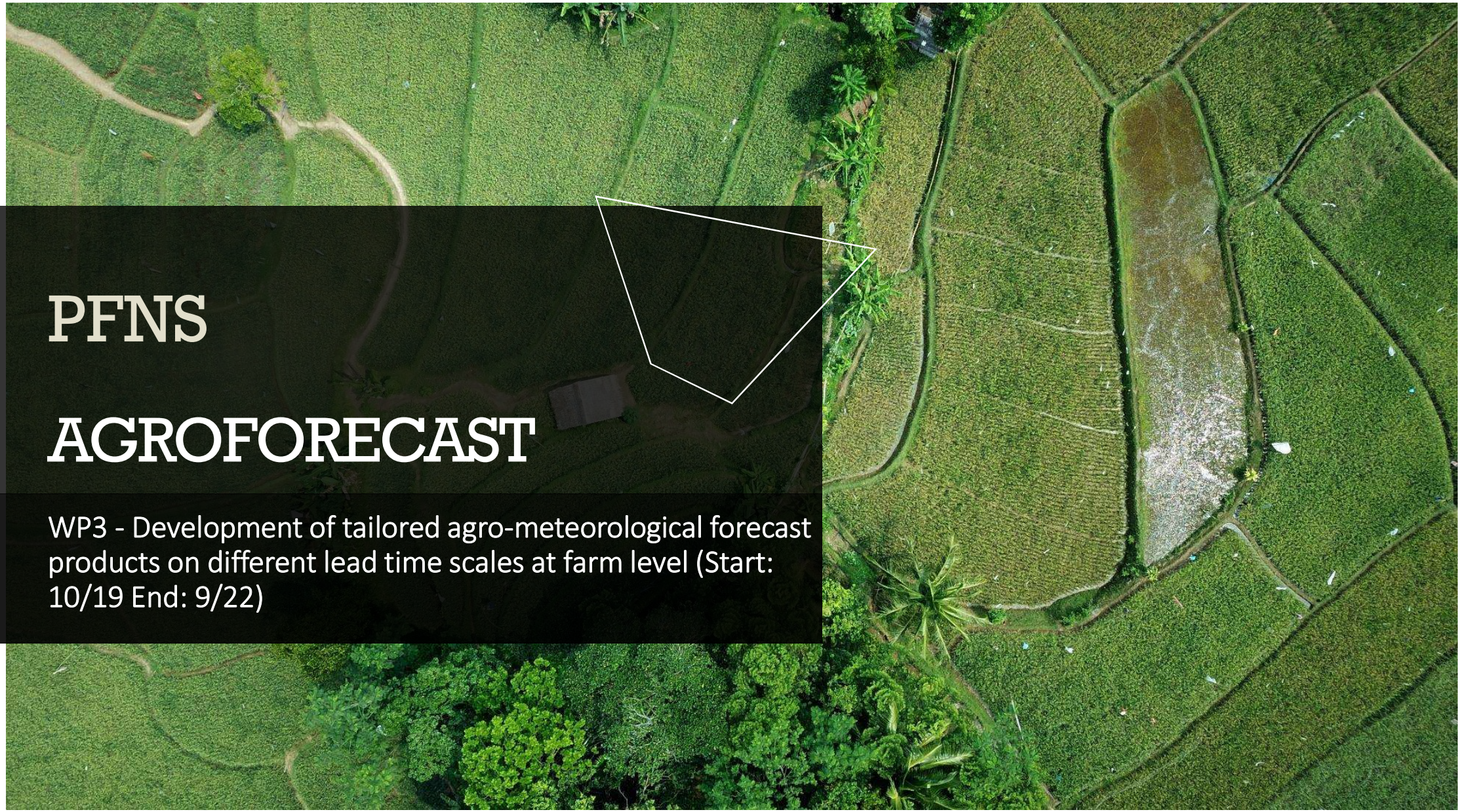


PFNS

AGROFORECAST

WP3 - Development of tailored agro-meteorological forecast products on different lead time scales at farm level (Start: 10/19 End: 9/22)

PFNS PROGRESS LINE

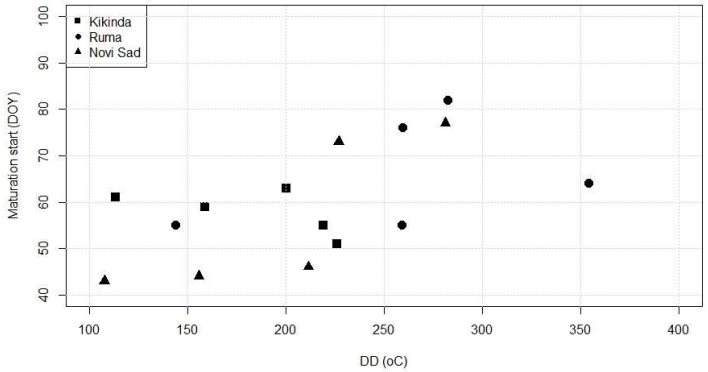
How will we scale in the future

Phase 1 Year 1	Phase 2 Year 2	Phase 3 Year 3
• APPLE SCAB DATA IN SERBIA	• APPLE SCAB MODEL VALIDATION – ON SERBIAN AGROECOLOGICAL CONDITIONS • USE OF SEASONAL WEATHER FORECAST IN APPLE PHENOLOGY FORECAST	• APPLE SCAB MODEL VALIDATION – ON AUSTIAN AGROECOLOGICAL CONDITIONS • MODEL IMPLEMENTATION IN ARIS • USE OF SEASONAL AND SHORT TERM WEATHER FORECAST
DONE	DONE	
No problems or delays	Seasonal forecast validation is planed for later	Data for model validation

Publishing/dissemination

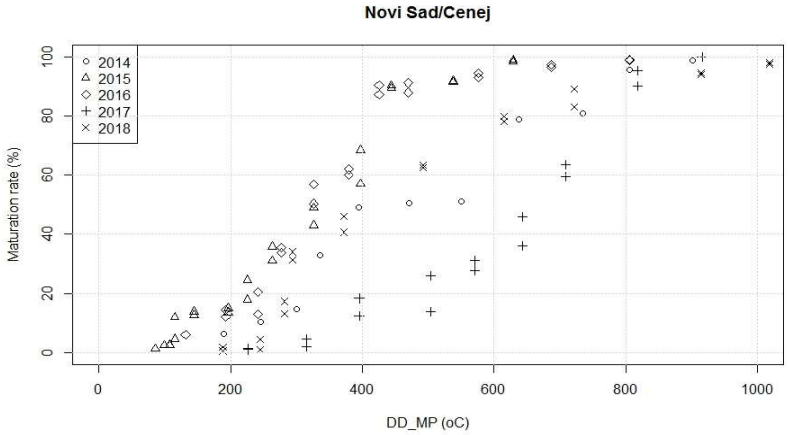
- A decade of harmful organism and micrometeorological conditions operational monitoring in Serbia: Venturia inaequalis case study – *Conference presentation*

Graph 1. Ascospore maturation start in respect to accumulated degree-days (DD)



Region	Period of monitoring
Senta	2013-2021
Novi Sad	2013-2021
Kikinda	2014-2021
Ruma	2014-2021
Vršac	2015-2021
Jagodina	2014-2018

Graph 2. Ascospore maturation rate in respect to degree-days during maturation period (DD_{MP}) on Novi Sad/Cenej locations



Mills criteria for Apple Scab, regresion

Or

M = f(DD, H, RVL, D_day, W_day)

- accumulated degree-days for Tb = 0 °C (DD) and
- precipitation (H), during the whole maturation period (denoted by subscript MP)
- the number of dry (D_d) and wet (W_d) days,
- average relative humidity (RVL)

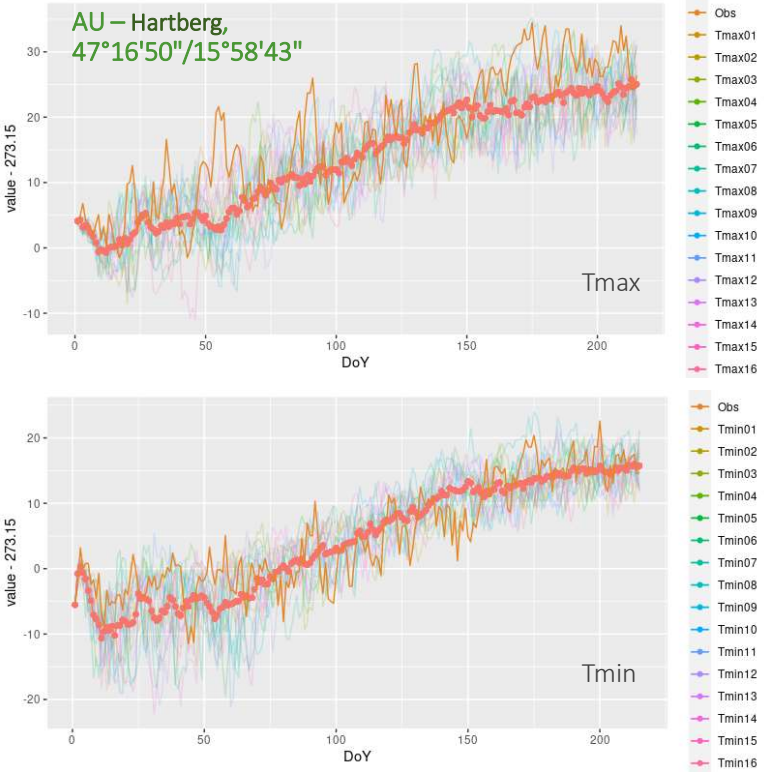
$$\frac{dM}{dt} = \frac{\partial \mathrm{M}}{\partial \mathrm{t}} + \frac{\partial \mathrm{M}}{\partial \mathrm{DD}}\frac{\mathrm{dDD}}{\mathrm{dt}} + \frac{\partial \mathrm{M}}{\partial \mathrm{H}}\frac{\mathrm{dH}}{\mathrm{dt}} + \frac{\partial \mathrm{M}}{\partial \mathrm{RVL}}\frac{\mathrm{dRVL}}{\mathrm{dt}} + \frac{\partial \mathrm{M}}{\partial \mathrm{D\_day}}\frac{\mathrm{dD\_day}}{\mathrm{dt}} + \frac{\partial \mathrm{M}}{\partial \mathrm{W\_day}}\frac{\mathrm{dW\_day}}{\mathrm{dt}}$$

Publishing/dissemination

Conference presentation

- Modelling phenology of the Central European apple: The seasonal forecast application perspective – EMS2021 (Ana Firanj Sremac, Branislava Lalic, Josef Eitzinger, Stefan Schneider)

2021 – 7 month – 16 ENS members



PhenoFlex – AU – 16 Ens. members