

Report on the outcomes of a presentation and participation in a Dissemination Conference¹

Action number: CA20108 - FAIR NEtwork of micrometeorological measurements (FAIRNESS)

Grantee name: Kerstin Kolkmann

Conference Details

Conference title: Annual Meeting of the European Meteorological Society (EMS 2024)

Conference web-page: <https://www.emetsoc.org/ems-annual-meeting-2024-programme-is-live/>

Conference venue²: Historical University of Barcelona, Spain

Conference start and end date: 02/09/2024 to 06/09/2024

Accepted oral contribution details

Title of the presentation: Multiple linear regression models to predict seasonal occurrences of two important grapevine pest Lepidoptera in Austria

Co-authors: Sylvia Blümel, Sabina Thaler and Josef Eitzinger

Other details of the presentation: specify here any additional details related to the contribution (e.g. title of the session / track of the conference programme in which the contribution is accepted)

Abstract is accepted as oral presentation: EMS Annual Meeting Abstracts, Vol. 21, EMS2024-311, 2024, updated on 05 Jul 2024, <https://doi.org/10.5194/ems2024-311>, EMS Annual Meeting 2024, © Author(s) 2024. This work is distributed under, the Creative Commons Attribution 4.0 License

Scheduled as *Oral / Thursday, 05 Sep, 11:45–12:00 (CEST) / Lecture room A-112*

Session: OSA2.2: Agricultural and Forest Meteorology

Presentation online: <https://meetingorganizer.copernicus.org/EMS2024/EMS2024-311.html>

Outcome of the conference participation

Description of the outcome of the conference presentation, including contacts made and potential for future collaborations.

(max.500 word)

The conference was a meeting place for meteorologists from all over Europe and also enabled to establish contacts with researchers from other scientific disciplines. In particular, the session OSA 2.2. "Operational

¹ This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

² For an online conference, specify virtual participation; for hybrid conferences, specify whether it is an in-person or virtual participation.

Systems and Applications: Agricultural and Forest Meteorology” brought together various researchers, experts and practitioners from across Europe and facilitated discussions on the risks that sustainable crop production and forestry are facing due to climate change. This enabled an interdisciplinary exchange between agronomists, biologists and meteorologists.

The presentation “Multiple linear regression models to predict seasonal occurrences of two important grapevine pest Lepidoptera in Austria” provided insights into how weather data can be used to generate adequate pest prediction models. The presentation started with a description of the pest, followed by an explanation of the modelling procedure and the preparation of the weather parameters for the multiple linear regression analysis. To conclude, the advantages of the generated prediction models were emphasised, such as improving the timing of monitoring activities and control measures, which ultimately contribute to more sustainable environmental practices. In addition, it was mentioned that the generated multiple linear regression models can be implemented into local climate change scenario simulations for future risk assessment (e.g. future infestation hotspots) of the pest.

The presented results showcased the connectivity between pest control and meteorology. The audience was informed about the impacts of two grape moth species and the importance of prediction models. After the presentation, the audience asked questions about the procedure for selecting the various weather variables incorporated into the final prediction models, as well as questions about the application of this method to other pests.

During the EMS 2024 I also participated in the FAIRNESS Workshop 05/09/2024 – 06/09/2024, Barcelona (Spain) “Exploitation of Mapping, Modeling, and Micrometeorological Data-Based Applications”, where an oral presentation was given on “Suitability of reference weather data for the development of multiple linear regression models to predict two important grapevine pest Lepidoptera in Austria”. The audience was made aware of the impact of climate change on pests. In addition, the dissemination of the results increased the awareness of the importance of publicly available meteorological data for the calibration and application of pest prediction models. The FAIRNESS Workshop was a perfect place to socialise and talk to various meteorologists from all over Europe.

As an entomologist in the field of sustainable plant protection, I gained a lot of knowledge during my time in Barcelona and had many interesting conversations with European meteorologists and agronomists. This allowed me to gain insight into the many very different research topics and deepen my knowledge by talking to various researchers.

The EMS conference, as well as the FAIRNESS Workshop, allowed to make face-to-face contact with project partners from Serbia, with whom contact was previously only possible online. These two events made it possible to get in touch with each other, exchange knowledge and talk about future collaborations.

Acknowledgement of inclusion of necessary supporting documents to claim the grant

I confirm that the following documents have been uploaded on e-COST as an integral part of this report:

- the certificate of conference attendance.
- the programme of the conference or book of abstracts / proceedings indicating the oral presentation of the grantee.
- copy of the given presentation.