



P4 - PFNS group



RIMPEST

The effect of changing climate on potential risk from important insect pest on plant production in Austria and related adaptation options

Team



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The Problem



Changing Climate

It is expected that CC will affect pest appearance and development.



Pest development

Current pest varieties will adopt to CC; changed one will appear.



Environmental observations

PIS micrometeorological and biological observational network is representative one.
Pest appearance assessment on country level can provide only simulation models.



Environmental Impact

Pest response on changing environmental conditions requires intensification of protection measures which can have negative impact on the environment.



Industrial Impact

In Serbia, **codling moth** is the most important pest in intensive apple production.



RIMPEST

The Solution

through project PFNS involvement in WPs and objectives

*WP1 –
Data Base establishment*



*WP2 –Pest models
evaluation and validation*



*WP3 –Simulating/analysing pest
trends under climate/crop scenarios*



*WP4 –Dissemination and
exploitation of results*



Observe and collect

To collect **available data** (COMBIRISK,AGROFORECAST) (observed biological and measured meteorological data), structure them and prepare proper datasets

Plan and develop

Existing models will be adapted, improved and re-validated, and new established

Test and forecast

Performance test for all models, and simulation of pest trends under climate and crop scenarios.

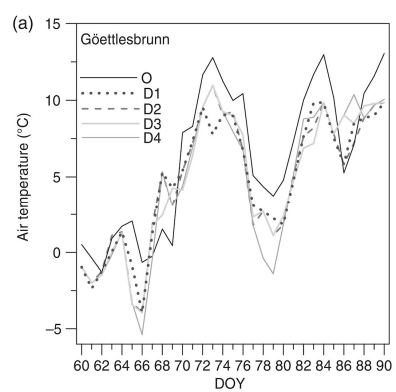
Hotspots, climate driven pest risk, change of spatial pest occurrence

Open Science

Results for stakeholder training, teaching materials, general public

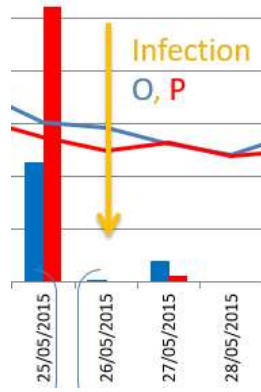


Previous experience



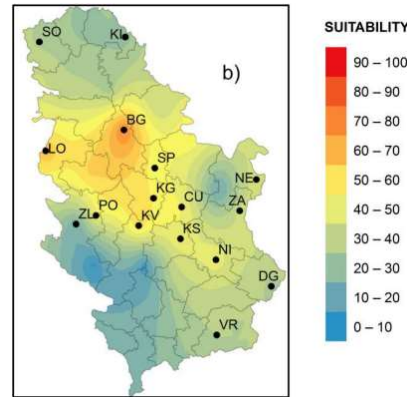
Apple scab, 2015

Effectiveness of short-term numerical weather prediction in predicting growing degree days and meteorological conditions for **apple scab** appearance



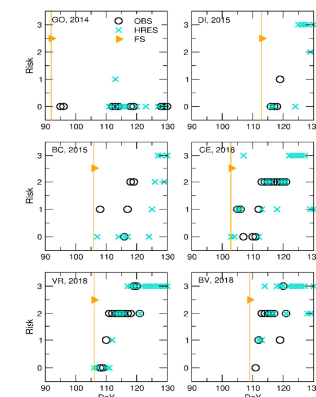
Downy mildew, 2016

The WRF-ARW application in predicting meteorological conditions for **Downy mildew** (*Plasmopara viticola*) appearance of wine grape



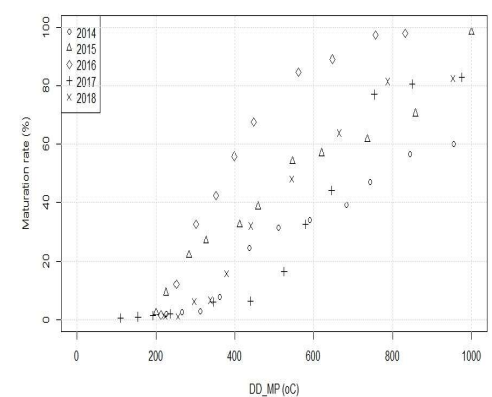
Asian tiger mosquito, 2017

Modelling the regional impact of climate change on the suitability of the establishment of the **Asian tiger mosquito** (*Aedes albopictus*) in Serbia.



Fire Blight and Downy Mildew, 2018

Toward a Weather-Based Forecasting System for **Fire Blight and Downy Mildew**



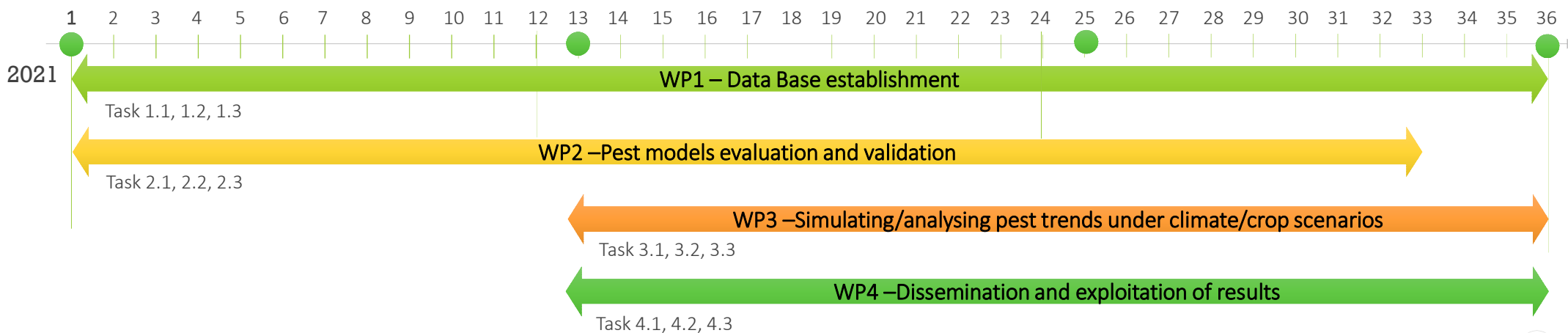
Apple scab, 2020

A decade of harmful organism and micrometeorological conditions operational monitoring in Serbia: ***Venturia inaequalis*** case study

Timeline

Our three-year action plan

Partner no.	Specific field/discipline	Main task in the project
PFNS	Pest monitoring, pest modeling	Contribute to WP1-WP3 Model application and validation for <i>codling moth (C. pomonela)</i> in Serbia and Austria and trend assessment under climate scenarios.



Ours to save and protect

Thank You



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