

IPM Decisions

D4.8: Selected datasets are made available for validation of DSS systems by other end users

Grant agreement number: 817617

Start date of project: 01/06/2019 **End date of project:** 31/05/2024

Deliverable due date: 31/03/2022 **Date of delivery:** 30/03/2022

Classification: Public

Version History

Version number	Implemented by	Reason
1.0	Niels Holst	Deliverable submission

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2 Public Summary

Data sets with historical monitoring data of a selection of pests and associated pesticide trials have been published to assist the further development of DSS and the teaching of IPM.

3 Executive Summary

Data sets with historical monitoring data of cereal aphids, carrot fly, cutworm, potato late blight, wheat pathogens (various), grape downy mildew, and apple scab and associated pesticide trial data were published to assist the further development of DSS and the teaching of IPM. All data were geo-referenced to a precision of 0.1°. At the time of writing, data provided by BASF was not made open access (pending approvals).

The datasets presented here, and future data sets made open access, will be promoted through the project website and associated networks and media.



4 Data sets selected for publication

Data sets were provided by IPM Decisions partners as part of decision support system validation and evaluation activities in work package 4 and were uploaded on Zenodo (see about.zenodo.org) on 14 March. The data is provided as both a tab-separated text file and a binary R data file. The R files provides code to read and plot the data. The two plots produced are also provided as PNG files. While SEGES (data sets 1 and 2) and Corteva (data sets 3 and 4) have approved open access to their data sets, we still await the approval from BASF (data sets 5 to 7). An additional data set on weeds is expected to be made available during 2022. To give an impression of the geographical coverage of the data, a map of each data set is provided below. Base maps were provided by Google.

4.1 Cereal aphid data, Denmark 2002-2019

Cereal aphids monitored in 2,110 fields in Denmark 2002-2019.

DOI: [10.5281/zenodo.6352394](https://doi.org/10.5281/zenodo.6352394)

The aphids were accounted for visually as the percentage of tillers infested. The type of crop (winter wheat or spring barley) and its growth stage at the time of aphid assessment are included in the data set (Figure 1). The data were collected by SEGES Innovation, Denmark.

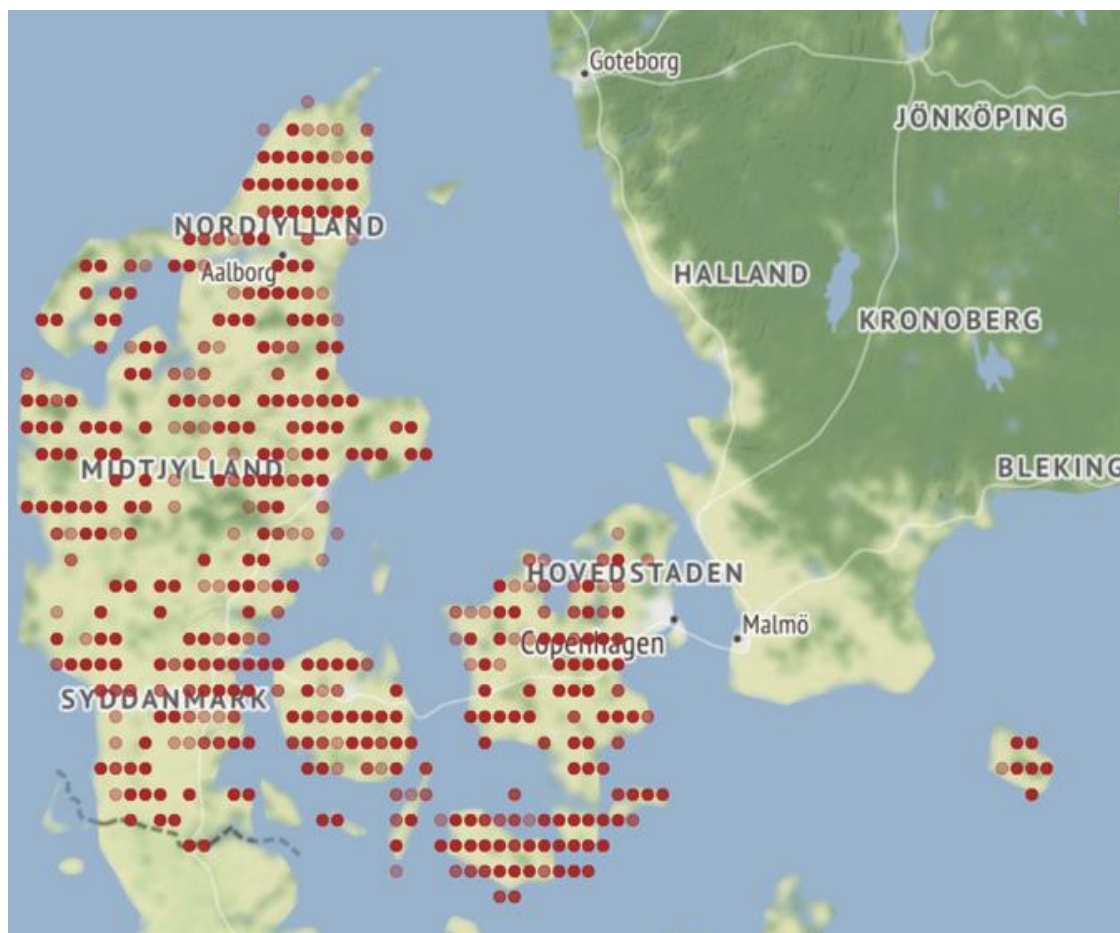


Fig. 1. Cereal aphids monitored in 2,110 fields in Denmark 2002-2019. Trapping data provided by SEGES Innovation, Denmark.

4.2 Trap catches of carrot fly and cutworm, Denmark and Sweden 1997-2019

Trap catches of carrot fly (*Psila rosae*) and cutworm (*Agrotis ipsilon*) from 142 fields in Denmark and Southern Sweden 1997-2019.

DOI: [10.5281/zenodo.6351794](https://doi.org/10.5281/zenodo.6351794)

The pests were caught in various vegetable crops in Denmark and Southern Sweden: Yellow sticky traps for carrot flies and pheromone traps for cutworm adults (Figure 2). The data were collected by SEGES Innovation, Denmark.



Fig. 2. Trap catches of carrot fly (*Psila rosae*) and cutworm (*Agrotis ipsilon*) from 142 fields in Denmark and Southern Sweden 1997-2019. Trapping data provided by SEGES Innovation, Denmark.



4.3 Fungicide trials data on potato late blight, UK and Ireland 2013-2017

Data from 18 fungicide trials on potato late blight in UK and Ireland 2013-2017.

DOI: [10.5281/zenodo.6352735](https://doi.org/10.5281/zenodo.6352735)

The data set comprises records of disease incidence, crop growth stage and yield from untreated and treated plots (Figure 3). The field trials were conducted by Corteva Agriscience, Germany.



Fig. 3. Data from 18 fungicide trials on potato late blight in UK and Ireland 2013-2017. Trial data provided by Corteva Agriscience, Germany.

4.4 Fungicide trials on wheat across Europe, 2014-2019

Data from 168 fungicide trials in wheat fields across Europe 2014-2018.

DOI: [10.5281/zenodo.6352615](https://doi.org/10.5281/zenodo.6352615)

The data set comprises records of disease incidence, crop growth stage and yield from untreated and treated plots (Figure 4). The field trials were conducted by Corteva Agriscience, Germany.



Fig. 4. Data from 168 fungicide trials in wheat fields across Europe 2014-2018. Trial data provided by Corteva Agriscience, Germany.



4.5 Fungicide trials on grape downy mildew across Europe, 2012-2019

Data from 36 fungicide trials on grape downy mildew across Europe 2012-2019.

DOI: [10.5281/zenodo.6353533](https://doi.org/10.5281/zenodo.6353533) [closed until approved by BASF].

The data set comprises records of disease incidence and yield from untreated and treated plots (Figure 5). The field trials were conducted by BASF, Germany.



Fig. 5. Data from 36 fungicide trials on grape downy mildew across Europe 2012-2019. Trial data provided by BASF, Germany.

4.6 Fungicide trials on wheat fields across Europe, 2017-2019

Data from 56 fungicide trials in wheat fields across Europe 2017-2019.

DOI: [10.5281/zenodo.6353501](https://doi.org/10.5281/zenodo.6353501) [closed until approved by BASF].

The data set comprises records of disease incidence and yield from untreated and treated plots (Figure 6). The field trials were conducted by BASF, Germany.



Fig. 6. Data from 56 fungicide trials in wheat fields across Europe 2017-2019. Trial data provided by BASF, Germany.

4.7 Fungicide trials on apple scab across Europe, 2008-2018

Data from 89 fungicide trials on apple scab across Europe 2008-2018.

DOI: [10.5281/zenodo.6361745](https://doi.org/10.5281/zenodo.6361745) [closed until approved by BASF].

The data set comprises records of disease incidence and yield from untreated and treated plots (Figure 7). The field trials were conducted by BASF, Germany.

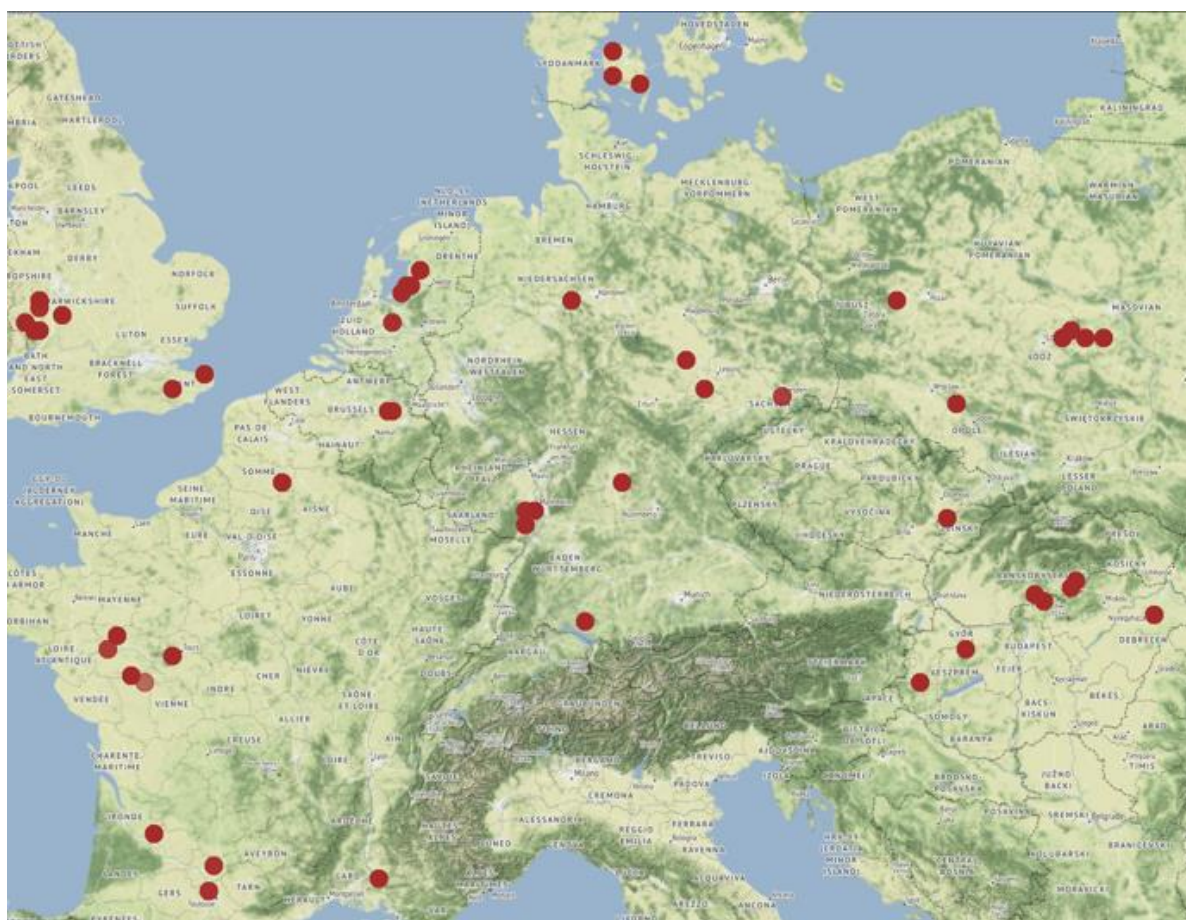


Fig. 7. Data from 89 fungicide trials on apple scab across Europe 2008-2018. Trial data provided by BASF, Germany.

5 Uses of the published data sets

The data sets can be used by developers of DSS as well as in the teaching of pest management. All data are geo-referenced to a precision of 0.1°, which matches the precision of the historical weather data that can be downloaded freely from EU's Copernicus weather service (www.copernicus.eu).

The datasets presented here, and future data sets made open access, will be promoted through the project website and associated networks and media.

