EuroBlight
A potato late blight network for Europe

Facultade de Ciencias, Ourense (Spain) | 18-21 May 2026

From smallholder to Intensive Farming: Testing the CARAH Model for onset of Potato Late Blight epidemic in Galicia

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Introduction

- Two contrasting production systems coexist in Galicia:
  - **Smallholder farming:** fragmented and heterogeneous (<1ha)
  - **Intensive farming:** larger and more homogeneous (4-9ha)
- Potato late blight is present every crop season in both systems.
- However, smallholder farming systems are less interesting to new technology management
  - The **late blight climatic models** (and DSS) are widely used in intensive farming, but ….

  How is the performance in smallholder systems?

Goal: estudy epidemiology of late blight in both farming systems in Galicia and see how CARAH model can predict outbreaks of this disease

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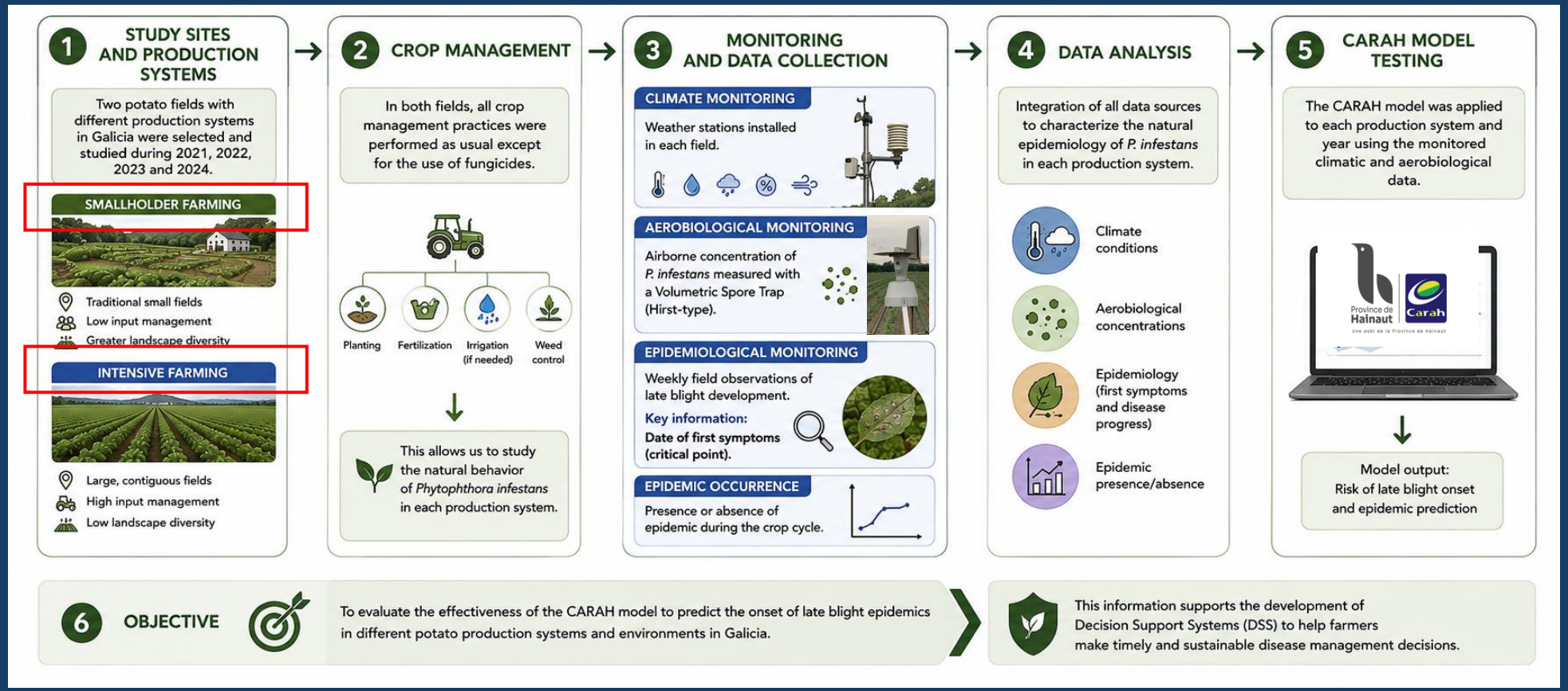
Methodology



Methodology

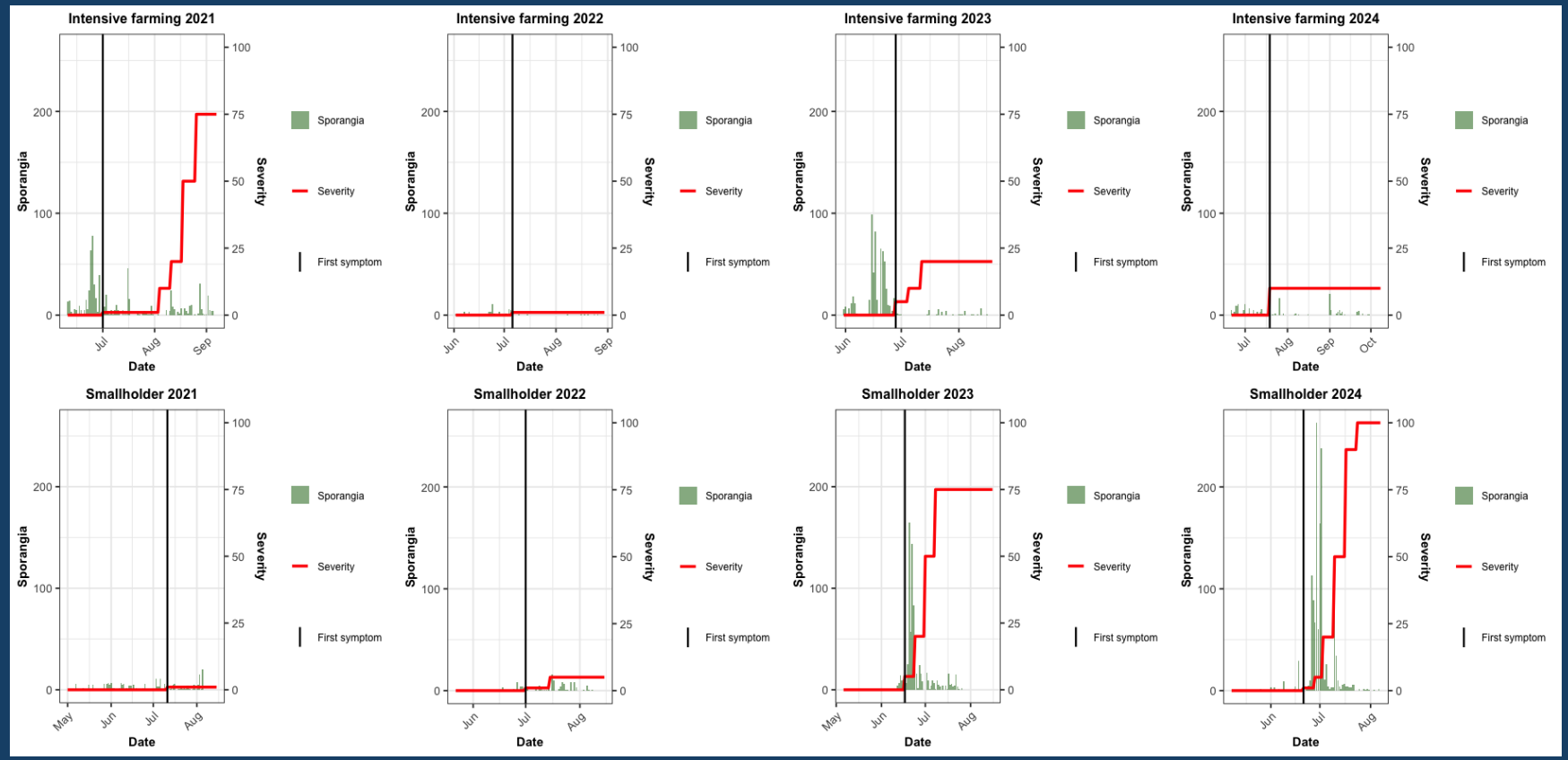
Intensive farming

Smallholder farming

Results: late blight epidemiological characterization per crop season

Intensive farming

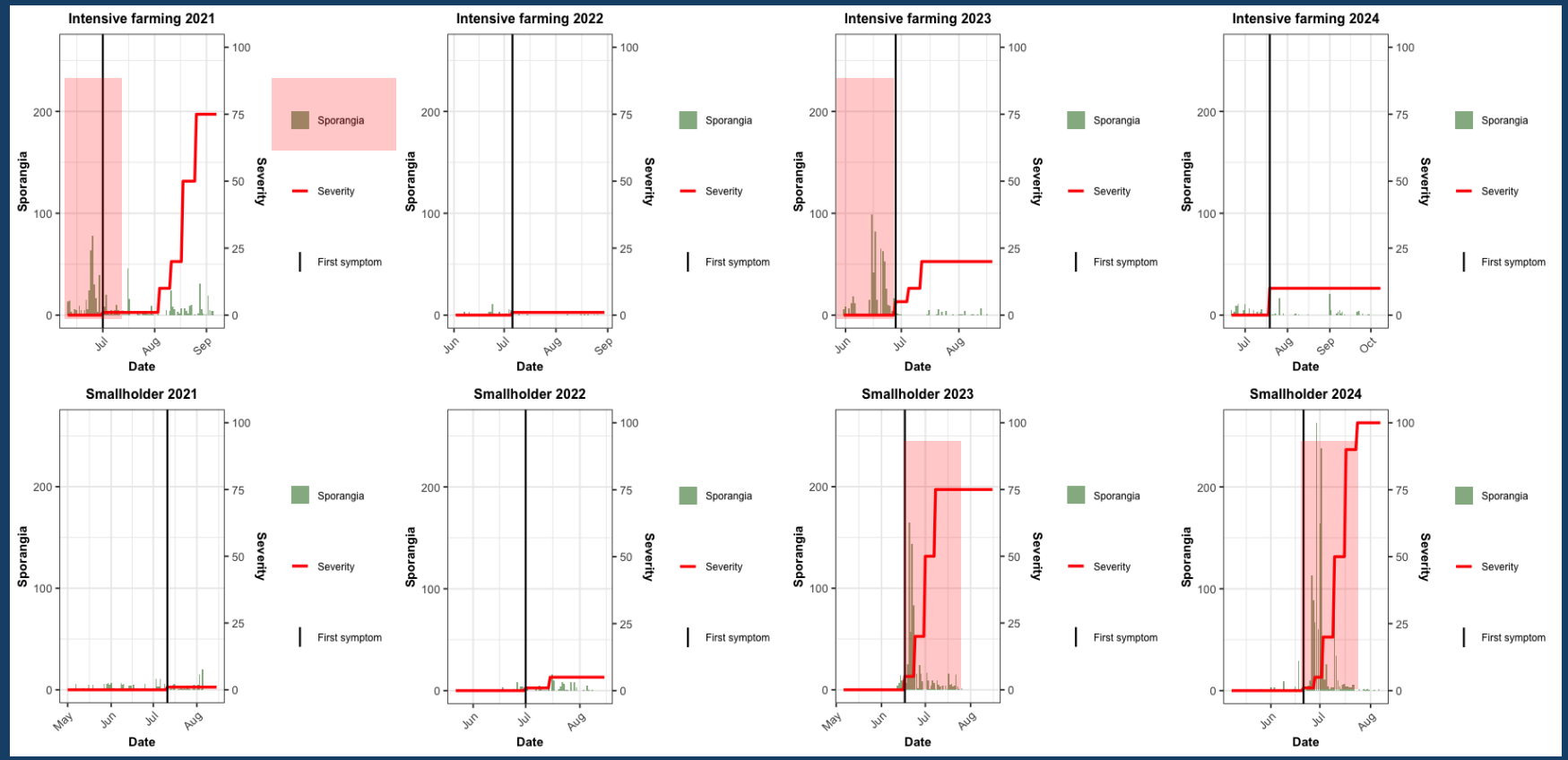
smallholder



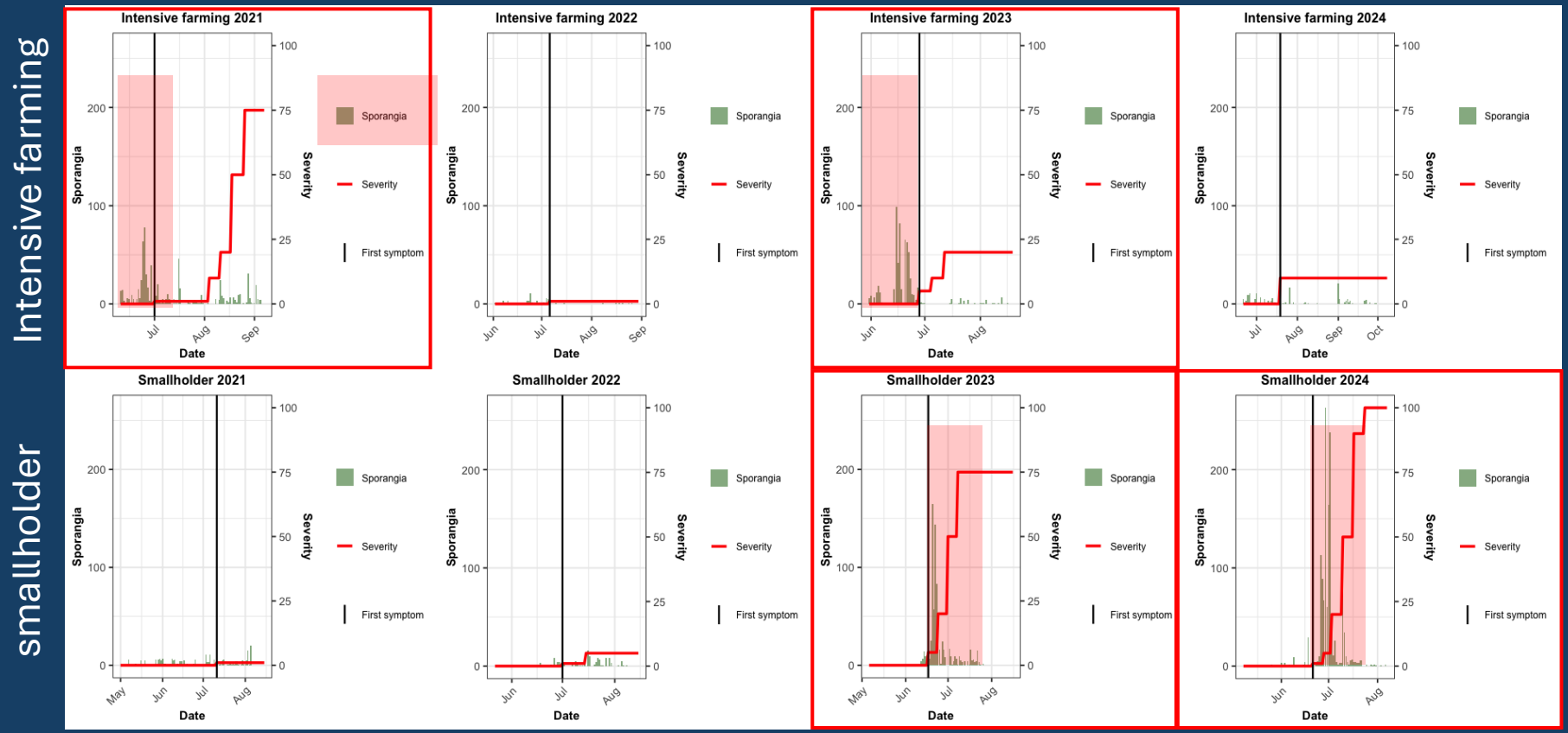
Results: late blight epidemiological characterization per crop season

Intensive farming

smallholder



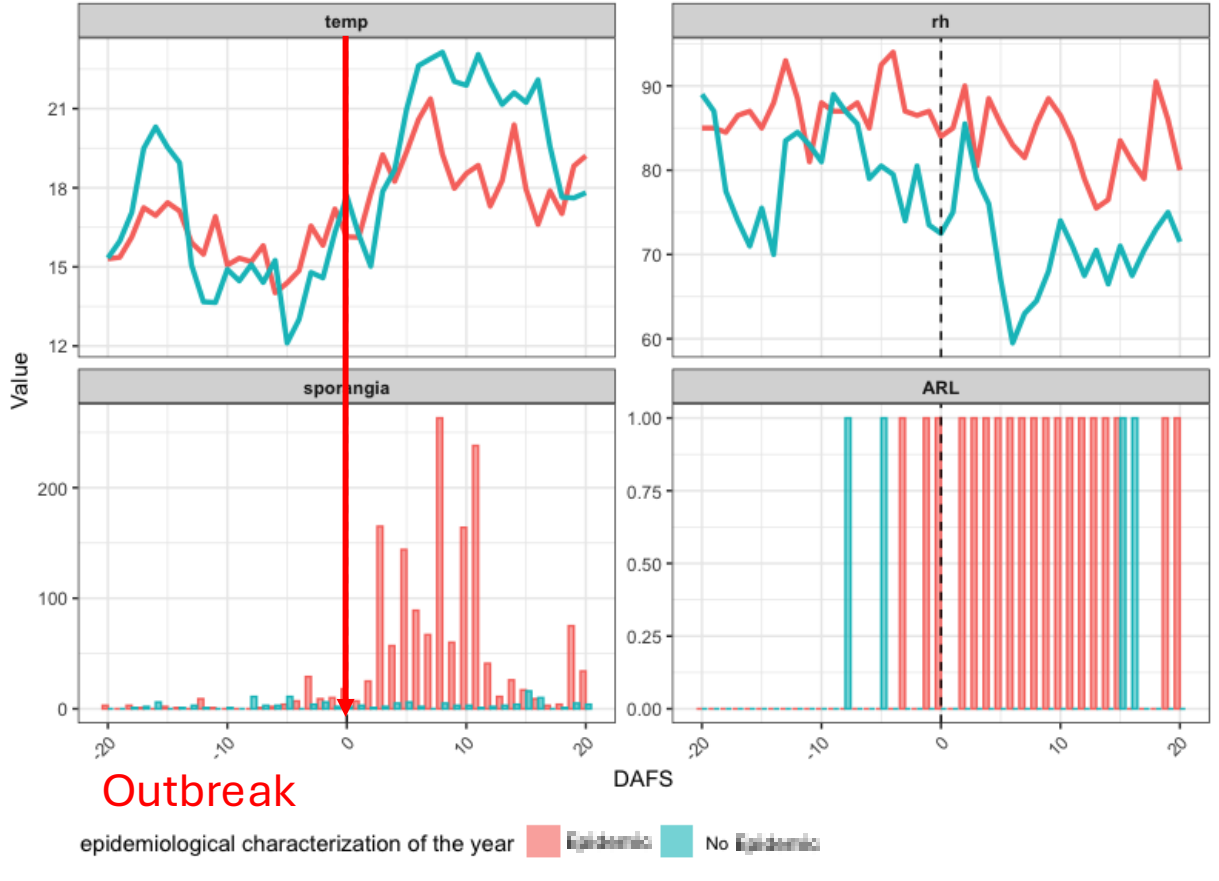
Results: late blight epidemiological characterization per crop season



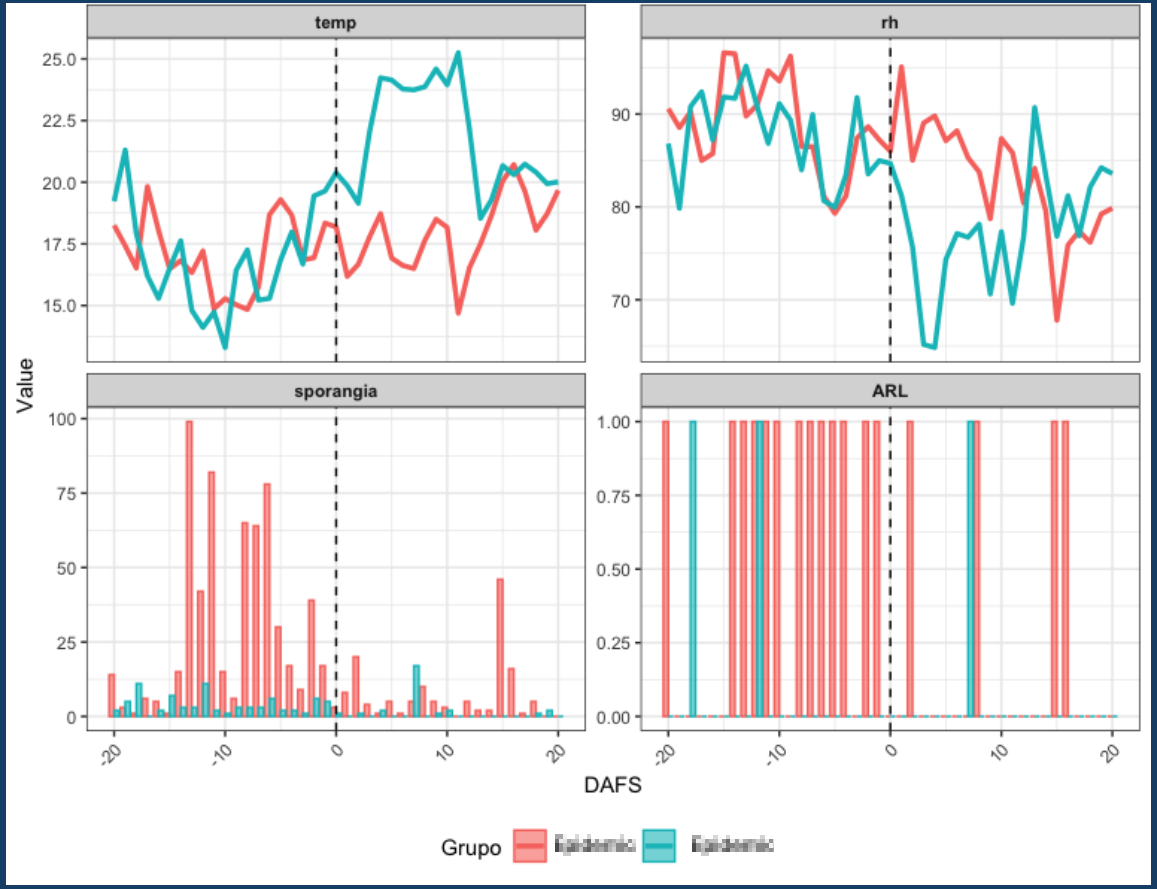
Epidemic (>20% severity)

Results: late blight epidemiological characterization per crop season

Smallholder



Intensive farming



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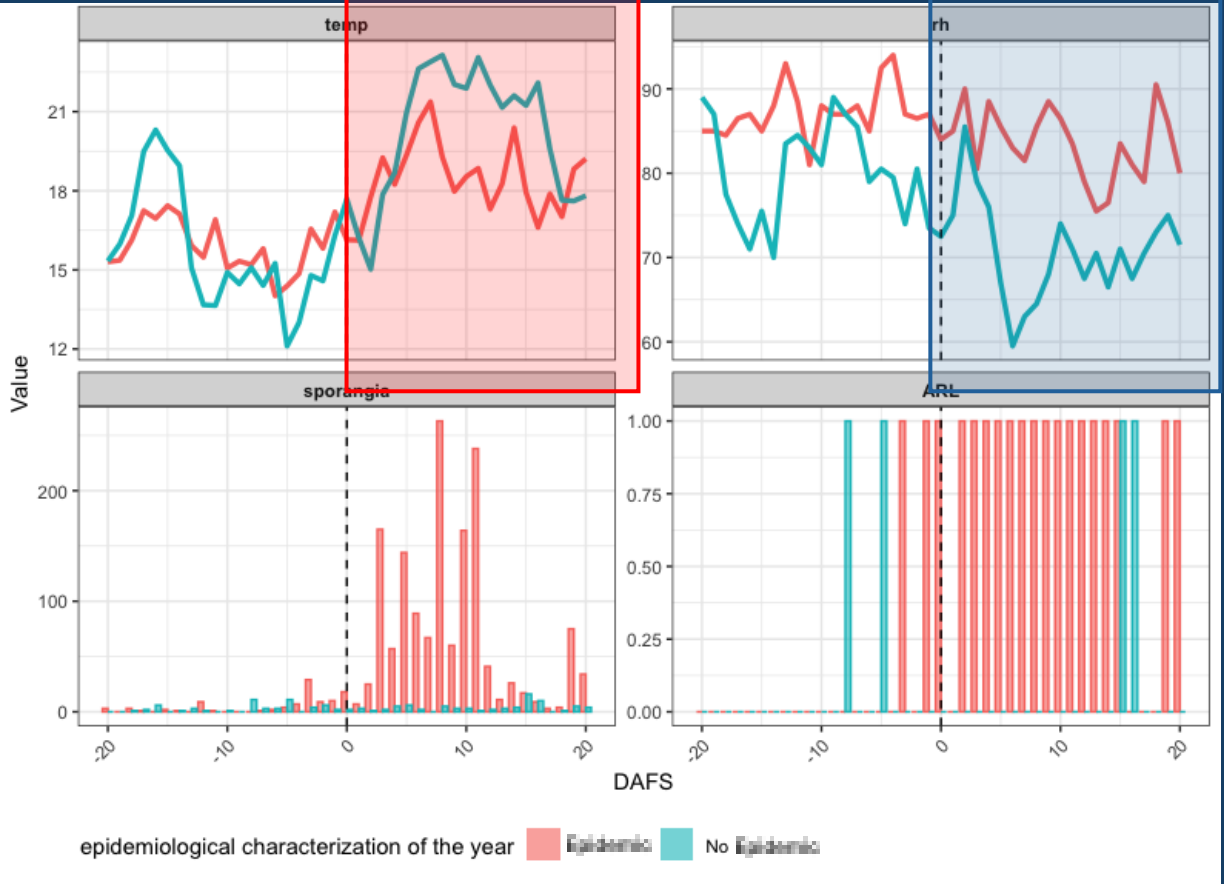
Smallholder



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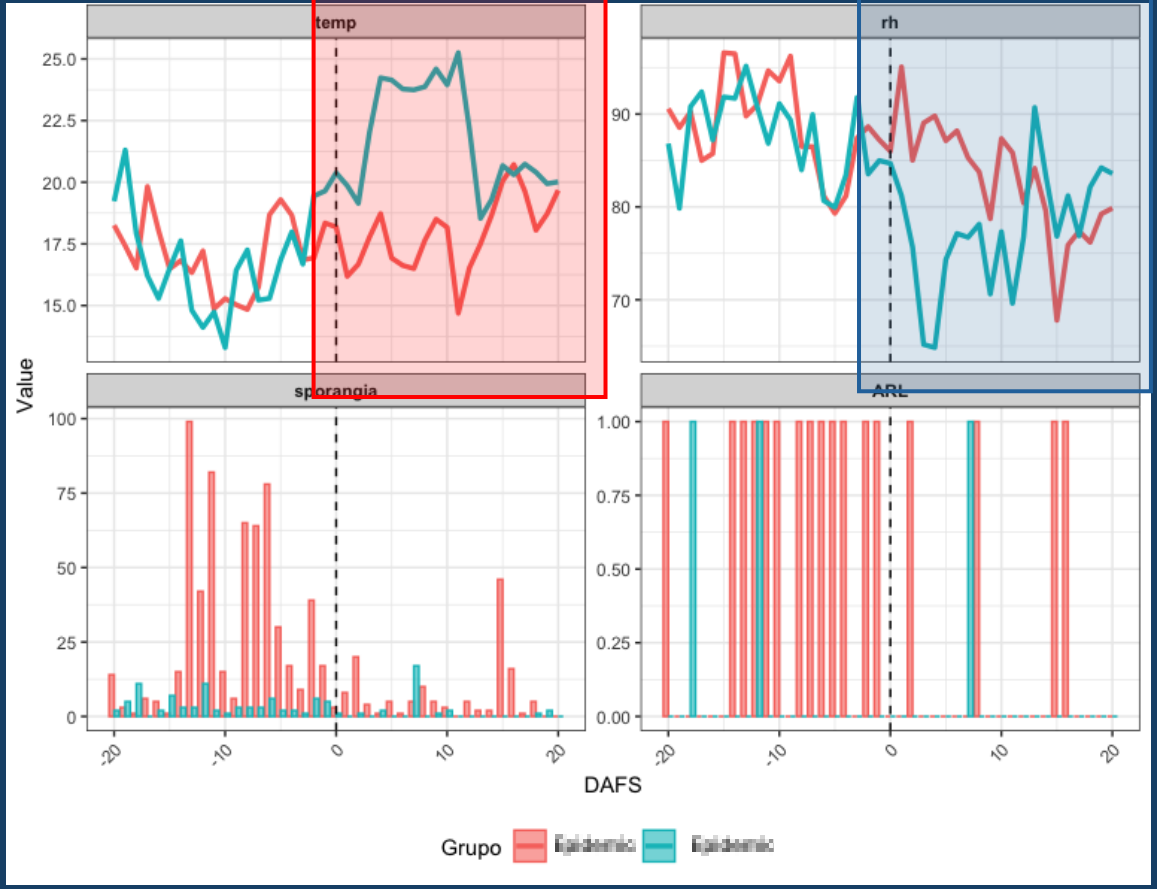

Results: late blight epidemiological characterization per crop season

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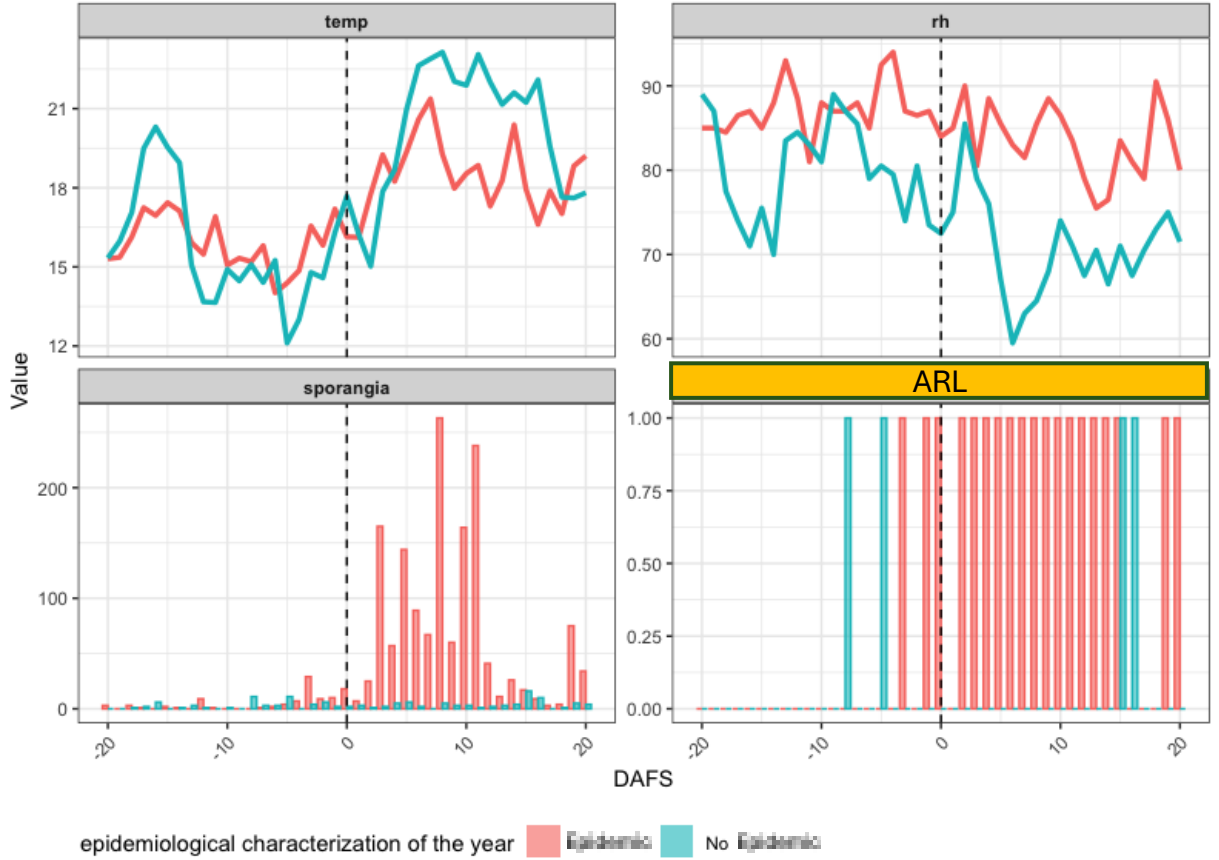

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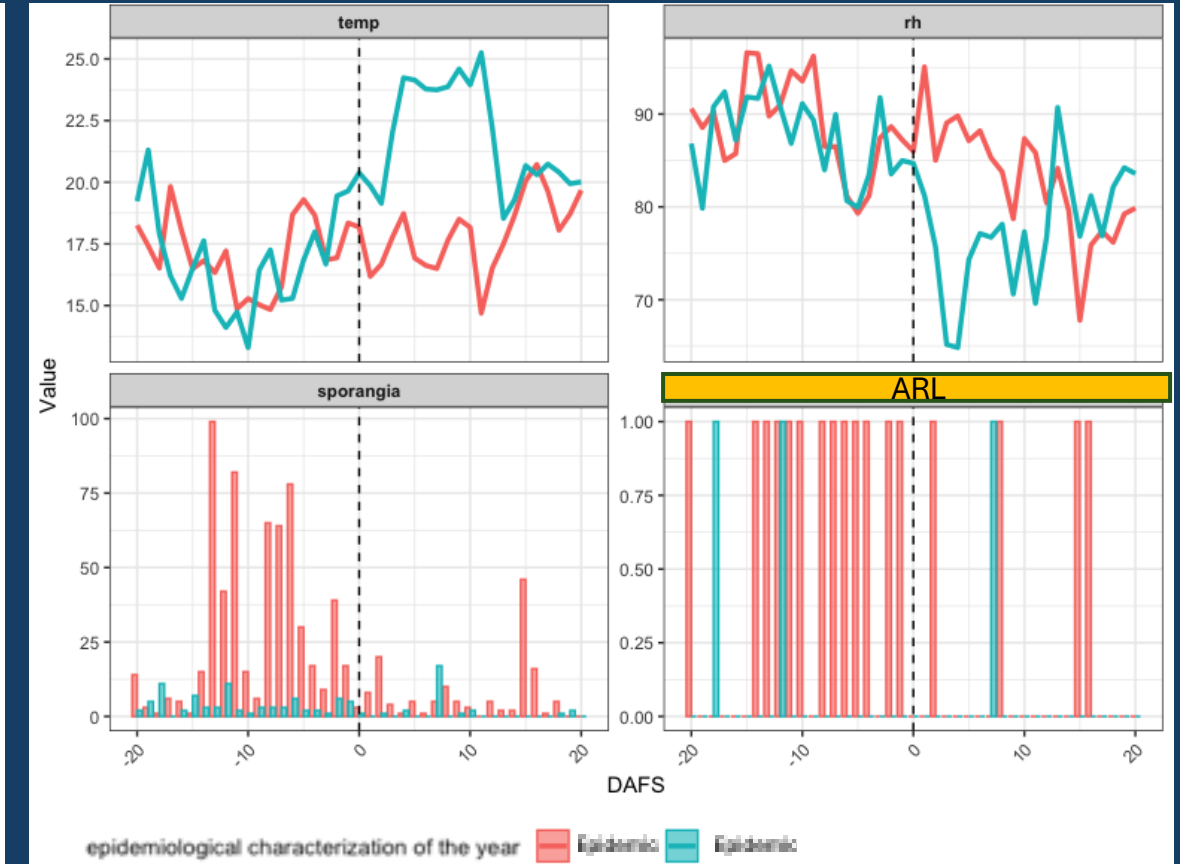
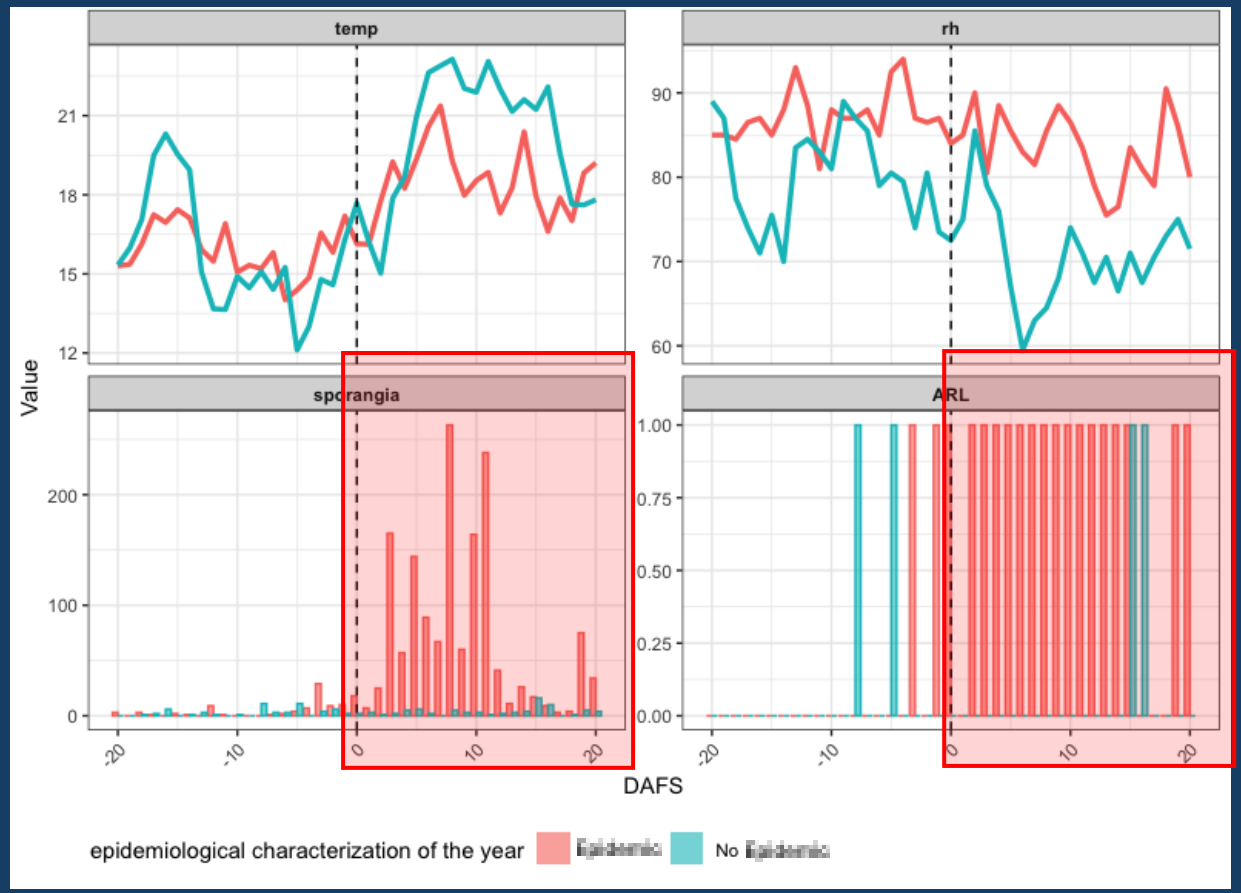


ARL= aerobiological risk level (>10 sporangia/day)

Results: late blight epidemiological characterization per crop season

Smallholder



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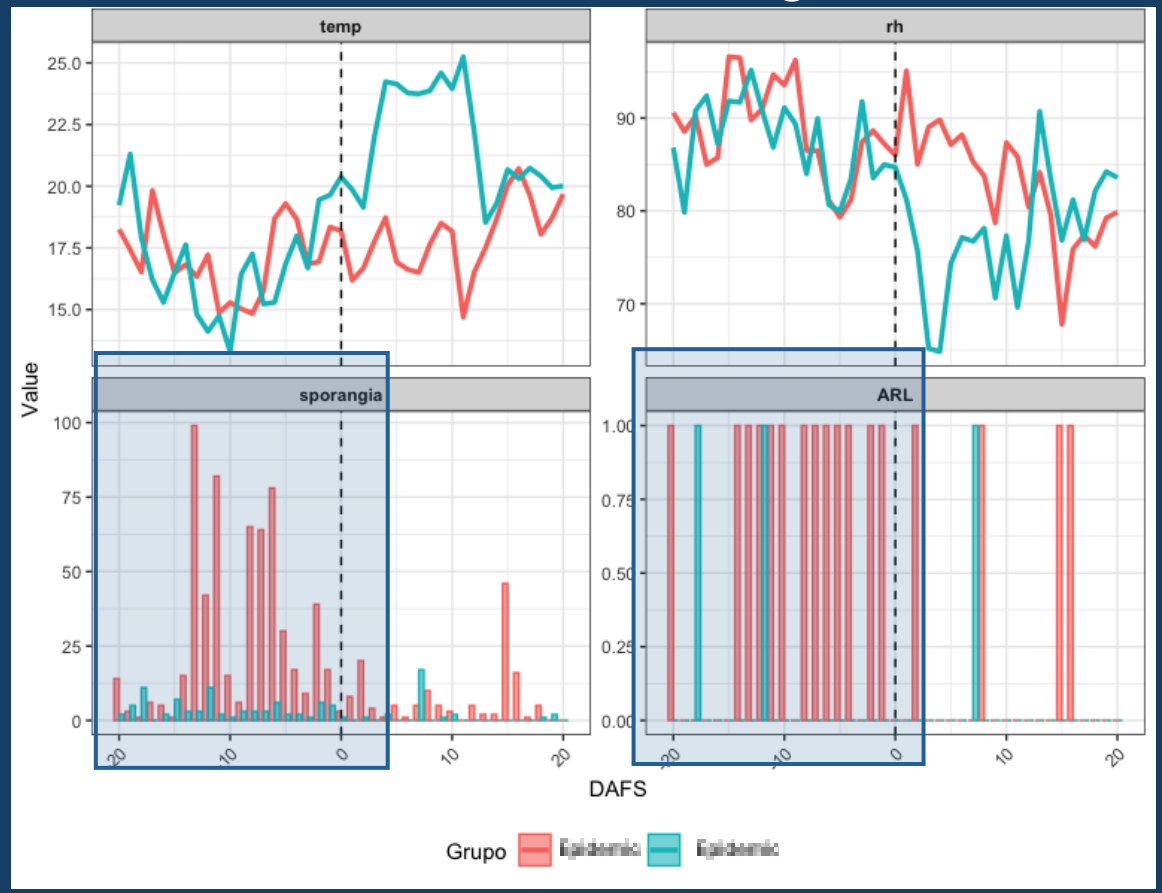
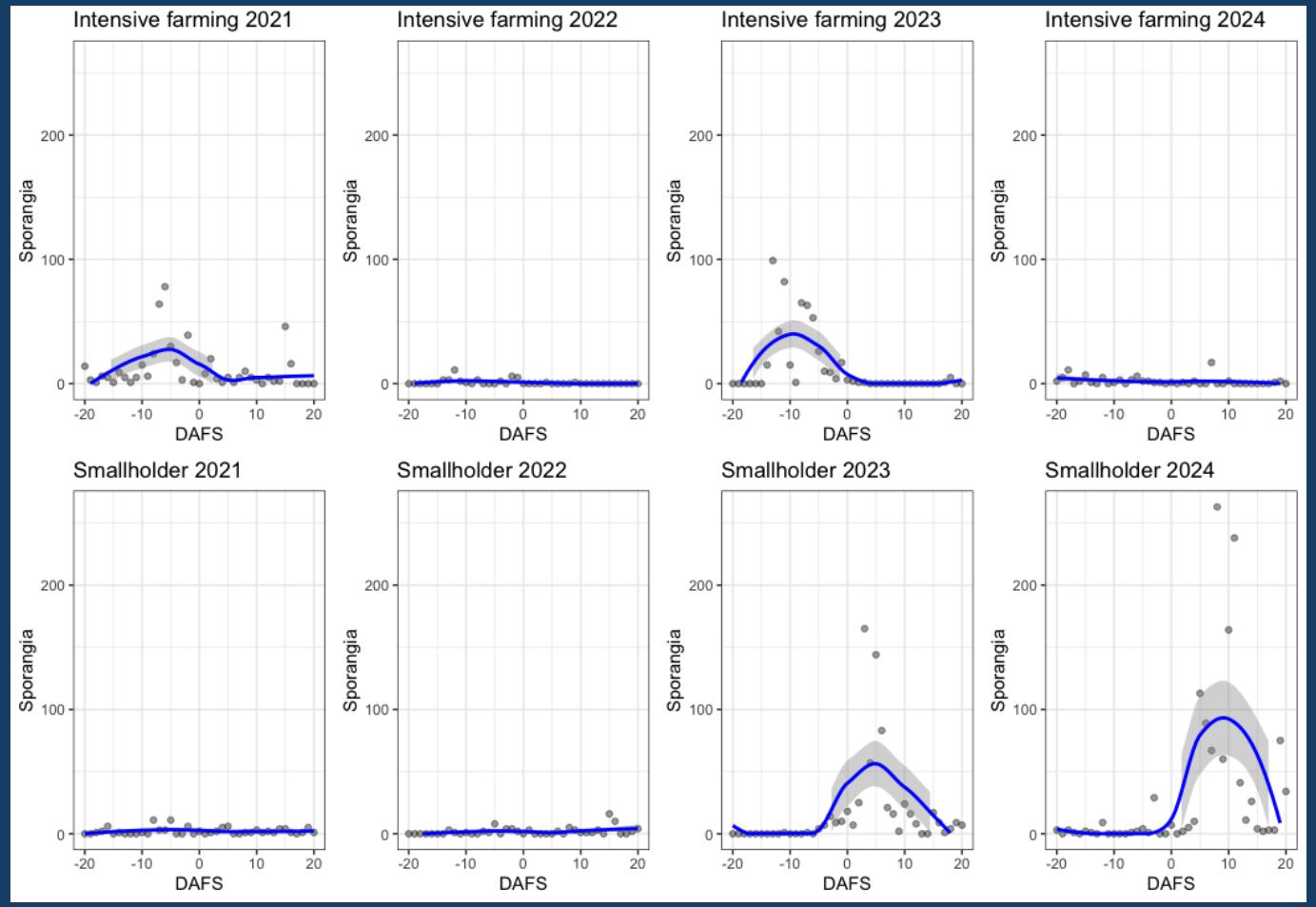


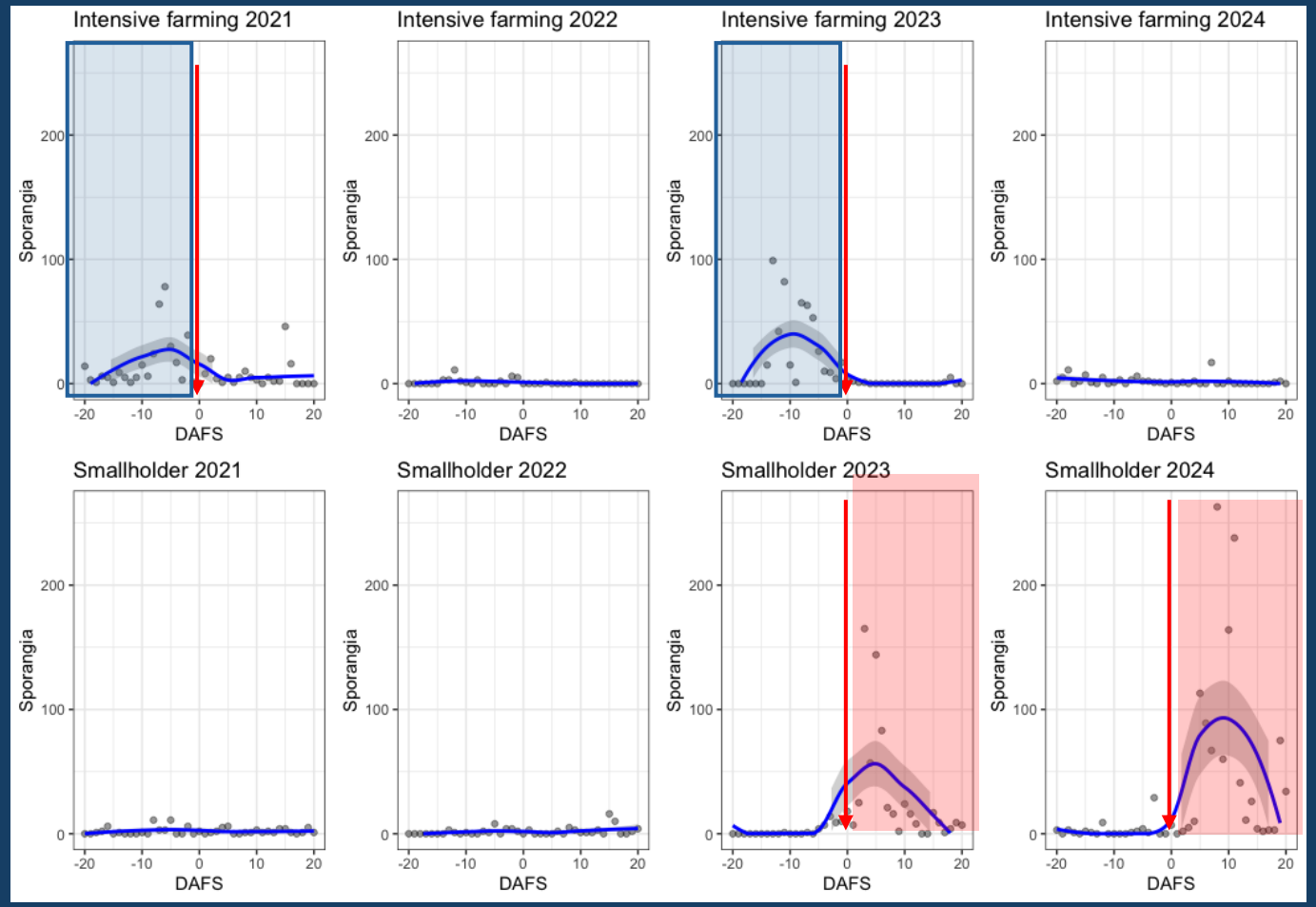
Results: late blight epidemiological characterization per crop season



DAFS: day after first symptoms

Results: late blight epidemiological characterization per crop season

0= outbreak of late blight epidemic



DAFS: day after first symptoms

Different behaviour of late blight in each cropping system....

What happened with **late blight climatic models** (and DSS) ?

The case of study of CARAH model from Belgium

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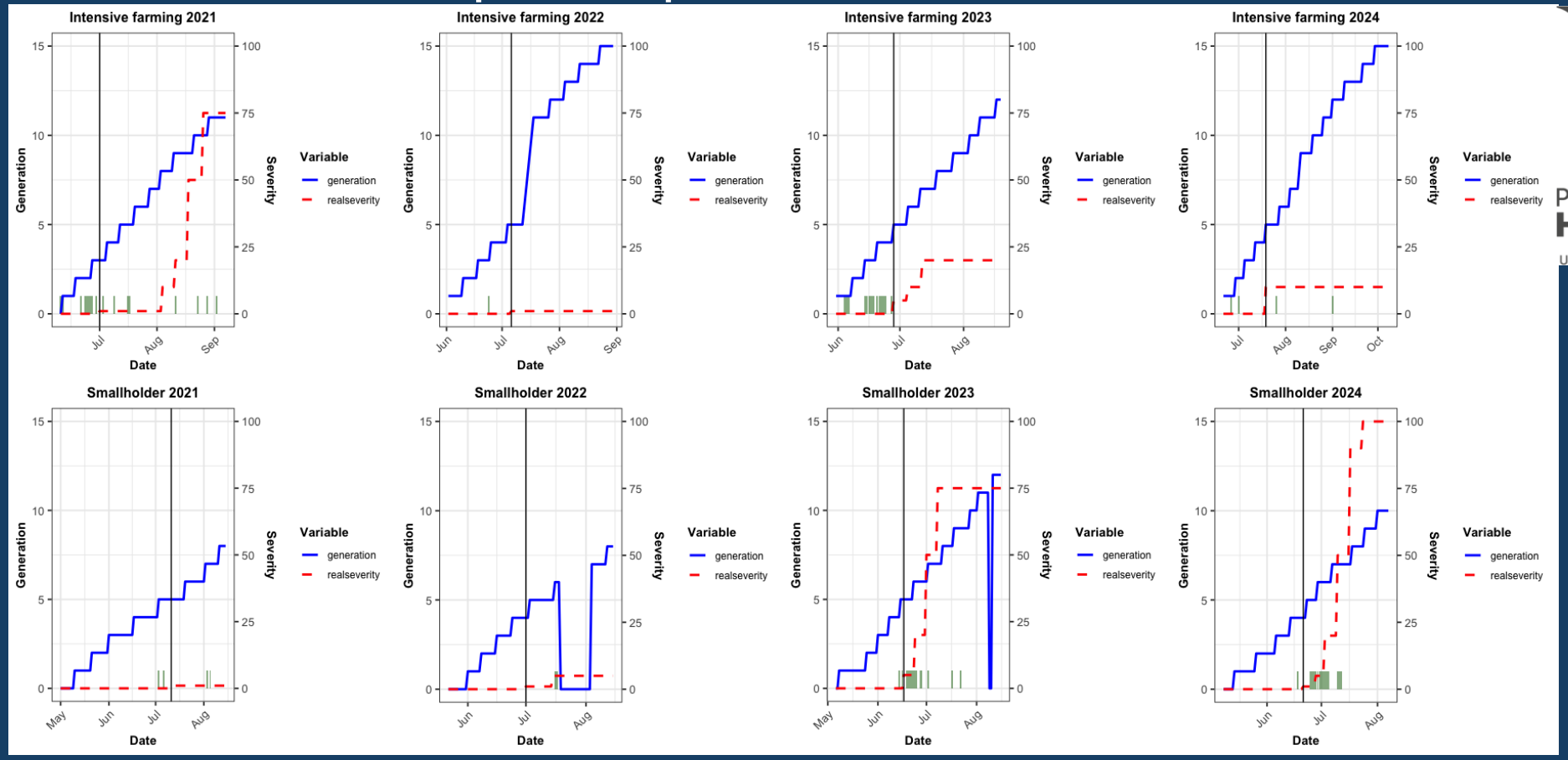
Results: Carah model per crop season



Province de Hainaut
Une asbl de la Province de Hainaut

Carah

— Generation of CARAH model
--- Real severity
— outbreak (1st symptoms)

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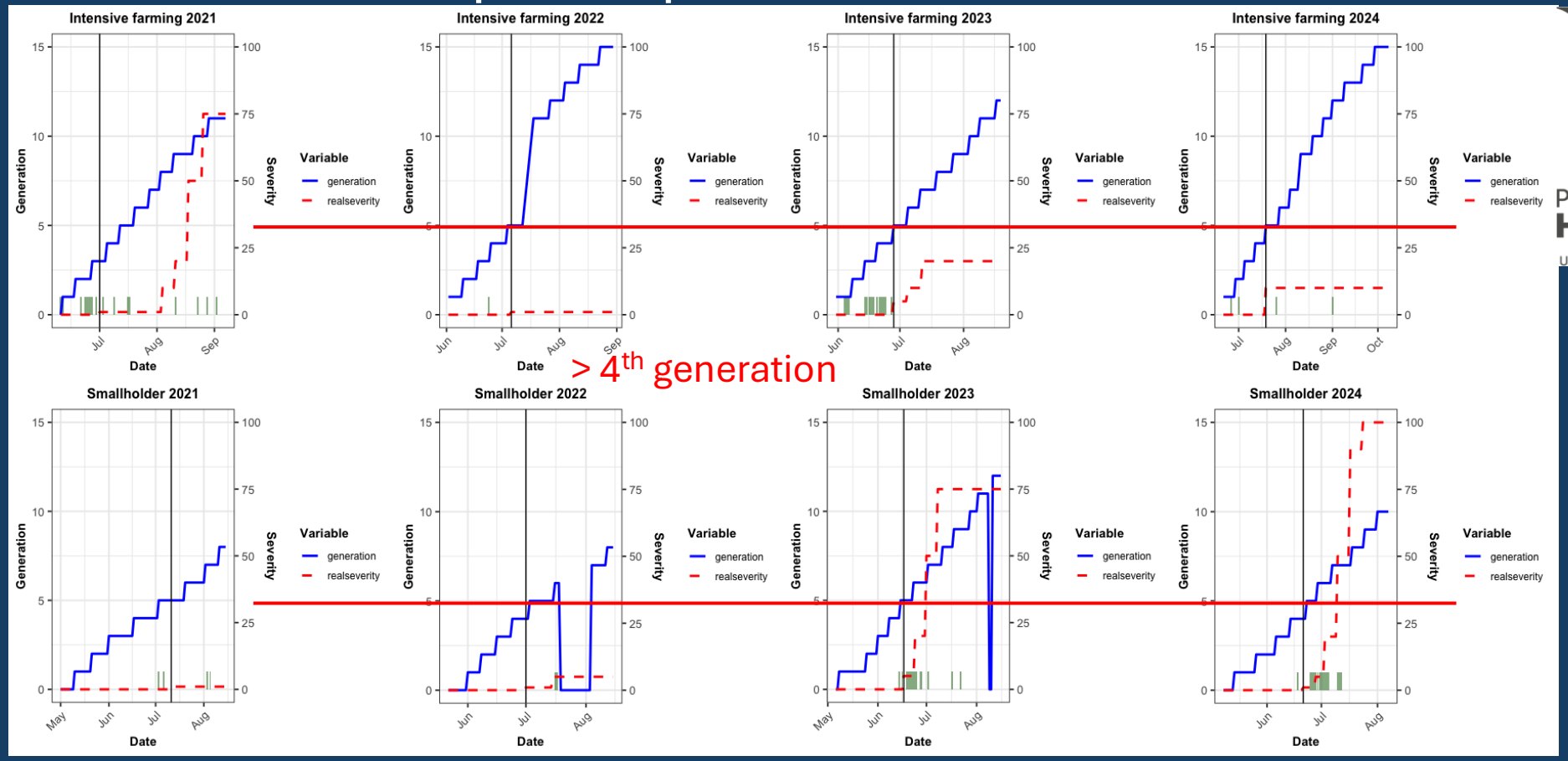
Results: Carah model per crop season



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Carah

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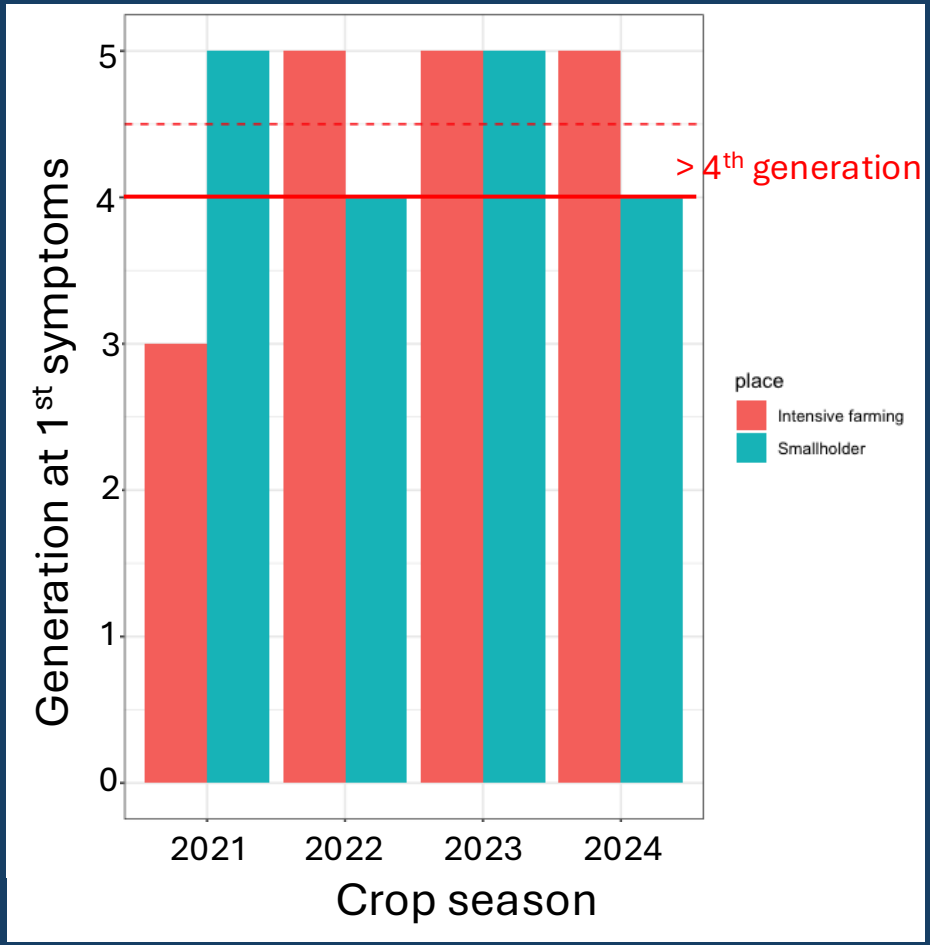

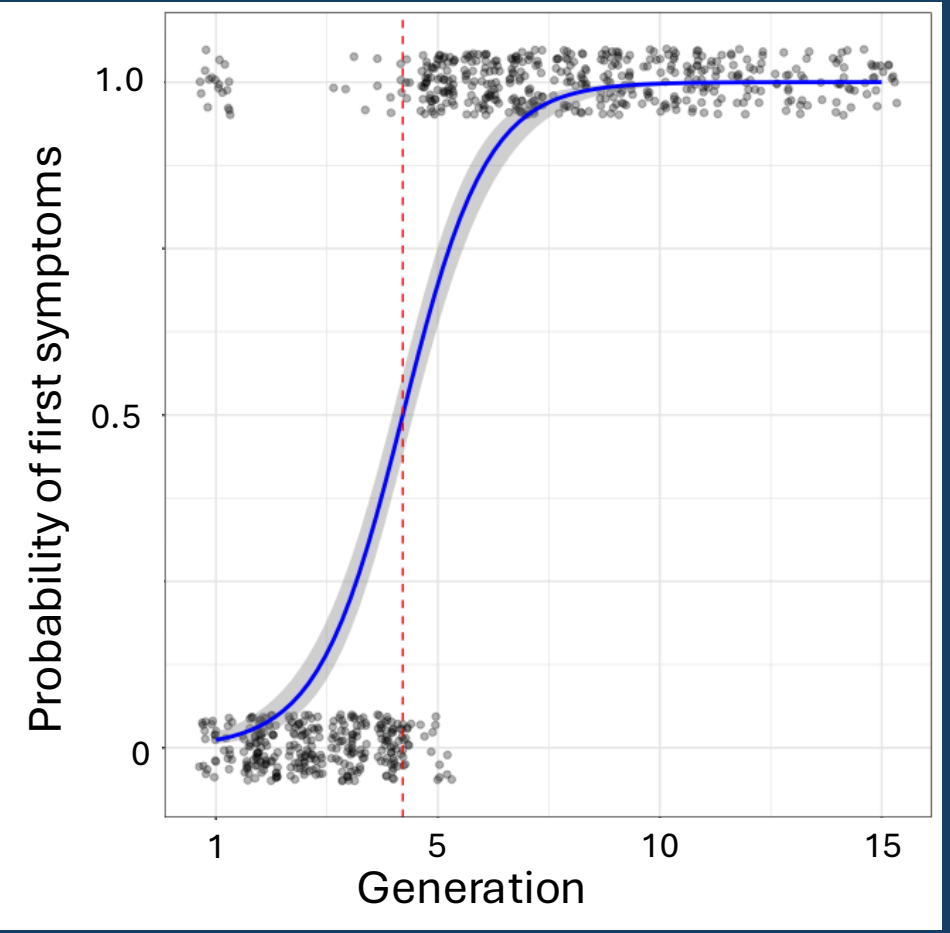

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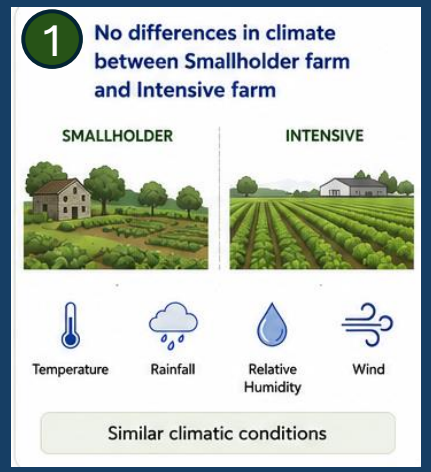
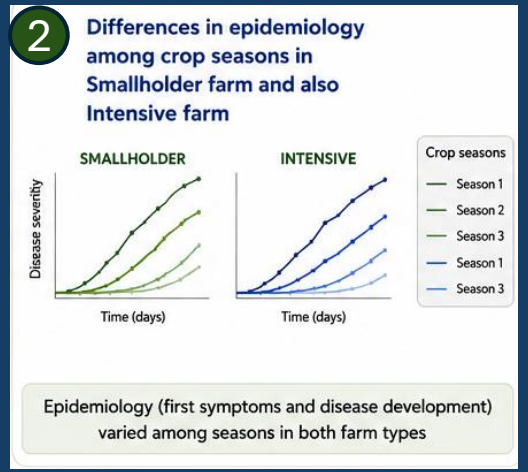
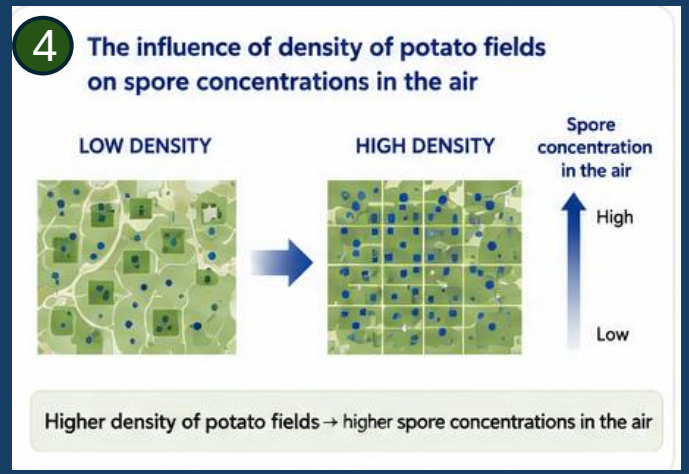
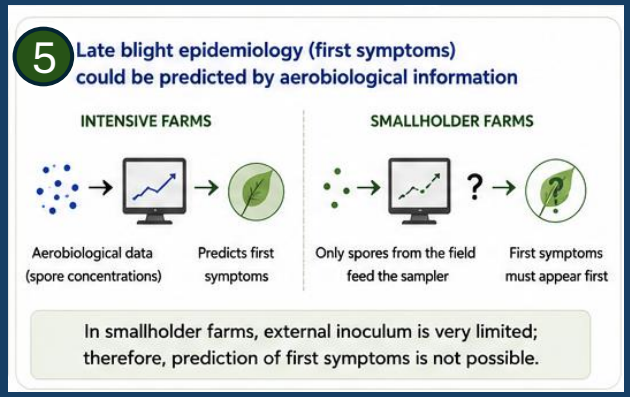
Carah

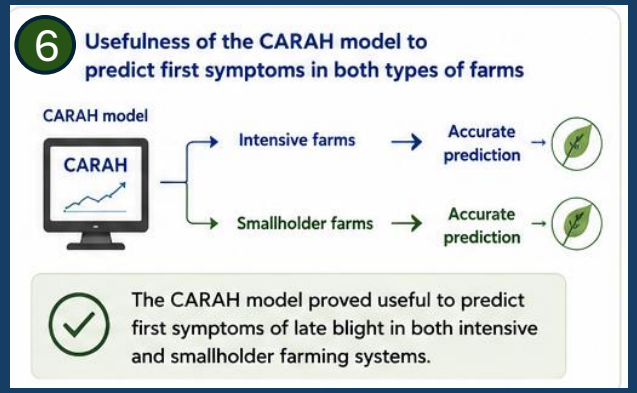
Conclusions











Moitas grazas
Many Thanks

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