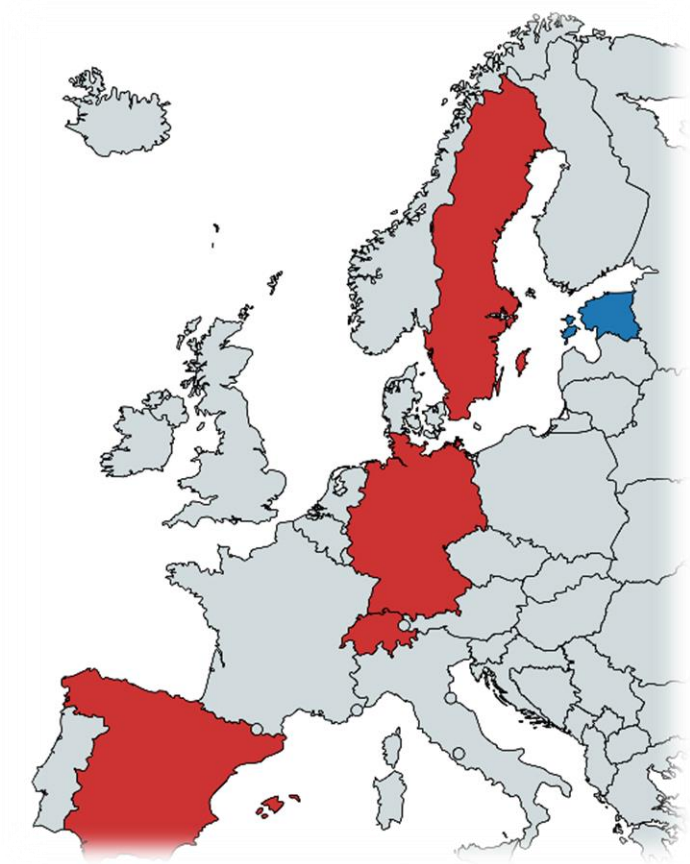
Managing soil biodiversity and ecosystem services in agroecosystems across Europe under climate change (SOILCLIM)




María Imgimarsdottir


Katja Kozjek


Helene Bracht Jorgensen


Katarina Hedlund


Svenja Meyer


Stefan Scheu


Jaak Truu


Natacha Bodenhausen


Dominika Kundel


Klaus Birkhofer


Andreas Fließbach


Pilar Gavin

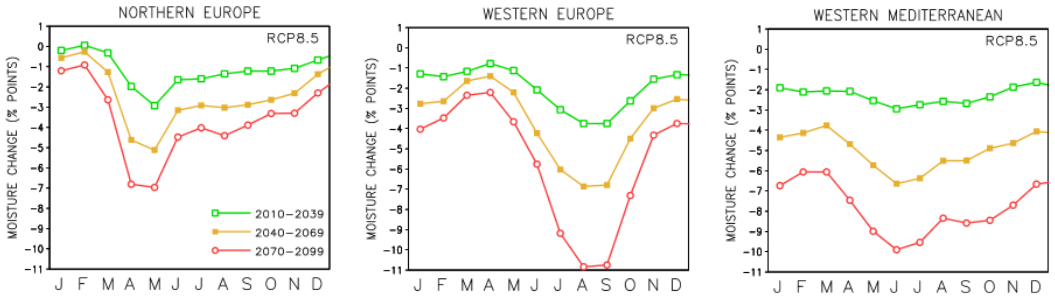

Jordi Moya Larano

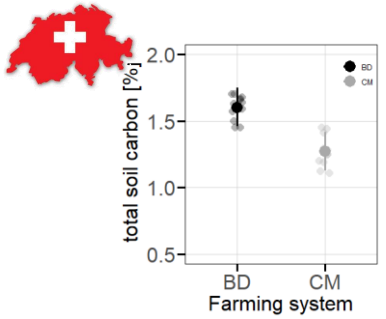

Marta Montserrat

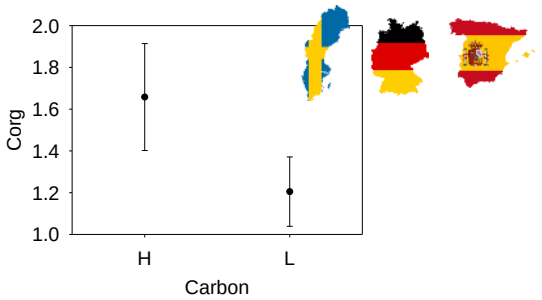

Diego Serrano

How do we approach the climate component?

- Natural climatic gradient within Europe (Sweden – Germany – Spain)
- Rainout-shelters to simulate reduced precipitation and soil moisture
- Different levels of soil carbon content

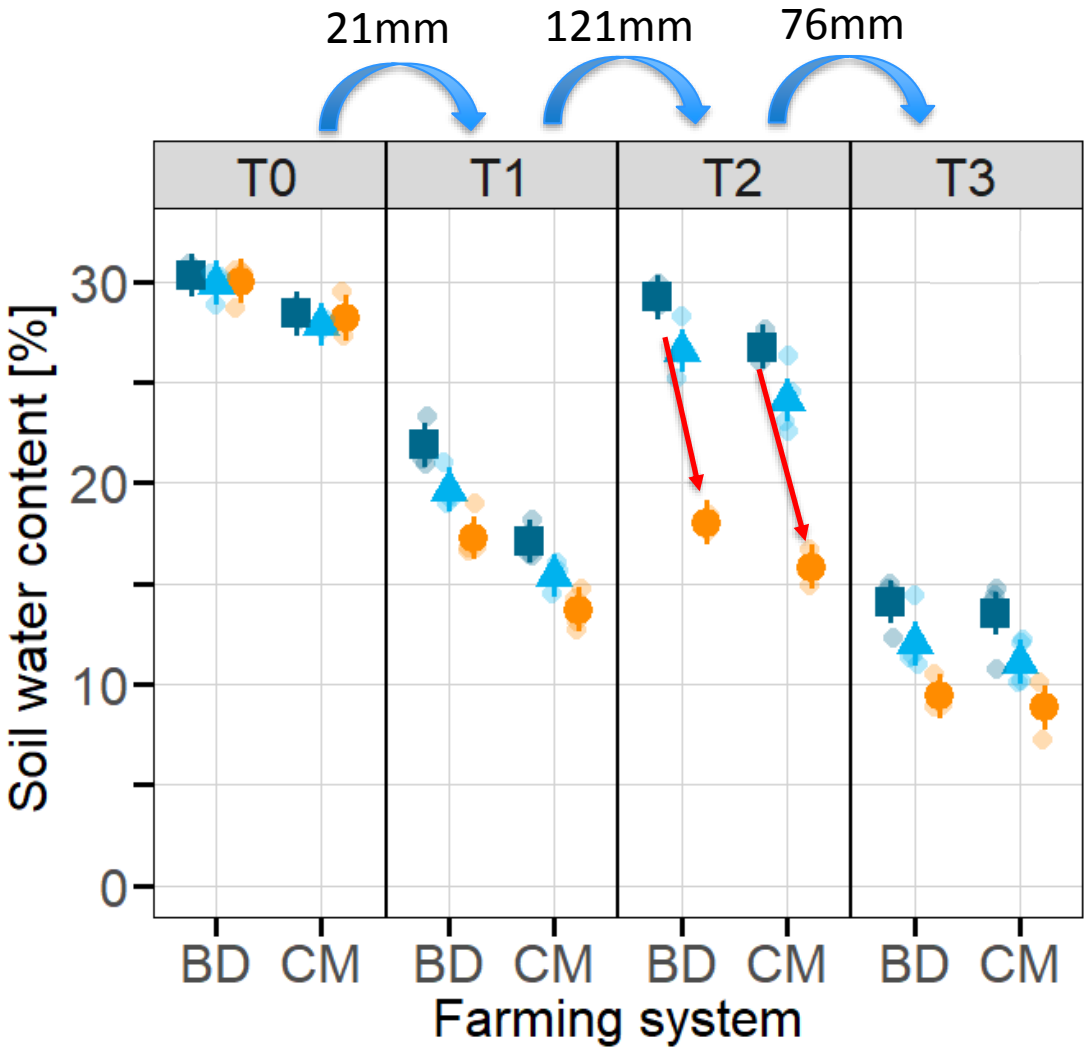






Ruosteenoja, K. et al. (2018) **Seasonal soil moisture and drought occurrence in Europe in CMIP5 projections for the 21st century.** Clim Dyn: 50: 1177.

Results



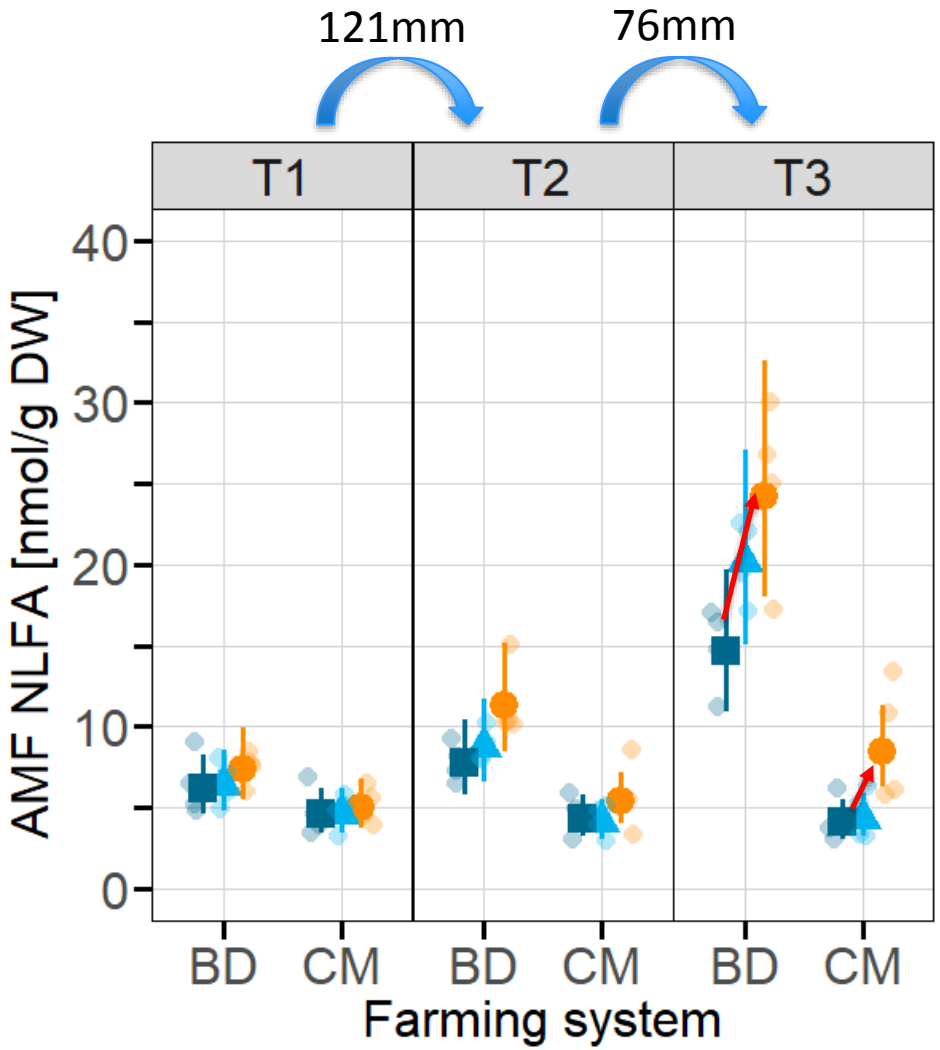
Dominika Kundel

Control

Roof control

Roof

BD Biodynamic
CM Conventional



Dominika Kundel

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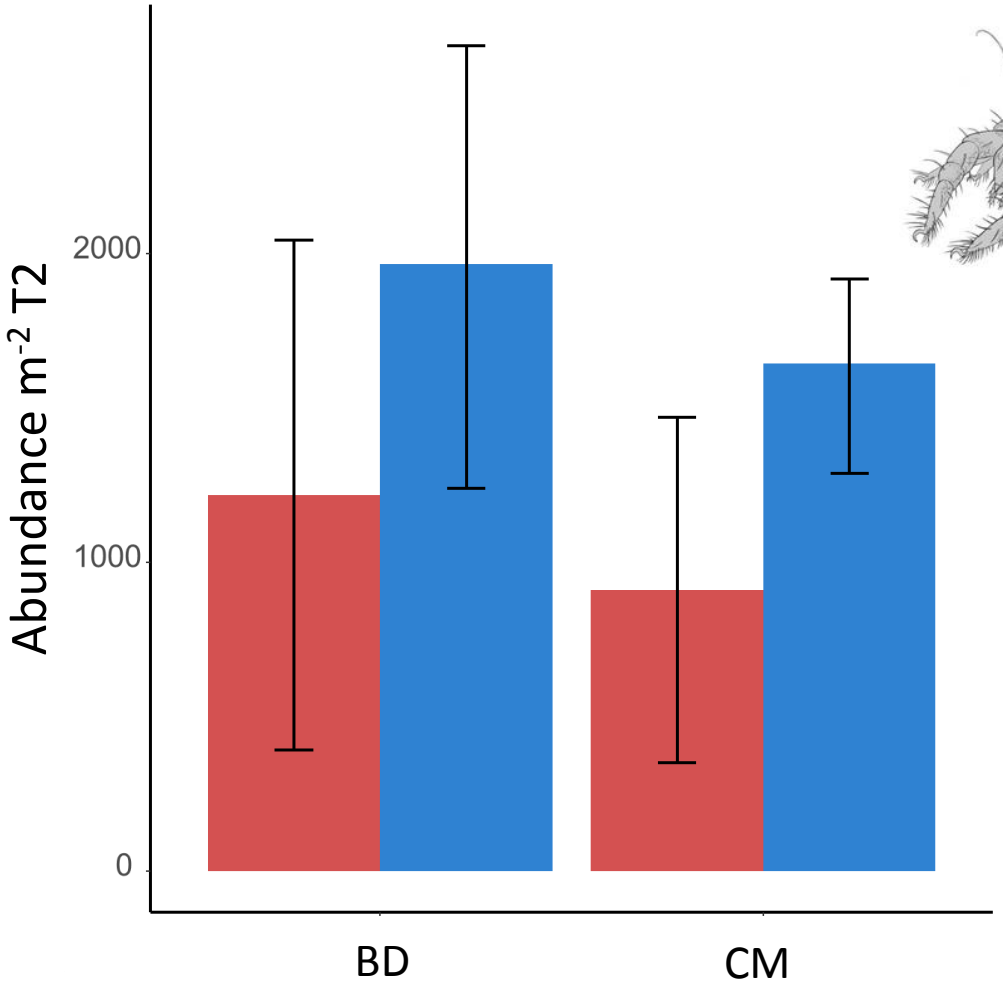
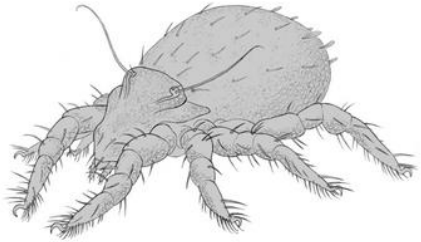
Roof control

Roof

BD Biodynamic
CM Conventional

Katja Kozjek



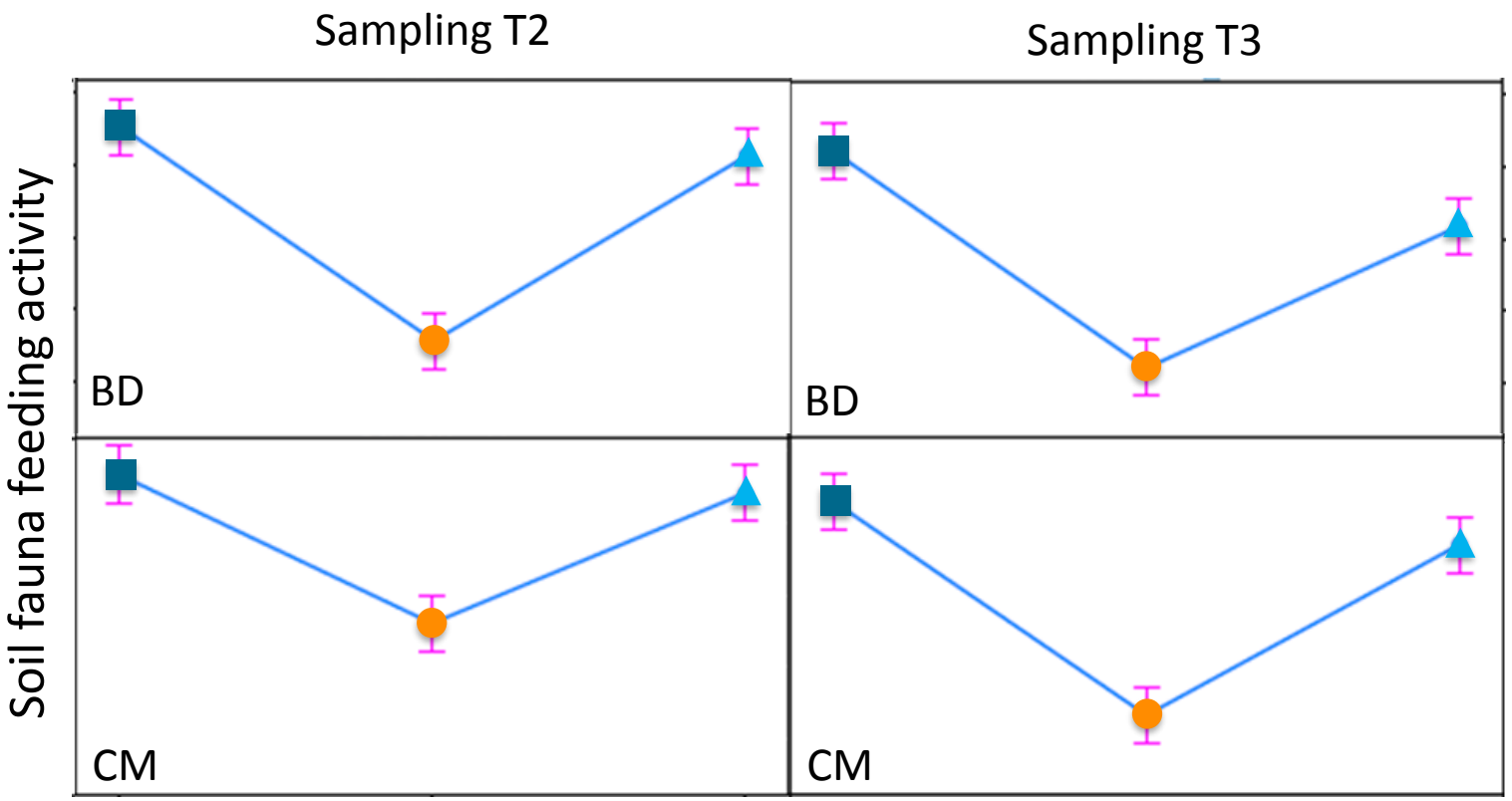


Svenja Meyer

BD Biodynamic
CM Conventional

Marta Montserrat

Diego Serrano



Control

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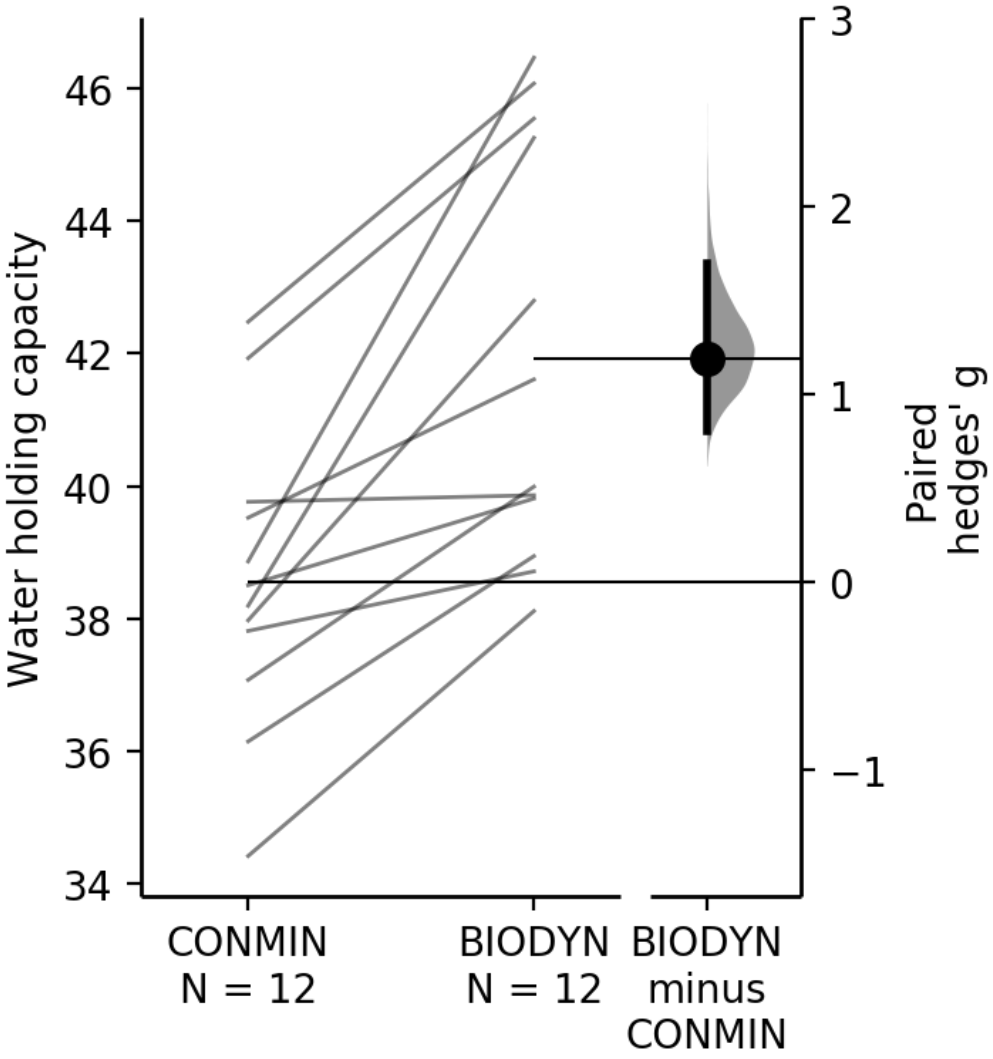
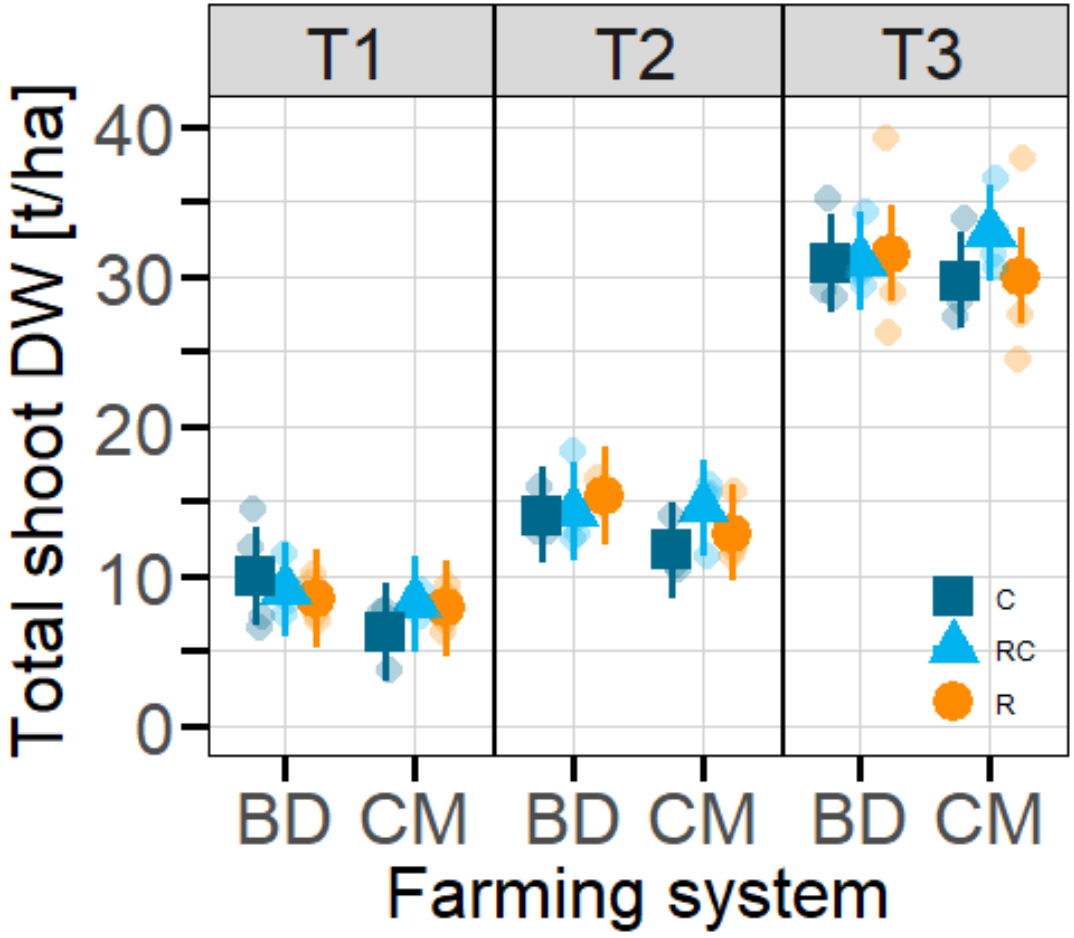


Dominika Kundel



Dominika Kundel

Dissemination

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Borgeby FältDagar




Dürreperioden abfedern *heisst an vielen Schrauben drehen*

BIO Aktuell.ch

Fruchtfolge anpassen und Humus aufbauen

Bei den Ackerkulturen ist neben der Niederschlagssumme vor allem die Verteilung über die Wachstumsperiode entscheidend. Die einjährigen Kulturpflanzen brauchen während und nach der Blüte am meisten Wasser. Mit fortschreitender Reife spielen Trockenperioden eine immer geringere Rolle.

Summer droughts in central Europe

Effects on biodiversity and agricultural production.

Building soil organic matter

Water storage: The capacity of the soil to store water is influenced by its texture, but especially by its humus content. The humus reinforces the sponge-like properties of the soil. Grassland and forests have high humus contents due to their permanent soil cover with living plants, while arable soils have relatively low contents. Organic farming can improve the humus content somewhat (Gattinger *et al.*, 2012) but does not reach the level of grassland soils. The more water the soil can store, the longer a plant community can withstand prolonged drought. A careful humus management and a high humus content in the soil not only has a proven effect on the soil's water retention capacity, but also promotes soil life, which, as mentioned above, has an overall positive effect on the functionality of soils under drought conditions.



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EARTH & LIFE INSTITUTE

Ralf Seppelt, Lead Author of the 2019 IPBES Global assessment on biodiversity and ecosytem services, UFZ, Germany, « Biodiversity loss: its drivers and ways towards solutions: insights from the IPBES global assessment»

Mark Urban, Professor, University of Connecticut, USA, « Comparisons of relative importance of different drivers of biodiverdity loss »

Patrick Meyfroidt, Professor, ELI, UCLouvain « The role of land use change in synergy with other human activities on biodiversity loss, by type of land use changes and by regions »

Teja Tscharntke, Professor, Göttingen University, Germany, « The role of industrial agriculture and forestry in synergy with other human activities on biodiversity loss, by regions in the world »

Klaus Birkhofer, Professor, University of Brandenburg, Germany, « Mitigation of biodiversity loss in industrialized countries through changes in agricultural practices »

Jean-Pascal van Ypersele, Professor, ELI, UCLouvain, « The role of climate change in interaction with other human activities on future threat of further biodiversity loss »

Jorge Ventocilla, Doctor, Policy Expert at the science and policy interface for the Belgian Biodiversity Platform/IPBES Belgian Focal Point "IPBES Rolling work programme to 2030 Opportunities for Belgian experts to get engaged»

Sven Wunder, Professor, European Forest Institute, Spain, « Biodiversity conservation in tropical forests based on the REDD+ strategy »

EARTH & LIFE INSTITUTE UCLouvain

Conference on October 24th, 2019

How human activities cause biodiversity loss :

Interactions and relative contributions of human activities.

What do we know, what do we need to know ?

Comparing organic and conventional agricultural cropping systems - What can be learned from the DOK and other long-term trials?

"DOK-Monte Verità"

Congressi Stefano Franscini, Monte Verità, Ascona, Switzerland
6-10 October, 2019

November 14-15, 2019

New Phytologist

Symposium: Above- and belowground Biodiversity for Sustainable Ecosystems

Agroscope, Zurich, Reckenholz

Forskarna tar jordprover för att mäta hur mycket svampar och bakterier det finns och de hur mycket insekter det finns i vetet och på marken. Foto: Fredrik Sweningsson/SVT

Biologer hjälper bönder att klara torkan bättre

Att torkan slagit till ordentligt i år det är det nog knappast någon som har missat. Men frågan är hur djur och växter påverkas av extrem torka. Det håller forskare från Lunds universitet på att ta reda på.

Hilstvetet står och vajar i väntan på skörd strax utanför Trollenäs i Eslövs kommun. Här håller biologer från Lunds universitet på att undersöka hur torkan påverkar alla de små organismer som bor på vetefältet. Till sin hjälp har de satt upp tak som ska simulera en ännu torrare miljö.

– Det kanske verkar lite fånigt att ha ett försök med simulerad torka när det är det torraste någonsin, men vi märker skillnad mellan de områden som har tak och de som inte har det, säger Katarina Hedlund, professor vid biologiska institutionen vid Lunds universitet.

NYHETER

Första urvalet till högskolan klart

Så påverkar torkan den som bor på en veteåker

Gryningspyromanen kan få fängelse

De forskar om torkans effekter

Katja Kozjek och Katarina Hedlund mäter och räknar ute i vetefältet.

Ulf Borgström kan dömas till fängelse

"Spindelman" på besök i Svinaberga

BRUKET KÖPINGEBRO - ETAPP 1

Skurup / 13

Forskning om torkans effekt

LR ONLINE

Lausitz FC Energie Nachrichten Ratgeber Bilder & Videos Leser & Service

Lausitzer Rundschau › Lausitz › Cottbus › BTU-Forscher warnt: Jetzt gibt es keine Ausreden mehr

BTU-Forscher warnt

Jetzt gibt es keine Ausreden mehr

Nach dem UN-Bericht zum Artensterben ist auch in der Region eine Diskussion entbrannt. Der Ökologe von der BTU ist froh über den Weckruf.

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kinderuni

WINTERSEMESTER 2017/18
SOMMERSEMESTER 2018

PROF. DR. KLAUS BIRKHOFER

frontiers in Environmental Science

METHODS
published: 22 March 2018
doi: 10.3389/fenvs.2018.00014

Design and Manual to Construct Rainout-Shelters for Climate Change Experiments in Agroecosystems

Dominika Kundel[1,2†], Svenja Meyer[3†], Herbert Birkhofer[4], Andreas Fliessbach[1], Paul Mäder[1], Stefan Scheu[3], Mark van Kleunen[2,5] and Klaus Birkhofer[6]*

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GOBIERNO DE ESPAÑA
MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD

FORMAS

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SWISS NATIONAL SCIENCE FOUNDATION

Eesti Teadusagentuur
Estonian Research Council

DFG Deutsche Forschungsgemeinschaft