

RIMPEST

1st Consortium Meeting, 19th September 2021



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WP 1 Intro

The effect of changing climate on potential risks from important insect pests on plant production in Austria and related adaptation options (RIMPEST)

Univ. Prof. DI Dr. Josef Eitzinger

Institut für Meteorologie und Klimatologie, Universität für Bodenkultur, Wien

E-mail: josef.eitzinger@boku.ac.at

<http://www.boku.ac.at/imp>

WP 1 is related to Objective 1:

The first main objective is to establish a data base (by extension of an already available data base from previous ACRP project COMBIRISK) for research on thermophilic pest insects in Austria, which includes amongst others data on the pests phenology, climate and daily weather data, pest models and reported (weather-related) pest damages on crops as well as meta-information of protected data sources for related research activities.

WP 1 Methods:

Database establishment on:

Task 1.1: Metainformation survey of available data (M1-12)

Task 1.2: Evaluation of weather related pest damages (M1-12)

Task 1.3: Extension of COMBIRISK data base (M1-36)

Task 1 (M1-12): Metainformation survey of available data

Includes:

Reported past pest occurrences and damages of thermophilic insect pests (focus on the target pests) in Austria and potential available data sets.

Methods:

Literature-based survey, direct contacting with institutions/organisations and experts working in the field of integrated pest management.

Results:

List, including a description of data sets which are existing and a description of the data/information sources with regard to free/limited access, potential costs, contact addresses, specific description of the structure of data (e.g. type of data, spatial and temporal extent, uncertainties etc.).

Specific consideration of project target pests on :

Available data to be checked for plausibility and suitability:

- Start and duration of the observation period;
- Type of information (e.g. date of occurrence, damage records etc.);
 - Format (e.g. numeric, descriptive)

Preparation for use for the selected pest models
(to evaluate, validate and improve pest forecasting models)

SEE ALREADY PREPARED EXCEL TABLES

INPUT TO WP 2

Literature survey on models (target pests)

Classification of available models (data needs and type of output)

SEE ALREADY PREPARED EXCEL TABLES

INPUT TO WP 2:

New model development if feasible (in respect to monitoring data base)

Evaluation (calibration/validation) of models

Selection of models for application under climate scenarios

Preparation of past daily weather data
(for observation sites and periods of target pests)

INPUT TO WP 2

Model calibration/evaluation
(station based or grid based Austrian agric. region)

Task 1.2 (M1-12): Evaluation of weather related pest damages:

The retrieved information and available data from Task 1.1 on reported pest occurrences, related damages and reported challenges over the past decades will be structured (numerical or descriptive) and evaluated with regard to observed trends and potential production risks.

The result will be a ranking based on different parameters:

- a) pest damage risks
- b) related uncertainties and
- c) Challenges

SEE ALREADY PREPARED EXCEL TABLES

INPUT TO Task 1.3

Task 1.3: Extension of COMBIRISK data base (M1-36)

Based on the previous two tasks data sets will be prepared for implementing into the COMBIRISK as well as CCCA data bank on climate change impacts and adaptation options for agriculture.

This will include also data sets produced during RIMPEST.

Available data sets will be prepared in a way that will allow direct use and free access for the research community and meet scientific standards e.g.: standard deviation of measured/observed data, critical and logical control of data, identification of systematic errors, in-depth statistical analysis of time series, identification of meteorological variables (and parameters) having strongest impact on pest development.

INPUT TO WP 2-4

WP 1 Milestones:

M1.1: List of available data sources and data sets useable for application in pest management and research in Austria

(M 09/22)

M1.2: Description and ranking on past pest occurrences and damage potentials for Austria (M 09/22)

M1.3: Data sets implemented in COMBIRISK and CCCA data base (M 09/22)