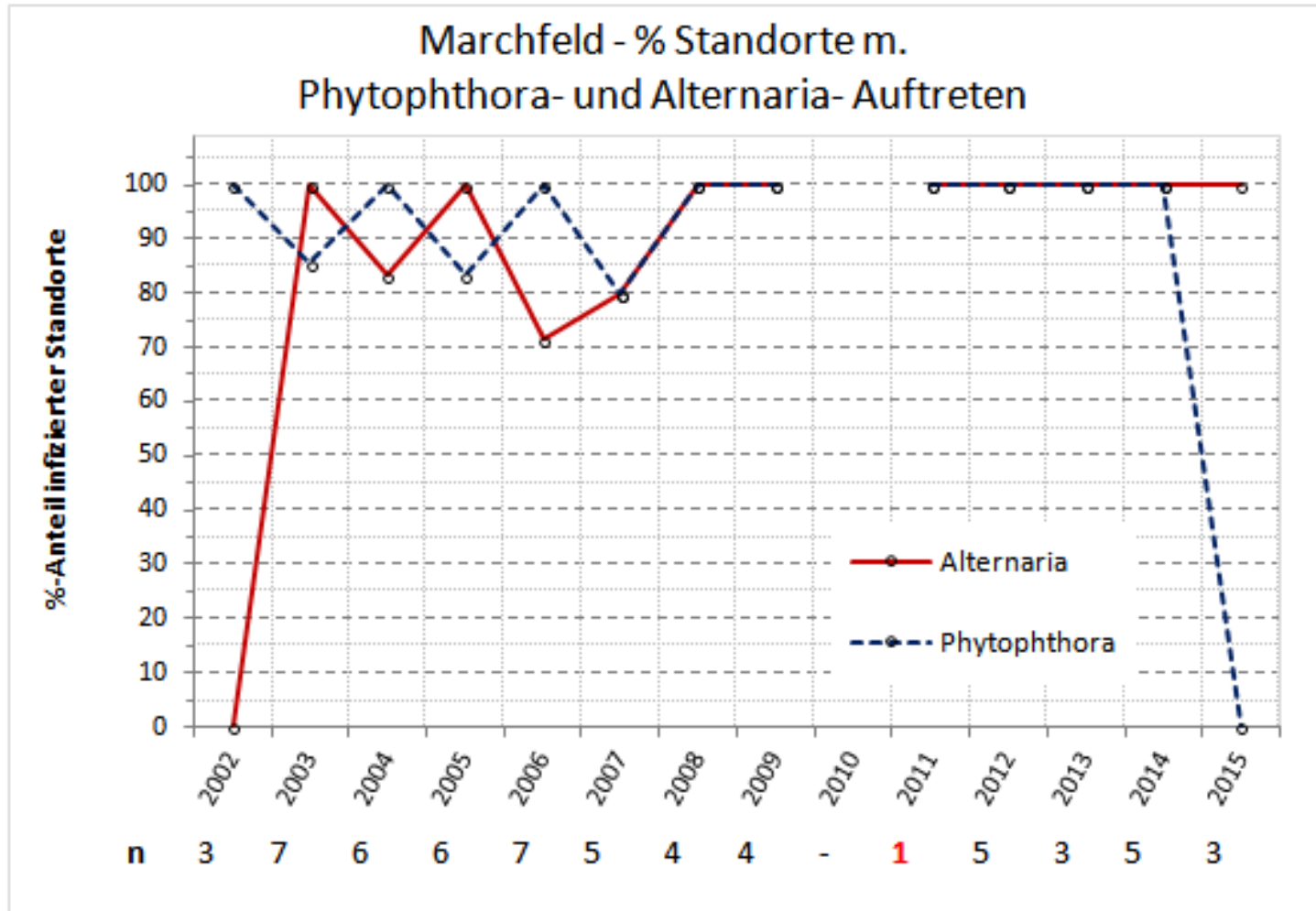


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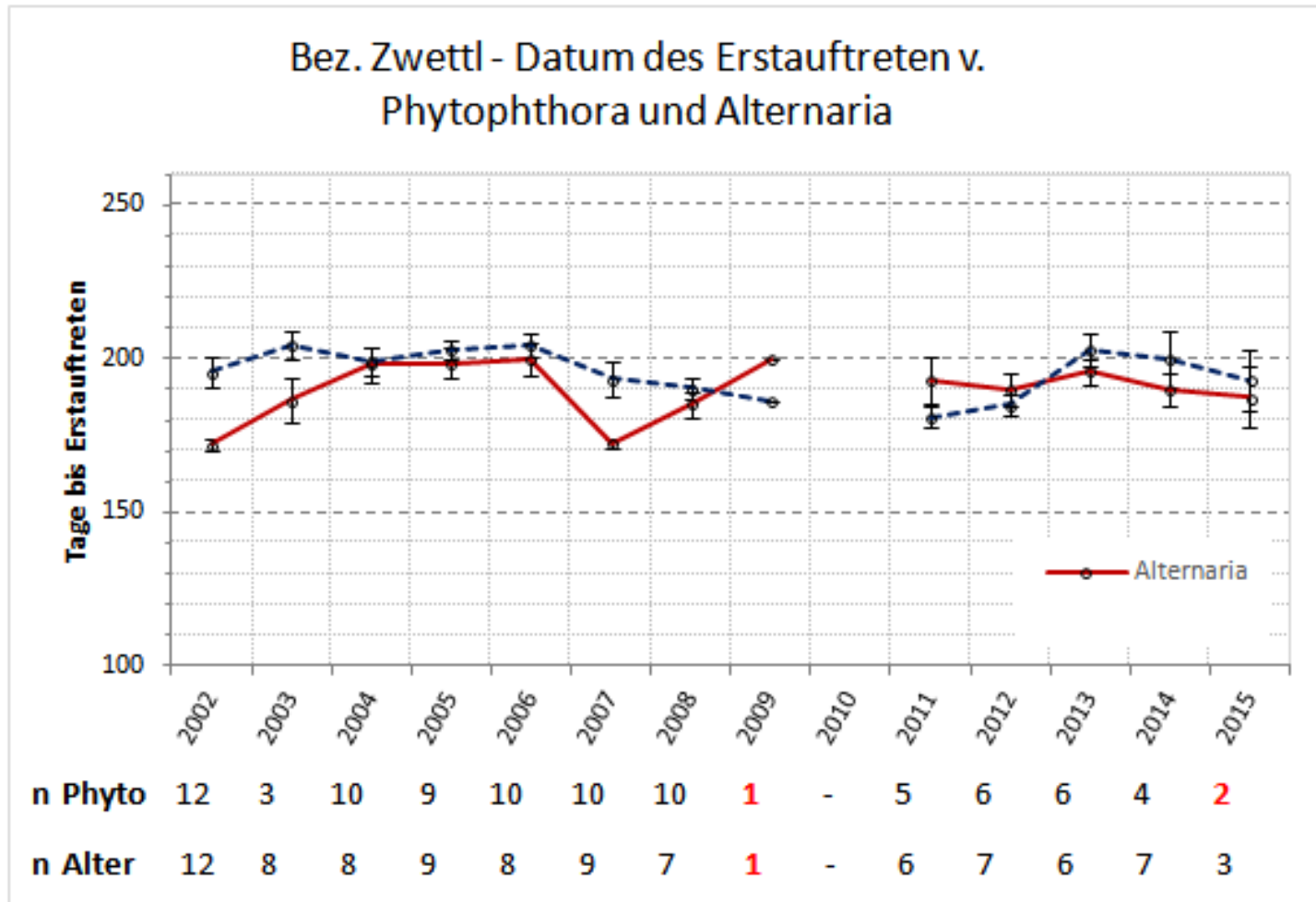
**MELES**

# Attachment

# Marchfeld- % of Monitored Sites Infected by *Phytophthora* and *Alternaria*

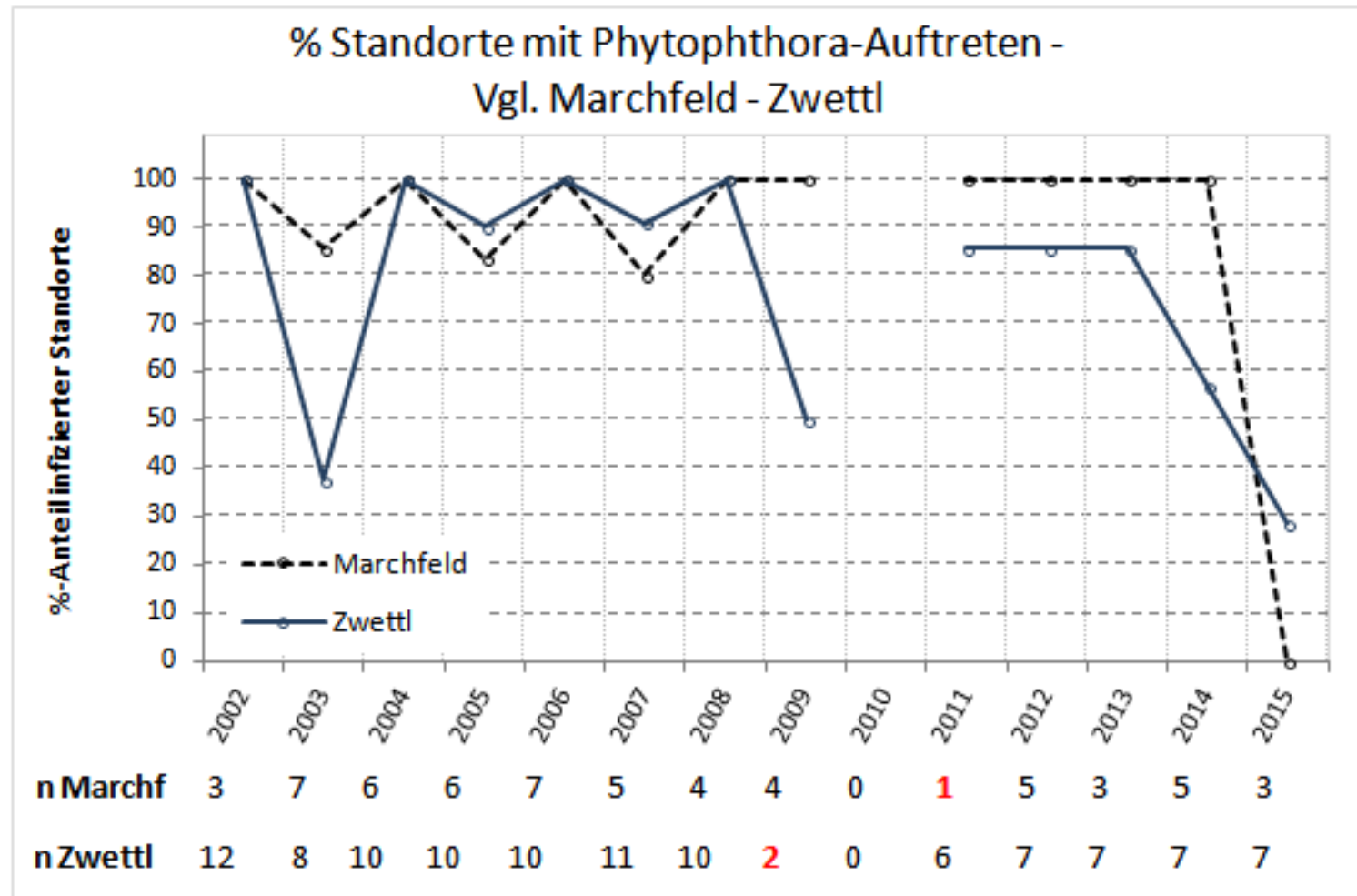


# District Zwettl- Average Initial Occurrence of *Phytophthora* and *Alternaria*

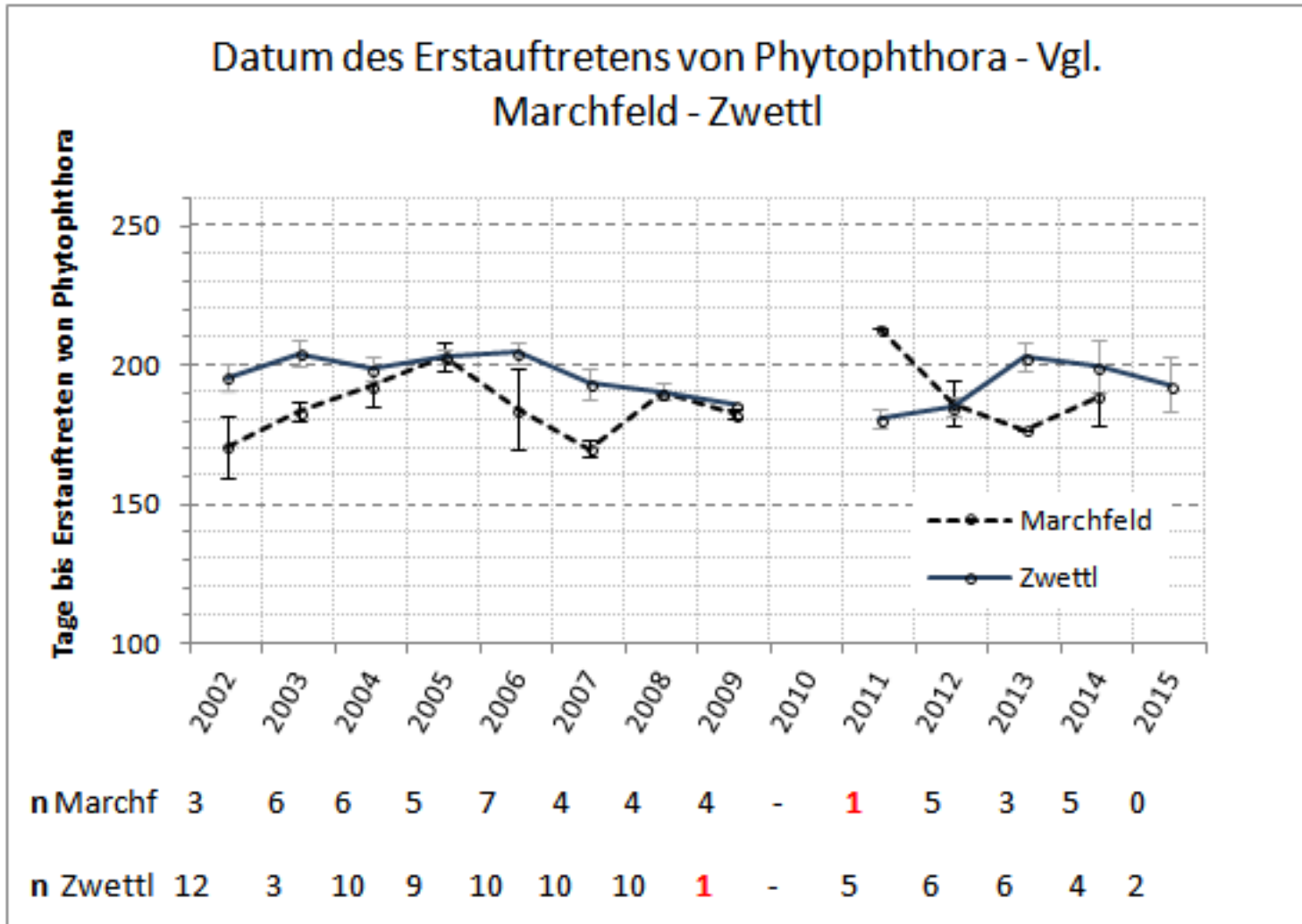




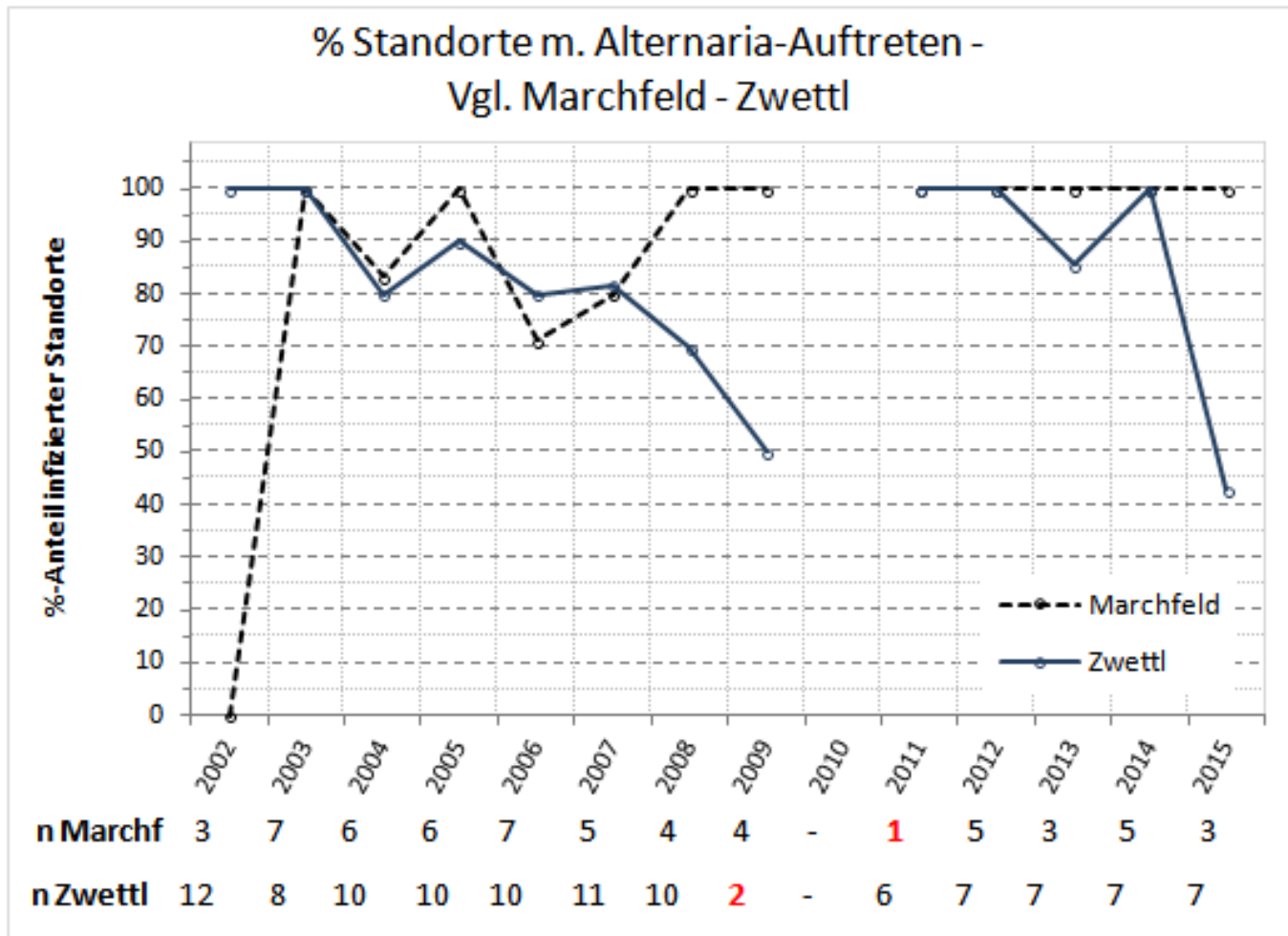
# % of Monitored Sites Infected by Phytophthora



# Marchfeld and Zwettl - Average Initial Occurrence of Phytophthora



# Marchfeld and Zwettl - % of Monitored Sites Infected by *Alternaria*



# Marchfeld and Zwettl - Average Initial Occurrence of *Alternaria*

