



HAL
open science

CropBooster-P Project (2018-2022). Towards a roadmap for future crops sustainable yield improvement. Bibliometric analysis of International Cooperation in Europe

Jacqueline Martin-Laffon, Dominique Fournier, Bernard Muller, Philippe Nacry, Norbert Rolland

► To cite this version:

Jacqueline Martin-Laffon, Dominique Fournier, Bernard Muller, Philippe Nacry, Norbert Rolland. CropBooster-P Project (2018-2022). Towards a roadmap for future crops sustainable yield improvement. Bibliometric analysis of International Cooperation in Europe. LPCV poster day, Dec 2023, Grenoble, France. hal-04524838

HAL Id: hal-04524838

<https://hal.science/hal-04524838>

Submitted on 28 Mar 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License



CropBooster-P Project (2018-2022)



Towards a roadmap for future crops sustainable yield improvement

Bibliometric analysis of International Cooperation in Europe

J.Martin-Laffon¹, D. Fournier², B. Muller², P. Nacry², N.Rolland¹

¹Univ. Grenoble Alpes, CNRS, INRAE, CEA, IRIG, LPCV, Grenoble, France

²Univ. Montpellier, INRAE, CNRS, Montpellier SupAgro, IPSIM & LEPSE, Montpellier, France



➤ About CropBooster-P:

www.CropBooster-P.eu

The H2020 CropBooster-P project is a CSA (Coordination and support action) led by a consortium of European universities and research institutes to prepare a roadmap for the development of improved crops to future-proof European agriculture.



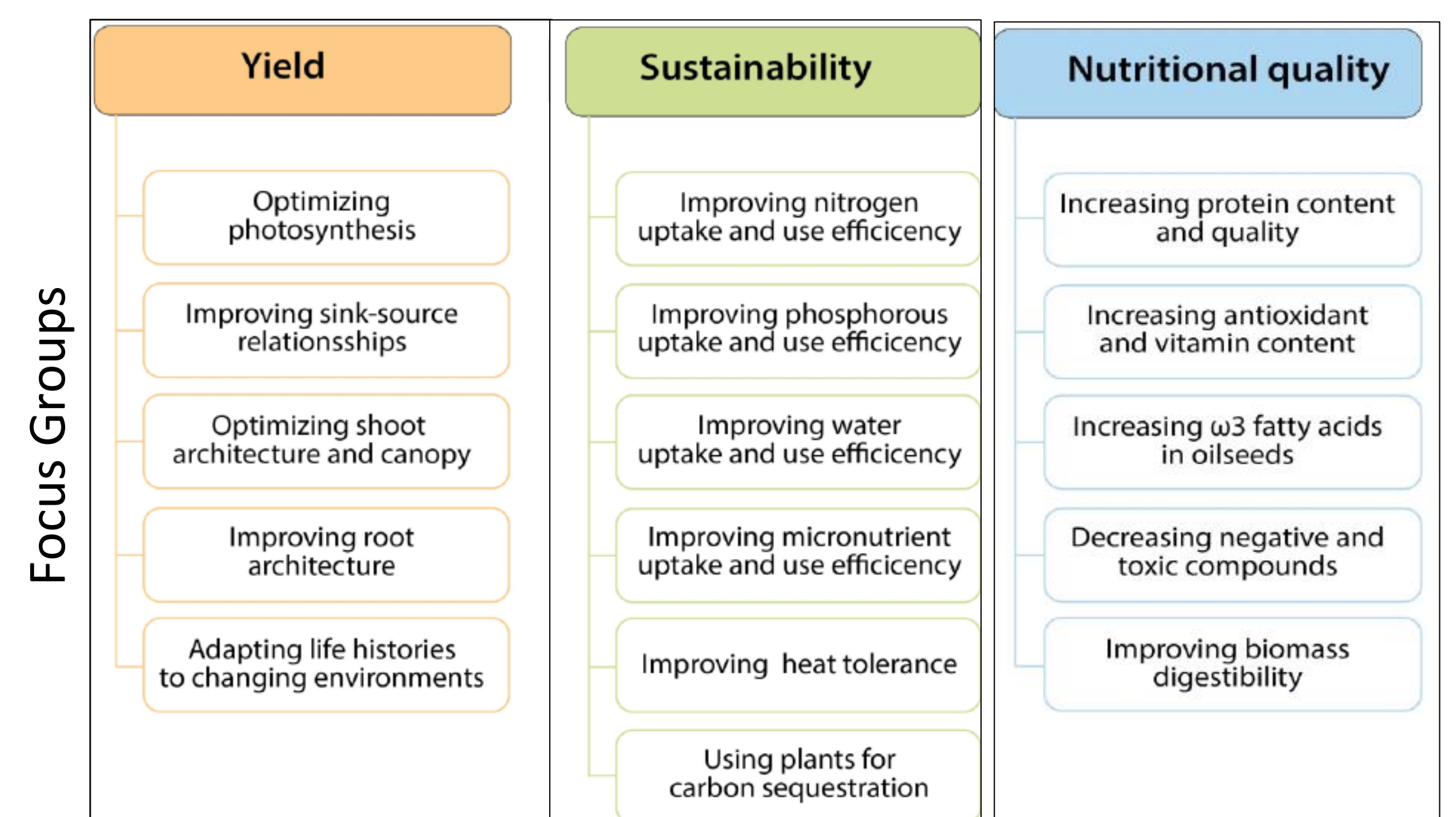
➤ Methodology and tools:

- The scientific production in Europe was screened during the period 2015-2019 using key terms linked to the different traits (Yield, Sustainability, Nutritional quality)
- The bibliographic search was carried with the Web of Science (WOS) database. The results were imported into VosViewer tool to visualize collaborations networks by author keywords, institutions and authors.

➤ Aim of the bibliometric analysis:

(Word package 4: International Cooperation; Task 4.1)

Identify the main European institutions and experts which publish in the fields corresponding to different traits (Yield, Sustainability, Nutritional quality). The results obtained allowed to link research communities by organizing joint meetings between plant scientists, with a coordinator for each Focus group (Word package 4; Task 4.2) and then to write a White paper for the Strategic Research Agenda (Word package 4; Task 4.3).



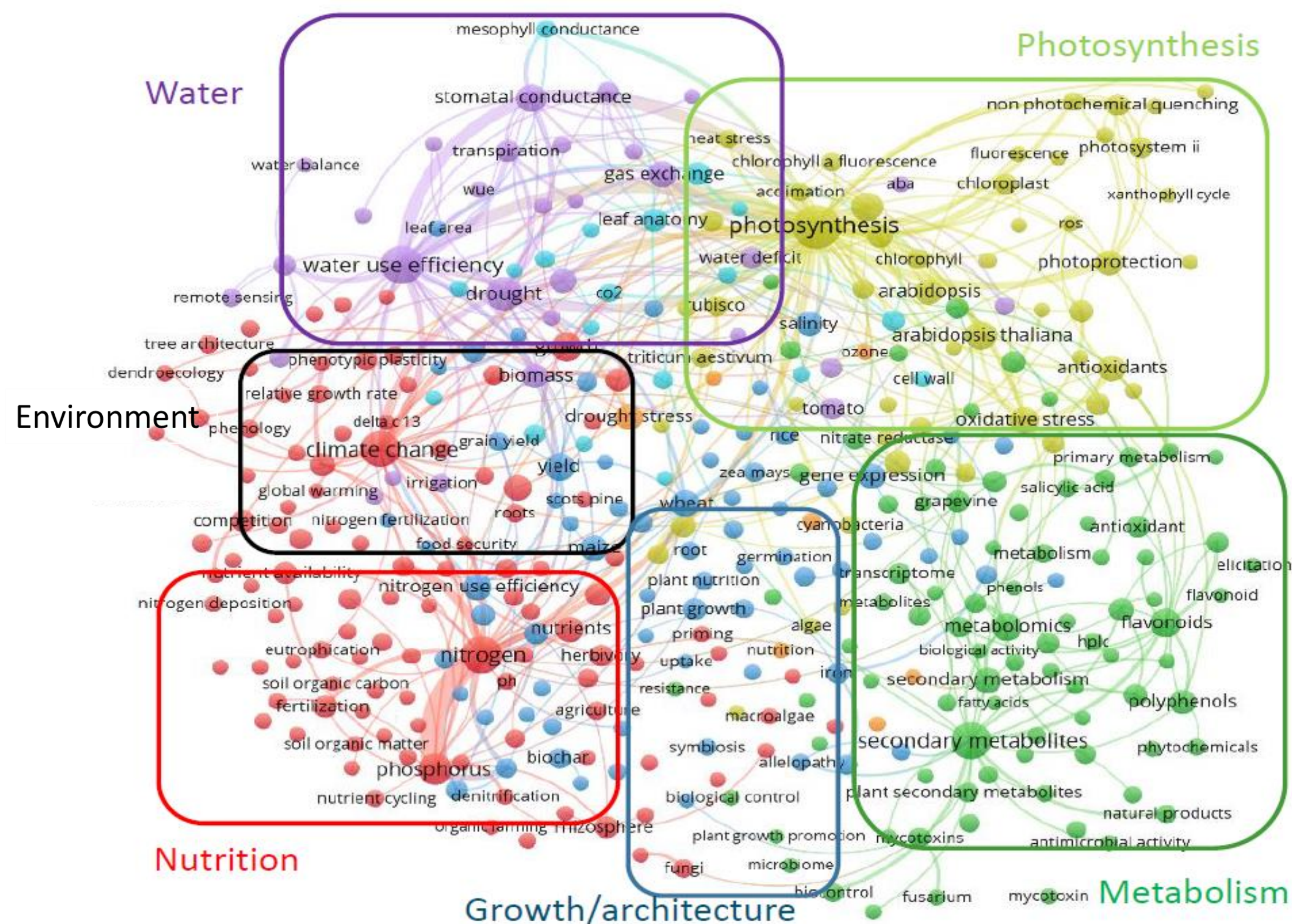
Yield + Sustainability
14053 publications

Nutritional quality
> 10000 publications

❖ Network of author keywords co-occurrence helps defining main research fields

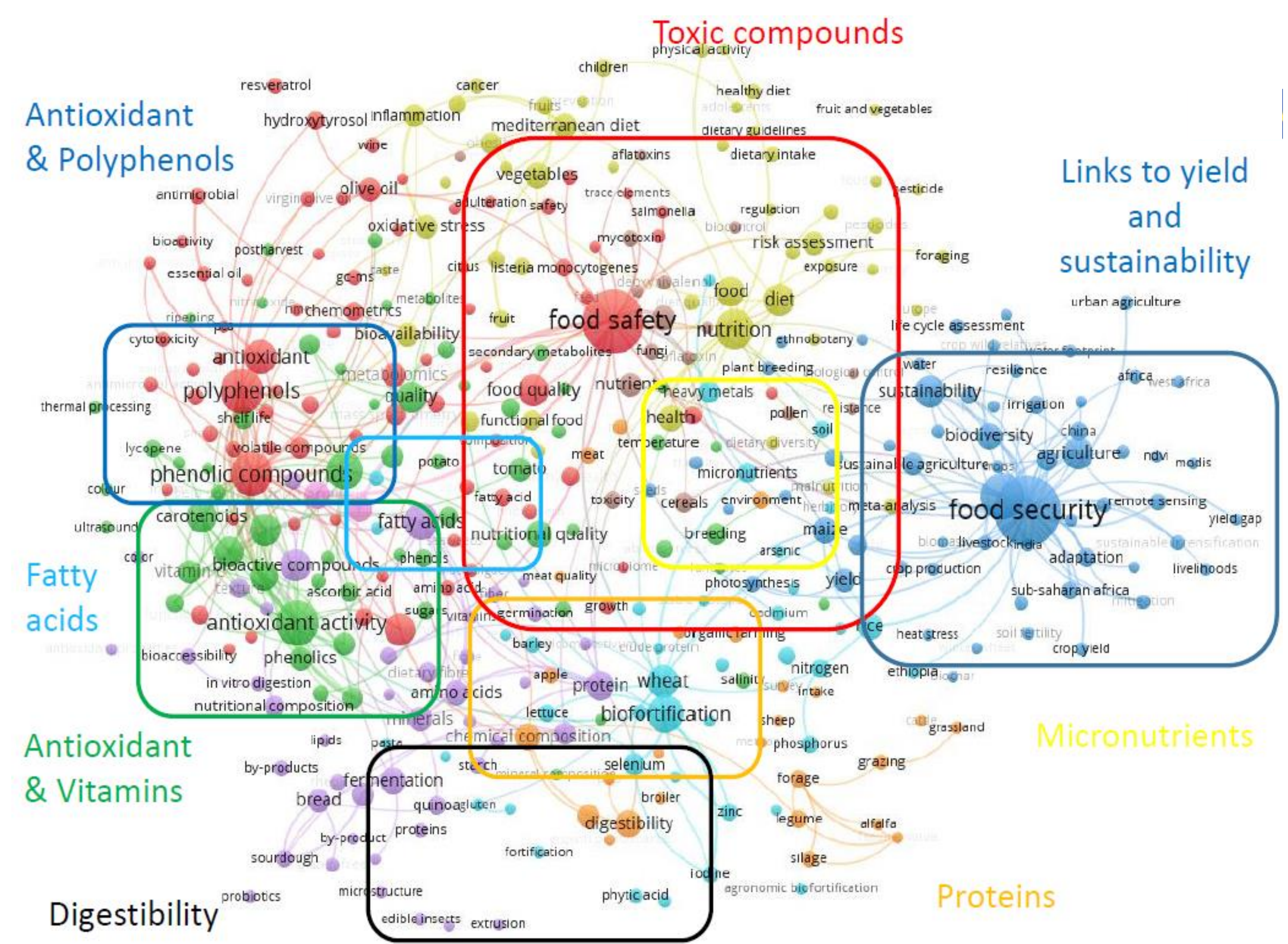
The network represents the co-occurrences of the main author keywords (minimum 20 occurrences) and the links indicate the existence of at least 5 publications with the 2 terms.

Yield and Sustainability



VOSviewer

Nutritional quality



❖ Main actors (Institutions) in all fields

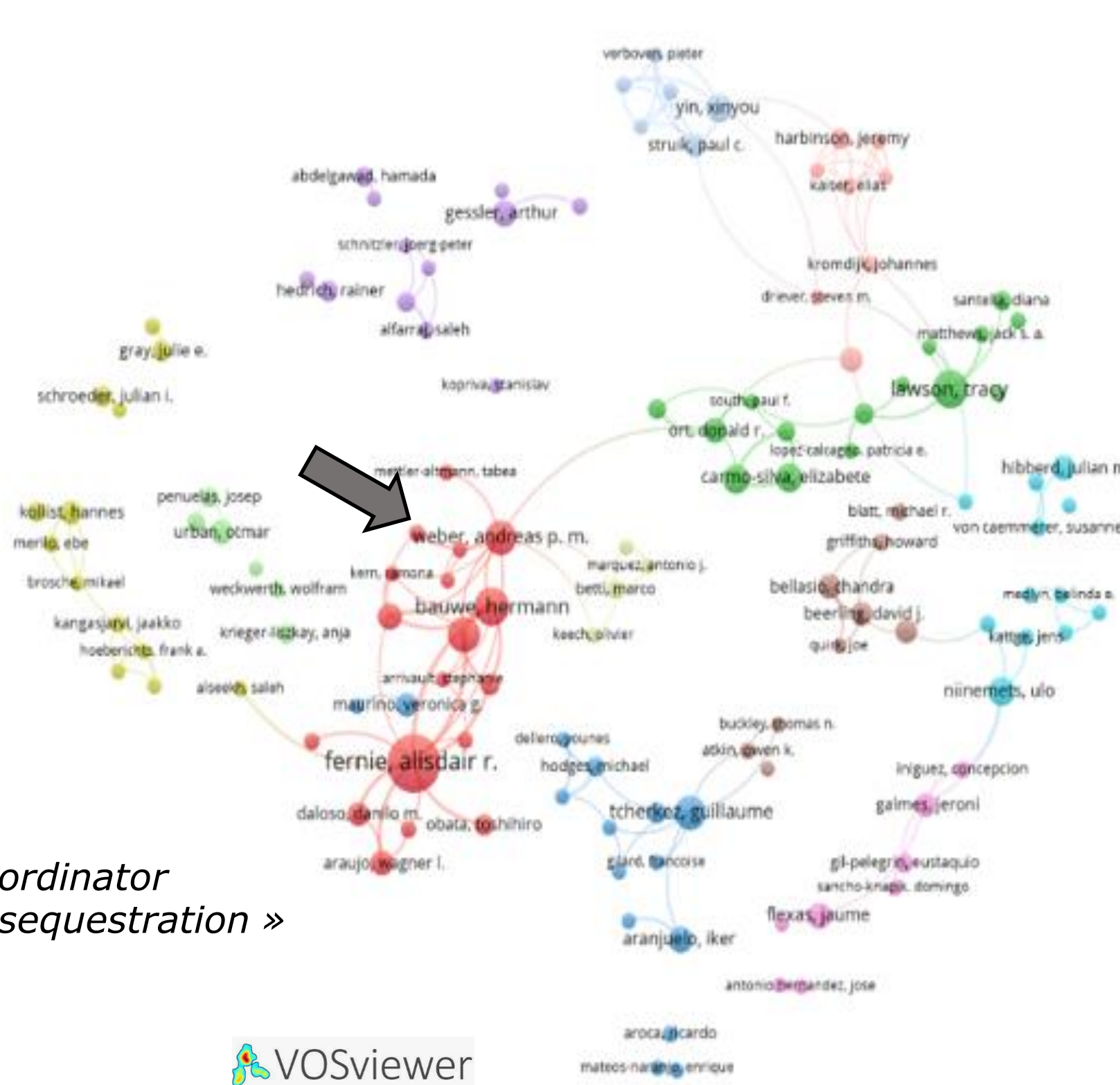
Publications by EU28 institutions (threshold: at least 200 publications)



Contacted Focus group coordinator
« Using plants for carbon sequestration »

❖ Network of co-publications between UE28 actors helps to identify main experts and their collaborations for each trait

For example here, the authors network for the trait « Biochemistry-Carbon assimilation » illustrates co-publications between UE28 authors who have published at least 4 publications between 2015 and 2019 in this field (threshold: 1 co-publication or more)



VOSviewer

❖ Conclusion: networking activities was organized with the different Research communities (Deliverable 4.2) to assemble an expert panel and to review strategies (Deliverable 4.3): Suggestion of Topics for EU Research Agenda

See Network Map of Research Networks (<https://www.cropbooster-p.eu/data/upload/files/d4-1-final-report-17-12-2020.pdf>), presentations of experts during the CropBooster meeting in 2021 (<https://www.cropbooster-p.eu/the-project/presentations.html>) and the White Paper and Scientific Basis of the Strategic Research Agenda (<https://www.cropbooster-p.eu/data/upload/files/d4-2-report-22-11-2021-v1.pdf>).

