Data on broad bean beetle (Bruchus rufimanus) damage, bumblebee pollination (Bombus terrestris) and faba bean (Vicia faba) yield - cage experiment in Sweden

SND-ID: 2022-23-1. **Version**: 1. **DOI**: https://doi.org/10.5878/x99m-yh51

Download data

FabaBean_Harvest_and_Damage_data.tsv *(42.61 KB)*

FabaBean_Pollinator_vitiation_data.tsv *(12 KB)*

Associated documentation

FabaBean_Harvest_and_Damage_data_explanations.tsv *(1.03 KB)*

FabaBean_Pollinator_vitiation_data_explanations.tsv *(843 bytes)*

Download all files

2022-23-1-1.zip *(~56.46 KB)*

Citation

Riggi, L. (2022) Data on broad bean beetle (Bruchus rufimanus) damage, bumblebee pollination (Bombus terrestris) and faba bean (Vicia faba) yield - cage experiment in Sweden (Version 1) [Data set]. Swedish University of Agricultural Sciences. Available at: https://doi.org/10.5878/x99m-yh51

Creator/Principal investigator(s)

Laura Riggi - Swedish University of Agricultural Sciences, Department of Ecology

Research principal

Swedish University of Agricultural Sciences - Department of Ecology

Principal's reference number

SLU.ekol.2022.4.4.lÄ-1

Description

Identifying and quantifying crop stressors interactions in agroecosystems is necessary to guide sustainable crop management strategies. Over the last 50 years, faba bean cropping area has been declining, partly due to yield instabilities associated to uneven insect pollination and herbivory. Yet, the effect of interactions between pollinators and a key pest, the broad bean beetle Bruchus rufimanus (florivorous and seed predating herbivore) on faba bean yield has not been investigated.

Using a factorial cage experiment (2 x 2 m) in the field we investigated how interactions between insect pollination by bumblebees and herbivory by the broad bean beetle, affect faba bean yield. The data on pest damage , pollinators visitation and behavior and faba bean yield components and biomass used in the paper:
Riggi, L., Raderschall, C., & Lundin, O. (2022). Insect pest damage increases faba bean (Vicia faba) yield components but only in the absence of insect pollination. In Ecology and Evolution (Vol. 12). https://doi.org/10.1002/ece3.8686
is presented.

The data material on pest, pest damage, pollinators visitation and faba bean yield components used in the paper:
Riggi, L., Raderschall, C., & Lundin, O. (2022). Insect pest damage increases faba bean (Vicia faba) yield components but only in the absence of insect pollination. In Ecology and Evolution (Vol. 12). https://doi.org/10.1002/ece3.8686

Data contains personal data

No

Language

English

Time period(s) investigated

2020-05 – 2020-09

Data format / data structure

Numeric

Text

Data collection 1

- Mode of collection: Experiment
- Description of the mode of collection: Cage experiment with observations and counts, harvest of plant material
- Time period(s) for data collection: 2020-05 – 2020-09
- Data collector: Swedish University of Agricultural Sciences
- Source of the data: Biological samples
- Temporal resolution: 7 day

Geographic spread

Geographic location: Sweden

Geographic description: Field scale experiment in a faba bean crop in Uppsala

Responsible department/unit

Department of Ecology

Funding

- Funding agency: FORMAS
- Funding agency's reference number: 2016-00626

Research area

Ecology (Standard för svensk indelning av forskningsämnen 2011)

Agricultural science (Standard för svensk indelning av forskningsämnen 2011)

Keywords

Ecosystem services

Publications

Riggi, L., Raderschall, C., & Lundin, O. (2022). Insect pest damage increases faba bean (Vicia faba) yield components but only in the absence of insect pollination. Ecology and Evolution. 12(3), e8686. https://doi.org/10.1002/ece3.8686
DOI: https://doi.org/10.1002/ece3.8686
SwePub: oai:slubar.slu.se:116381

Link to publication list:
https://www.authorea.com/users/435468/articles/538469-high-insect-pest-damage-increases-faba-bean-vicia-faba-yield-components-but-only-in-the-absence-of-insect-pollination?commit=3b0441843cae44ab9573e091890c421d468acb09

If you have published anything based on these data, please notify us with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

17.670050346913, 59.845244674655

17.670050346913, 59.835025972238

17.692272842854, 59.835025972238

17.692272842854, 59.845244674655

17.670050346913, 59.845244674655

Accessibility level

Access to data through SND
Data are freely accessible

Use of data

Things to consider when using data shared through SND

Versions

Version 1. 2022-11-01

Contact for questions about the data

Ola Lundin

Ola.lundin@slu.se

Download metadata

DataCite

DDI 2.5

DDI 3.3

DCAT-AP-SE 2.0

JSON-LD

PDF

Citation (CSL)

File overview (CSV)

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