



DiverIMPACTS
European Conference
on Crop Diversification
September 18-21, 2019
Budapest, Hungary



DETAILED PROGRAMME



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Wednesday 18 September

18:00-20:00 **Registration and Welcome Evening**

Thursday 19 September

9:00-10:00 **Plenary session**

Chairs: Dóra Drexler (DiverIMPACTS, ÖMKi, Hungary),
Antoine Messéan (DiverIMPACTS, INRA, France)

9:00-9:15 *Room Amazonas 1*

Opening session

Welcome from ÖMKi and DiverIMPACTS

9:15-10:00 *Room Amazonas 1*

Keynote Speaker I

John Ingram (University of Oxford, United Kingdom)

Linking agroecology, food security and environment

10:00-10:15 *Coffee break*

10:15-12:15 **Parallel sessions**

10:15-12:15 *Room Amazonas 1*

Session 5: Enhancing agrosystem resilience and performances by crop diversification

Chairs: Erik Steen Jensen (Swedish University of Agricultural Sciences, Sweden),
Jorge Álvaro-Fuentes (CSIC, Spain)

1. **Does diversity affect dynamics of agricultural system facing perturbations?**
Speaker: Manon Dardonville, INRA, France
2. **Does cropping system diversification with legumes lead to higher yield stability? Diverging evidence from long-term experiments across Europe**
Speaker: Moritz Reckling, ZALF, Germany
3. **Diversified arable cropping systems and management in selected European regions have positive effects on crop production and soil organic carbon**
Speaker: Claudia Di Bene, CREA, Italy
4. **Syppre: better reconciliation of global and local issues through innovative and diversified cropping systems**
Speaker: Paul Tauvel, ITB, France
5. **Co-design and multicriteria assessment of low-input cropping systems in the South-West of France: an 8-years experimentation with farmers**
Speaker: Lionel Alletto, Chambre régionale d'agriculture Occitanie, France
6. **Combining temporal and spatial diversification to improve economic, environmental and social performances in European cropping systems**
Speaker: Loïc Viguié, INRA, France

Posters thematically allocated to this session (see book of abstracts) will be either summarised by chairs or presented in the form of flash talks by authors. Details on the way posters will be presented were provided to authors by email.

10:15-12:15 Room Amazonas 4+5

Session 13: Breeding for interspecific mixtures

Chairs: Charlotte Bickler (ORC, United Kingdom),
Johannes Timaeus (University of Kassel, Germany)

1. **Development of genetic models to breed for mixed cropping systems**
Speaker: Benedikt Haug, FiBL, Switzerland
2. **An interdisciplinary approach to increase wheat within-field diversity and promote agro-ecosystem services**
Speaker: Jérôme Enjalbert, INRA, France
3. **Promoting long-term durability in disease control: a framework for managing varietal diversity and identifying varieties with potential durable resistance**
Speaker: Florence Dubs, INRA, France
4. **On-farm research to explore the impact of increasing diversity: the case of soft wheat combining intra-varietal diversity with legume association for modern and landrace varieties**
Speaker: Antoine Marin, INRA, France
5. **Selection of the best adapted legume types for relay intercropping in durum wheat**
Speaker: Federico Leoni, Sant'Anna School of Advanced Studies, Italy

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10:15-12:15 Room Amazonas 2+3

Session 17: Tools to design, manage and monitor diversified systems from the field to the landscape levels

Chairs: Frédérique Angevin (INRA, France),
Christine Watson (Scotland's Rural College, United Kingdom)

1. **Modelling crop-weed canopies as a tool to investigate the role of crop diversification in agroecological cropping systems**
Speaker: Stéphane Cordeau, INRA, France
2. **The DiverIMPACTS set of indicators for the sustainability assessment of crop diversification**
Speaker: Stefano Canali, CREA, Italy
3. **SYSTERRE®, an online tool to describe diversified cropping systems, to calculate their performances, and assess their sustainability**
Speaker: Clotilde Toqué, ARVALIS, France
4. **Current dominant crop sequences across EU: a typology based on LUCAS dataset**
Speaker: Rémy Ballot, INRA, France
5. **Integrated assessment and modelling of the impacts of cropping system diversification from field to landscape and agro-chain levels: the MAELIA multi-agent platform**
Speaker: Rui Catarino, INRA, France
6. **Assessing area suitable for diversification crops: an example on soybean in Europe under climate change using machine learning**
Speaker: Nicolas Guilpart, INRA, France
7. **New interactive front-end tools for visualizing and analysing data from quantitative and qualitative surveys: application to Crop Diversification Experiences across Europe**
Speaker: Frédéric Vanwindekens, CRA-W, Belgium

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10:15-11:15 *Room Ganges 1+2*

Session 4: Connecting actors to foster crop diversification: how to turn theory into action and vice versa?

Chairs: John Grin (University of Amsterdam, The Netherlands),
Guillaume Martin (INRA, France)

1. Building and fostering trust as a craft

Speaker: Barbara Koole, University of Amsterdam, The Netherlands

2. Translating knowledge for legume-based farming for food and feed (Legumes Translated)

Speaker: Donal Murphy-Bokern, Germany

3. Knowledge exchange in 'plant team' cropping with on-farm participatory research

Speaker: Alison Karley, The James Hutton Institute, United Kingdom

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11:15-12:15 *Room Ganges 1+2*

Workshop: Towards a crop diversification network

Convenors: Antoine Messéan (INRA, France),
Walter Rossing (Wageningen University and Research, The Netherlands)

Facilitators: Margarida Ambar (EIP-AGRI, Belgium),
Dóra Drexler (ÖMKi, Hungary),
John Grin (University of Amsterdam, The Netherlands),
Henrik Hauggaard-Nielsen (Roskilde University, Denmark),
Pete Iannetta (The James Hutton Institute, United Kingdom),
Liisa Kübarsepp (EIP-AGRI, Belgium),
Anja Vieweger (ORC, United Kingdom)

Background

The H2020 Crop Diversification cluster (<https://www.cropdiversification.eu/>) brings together research projects which operate in countries across Europe to increase the impact of crop diversification research. The cluster encourages sustained uptake of diversification measures by European farmers and through innovations across the agri-value chain. Also, the EIP-AGRI brings together innovation actors (farmers, advisers, researchers, businesses, NGOs and others) at EU level and recently organised a workshop "Cropping for the future: networking for crop rotation and crop diversification". Against this context, there is a need to align those initiatives and to discuss how networking could be used as a means to support the transition to diversified and sustainable agri-food systems.

Workshop format and objectives

The workshop will be introduced with short talks on (i) what is already being done within the cluster; and (ii) the outcomes of the EIP-AGRI workshop on crop diversification which was held in Almere, The Netherlands, in June 2019. Facilitated discussions will address the following objectives:

- Identify expectations and needs as well as experiences in terms of networking on crop diversification;
- Suggest ideas, processes, instruments and tools, and make recommendations to support networking on crop diversification.

12:15-13:15 *Lunch break*

13:15-14:45

Plenary session

Chairs: Alison Karley (DIVERSify, The James Hutton Institute, United Kingdom),
Frédéric Muel (LegValue, Terres Inovia, France)

13:15-14:00 *Room Amazonas 1*

Keynote Speaker II

Pablo Tittonell (CONICET, Argentina)

Ecological intensification as a transition to agroecological landscapes and sustainable food systems

14:00-14:45 *Room Amazonas 1*

Keynote Speaker III

Julie Dawson (University of Wisconsin-Madison, United States)

Collaboration all along value chains to develop varieties for local food systems

14:45-15:00

Coffee break

15:00-17:30

Parallel sessions

15:00-17:15 *Room Amazonas 2+3*

Session 10: New Inter and strip-cropping: crop and ecological performances

Chairs: Guénaelle Hellou (ESA, France),
Eric Justes (CIRAD, France)

1. **Intercropped melon-cowpea organic system can improve melon yield and land equivalent ratio**
Speaker: Raúl Zornoza, Universidad Politécnica de Cartagena, Spain
2. **Intercropping promotes both agronomic and ecological aims: the case of organic strip cropped cabbage (*Brassica oleracea* L.)**
Speaker: Juventia Stella, Wageningen University & Research, The Netherlands
3. **Mobilizing within-field diversity for ecosystem service delivery in temperate arable systems**
Speaker: Lenora Ditzler, Wageningen University & Research, The Netherlands
4. **Grain legume-cereal intercropping increases the reliance on dinitrogen fixation in grain legumes and enhances soil N acquisition in cereal plants: A meta-analysis**
Speaker: Carolina Rodriguez Gonzalez, Swedish University of Agricultural Sciences, Sweden
5. **Trait combinations for efficient nitrogen utilization in pea-barley and wheat-faba bean plant teams field-grown in Sweden**
Speaker: James Ajal, Swedish University of Agricultural Sciences, Sweden
6. **Impact of fertilization and legume sowing density on intercropped triticale-pea performances under organic farming - Synthesis of three years of trials**
Speaker: Didier Stilmant, CRA-W, Belgium
7. **Exploring below-ground interspecific root-root interactions to understand advantage of intercropping in terms of productivity, nutrient use and soil fertility**
Speaker: Long Li, China Agricultural University, China
8. **Weed species' competition for different N sources along gradients in a pea-barley intercrop**
Speaker: Ortrud Jäck, Swedish University of Agricultural Sciences, Sweden

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15:00-17:00 *Room Amazonas 1*

Session 12: Breeding for intraspecific diversity

Chairs: Jörg Peter Baresel (Technical University of Munich, Germany),
Maria Finckh (University of Kassel, Germany)

1. **Innovative approaches to optimize genetic diversity in wheat for sustainable farming systems of the future (INSUSFAR)**
Speaker: Odette Weedon, University of Kassel, Germany
2. **Production risk in organic winter wheat cultivation - heterogeneous populations vs. pure line varieties**
Economic performance of organic winter wheat production with composite cross populations
Speaker: Torsten Siegmeier, University of Kassel, Germany
3. **Yield stability and yield variability of diverse wheat populations to inter- and intra-site heterogeneity**
Speaker: Robert Oliver Simon, Technical University of Munich, Germany
4. **Performance, diversity and stability of population-varieties developed within a wheat participatory breeding program in France**
Speaker: Gaëlle van Frank, INRA, France
5. **Information system ROBUSTUM for diversity breeding**
Speaker: Lorenz Bülow, JKI, Germany

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15:00-17:30 *Room Amazonas 4+5*

Session 15: Barriers, lock ins, enablers and practical experiences of crop diversification

Chairs: Alison Karley (The James Hutton Institute, United Kingdom),
Wijnand Sukkel (Wageningen University and Research, The Netherlands),
Martin Weih (Swedish University of Agricultural Sciences, Sweden)

1. **Documenting crop diversification experiences across Europe - The DiverIMPACTS Expert Survey**
Speaker: Dóra Drexler, ÖMKi, Hungary
2. **Supporting crop diversification within or outside the dominant agro-food regime: different barriers for different strategies**
Speaker: Kevin Morel, Université catholique de Louvain, Belgium
3. **Hemp, a borderline crop to diversify Sicilian food systems**
Speaker: Luca Colombo, FIRAB, Italy
4. **Implementing applied research and development approaches for crop diversification in French arable farming: a strategic view from the French oil and protein farmers' applied research institute Terres Inovia**
Speaker: David Gouache, Terres Inovia, France
5. **The perceived or realised practical restrictions imposed by plant teams**
Speaker: Charlotte Bickler, ORC, United Kingdom
6. **Why and how farmers change their practices towards crop diversification: examples from a case study in France**
Speaker: Eva Revoyron, INRA, France
7. **Emmer and einkorn as the means of diversification in organic farming under marginal conditions**
Speaker: Szilvia Bencze, ÖMKi, Hungary
8. **Motivations and observed benefits and limits from farmers growing legumes**
Speaker: Elise Pelzer, INRA, France

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15:00-16:30 *Room Ganges 1+2*

Session 3: Niche management and diversification projects: how to turn theory into action and vice versa?

Chairs: Henrik Hauggaard-Nielsen (Roskilde University, Denmark),
Barbara Koole (University of Amsterdam, The Netherlands)

1. **Multi-actor approaches for diversified cropping systems: fostering complexity-sensitivity through co-innovation in DiverIMPACTS**
Speaker: Walter Rossing, Wageningen University and Research, The Netherlands
2. **Co-design and assessment of agronomical scenarios for reintroduction of legumes into a French territory**
Speaker: Elise Pelzer, INRA, France
3. **Diversification of cropping systems in a context of shallow soils: implementation and performances of both on-station and on-farm systems**
Speaker: Stéphane Cadoux, Terres Inovia, France
4. **Investigating farmer-driven co-innovation for increased species mixture cropping in European agriculture using the Danish ReMIX multi-actor approach**
Speaker: Ane Kirstine Aare, Roskilde University, Denmark

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16:30-17:30 *Room Ganges 1+2*

Session 2: Co-designing crop diversification at the field level: what do actors want?

Chairs: Kevin Morel (Université catholique de Louvain, Belgium),
Anja Vieweger (ORC, United Kingdom)

1. **Participatory strategy to build sustainable cropping system: upscaling from field to the territory**
Speaker: Corrado Ciaccia, CREA, Italy
2. **Co-design and multicriteria assessment of wheat variety mixtures for organic farming systems**
Speaker: Emma Forst, INRA, France
3. **What do end-users expect from EcosysteMIX, a tool for supporting the design of crop mixtures?**
Speaker: Safia Médiène, INRA, France

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17:00-18:15

Poster session I *Room Ganges 4+5*

19:00

Gala dinner *Room Amazonas 1+2+3+4+5*

Friday 20 September

9:00-10:30 **Plenary session**

Chairs: Pete Iannetta (TRUE, The James Hutton Institute, United Kingdom),
Eric Justes (ReMIX, CIRAD, France)

9:00-9:45 *Room Amazonas 1*

Keynote Speaker IV

Phil Howard (Michigan State University, United States)

Bridging information gaps between producers and consumers to develop more diversified and sustainable food systems

9:45-10:30 *Room Amazonas 1*

Keynote Speaker V

Emmanuel Petel (European Commission, Belgium)

Common agricultural policy post-2020 – The new green architecture and Research & Innovation

10:30-10:45 *Coffee break*

10:45-12:45 **Parallel sessions**

10:45-12:45 *Room Ganges 1+2*

Session 9: Impacts of introducing service crops and legumes in cropping systems

Chairs: Frédéric Muel (Terres Inovia, France),
Elise Pelzer (INRA, France)

1. **Cropping diversification and N fertilization effects on soil greenhouse gas emissions in irrigated Mediterranean conditions**
Speaker: Jorge Álvaro-Fuentes, CSIC, Spain
2. **Multifunctional analysis of ecosystem services relative to the nitrogen fluxes provided by ten legume crops**
Speaker: Maé Guinet, INRA, France
3. **Diversifying irrigated rotations with cover crops in Mediterranean semi-arid regions: learnings from a long-term experiment**
Speaker: María Alonso-Ayuso, Universidad Politécnica de Madrid, Spain
4. **Increasing cover crop benefits from the termination method choice in semi-arid Mediterranean regions**
Speaker: María Alonso-Ayuso, Universidad Politécnica de Madrid, Spain
5. **Diversity of perennial legume-grass mixture influences the delivery of ecosystem services in organic arable cropping systems**
Speaker: Nawa Raj Dhamala, Swedish University of Agricultural Sciences, Sweden
6. **Do tomorrow's diversified cropping systems need ley pastures?**
Speaker: Guillaume Martin, INRA, France
7. **Agro-ecosystem services and drivers of variability in their delivery from legumes in European cropping systems: a systematic review**
Speaker: Dirk van Apeldoorn, Wageningen University & Research, The Netherlands

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10:45-12:45 *Room Amazonas 4+5*

Session 6: Diversification benefits: their economic value and carry-over effects

Chairs: Stefano Canali (CREA, Italy),
Didier Stilmant (CRA-W, Belgium)

- 1. How to reconcile short-term and long-term objectives in agroforestry systems? An application of viability theory to mixed horticultural systems**
Speaker: Raphaël Paut, INRA, France
- 2. Economic valuation of ecosystem services provided by crop diversification**
Speaker: Francisco Alcón, Universidad Politécnica de Cartagena, Spain
- 3. Economic benefits of agro-ecological ecosystem services: consumers value diverse cropping systems**
Speaker: Heikki Lehtonen, Luke, Finland
- 4. Finding and fastening the missing link: a novel method to estimate pre-crop values for previous and subsequent crop combinations**
Speaker: Pirjo Peltonen-Sainio, Luke, Finland
- 5. On the economics of crop rotation diversification: pre crop, crop rotation and price effects**
Speaker: Alain Carpentier, INRA, France
- 6. Estimation of crop rotation effects based on farm accountancy data**
Speaker: Romaric Sodjahin, INRA, France
- 7. Pre-cropping effects from grain legumes on wheat and oilseed rate: nitrogen fluxes and productivity**
Speaker: Anne Schneider, Terres Inovia, France

10:45-12:15 *Room Amazonas 1*

Session 16: Valuing crop diversification products

Chairs: Francisco Alcón (Universidad Politécnica de Cartagena, Spain),
Pete Iannetta (The James Hutton Institute, United Kingdom)

- 1. Moving beyond competition in crop diversification niches**
Speaker: Barbara Koole, University of Amsterdam, The Netherlands
- 2. The up-stream agro-food value chain actors relationship role in crop diversification adoption. A case from the Italian food valley**
Speaker: Eleonora Sofia Rossi, University of Tuscia, Italy
- 3. The role of legume product development and consumption on transitioning towards a nutrition-friendly, sustainable diet**
Speaker: Marta Vasconcelos, Universidade Católica Portuguesa, Portugal
- 4. How do bakery value chain downstream's actors pull farmers to diversify their cropping systems? The Mulino Bianco® Italian brand case study**
Speaker: Lorenzo Fosci, University of Tuscia, Italy

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10:45-12:45 *Room Amazonas 2+3*

Session 1: Co-designing crop diversification: which actors to include beyond the farm?

Chairs: Luca Colombo (FIRAB, Italy),
Walter Rossing (Wageningen University and Research, The Netherlands)

1. **Organic seed production and use in Hungary**
Towards effective networking for crop diversity in Europe
Speaker: Judit Fehér, ÖMKi, Hungary
2. **The industrialisation of agri-food systems and the demise of home-grown legumes in Europe**
Speaker: Pete Iannetta, The James Hutton Institute, United Kingdom
3. **Building diversification and inputs reduction in intensive arable farms in Italy: main concepts and experimental co-design**
Speaker: Emanuele Blasi, University of Tuscia, Italy
4. **Co-designing crop diversification strategies from plot to sociotechnical system to manage root-knot nematodes in Mediterranean market gardening systems**
Speaker: Yann Boulestreau, INRA, France

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12:45-13:45

Lunch break

13:45-14:15

Poster session II *Room Ganges 4+5*

14:15-16:45

Parallel sessions

14:15-15:45 *Room Amazonas 1*

Session 8: Cropping system diversification to support biocontrol

Chairs: Jens Dauber (Thünen Institute of Biodiversity, Germany),
Didier Stilmant (CRA-W, Belgium)

1. **Does crop diversification ensure mixed cropping systems health?**
Speaker: Marc Tchamitchian, INRA, France
2. **Influence of temporal diversification on aboveground arthropods**
Speaker: Michael Meyer, University of Münster, Germany
3. **Evaluating effects of cropping-systems diversification on biocontrol potential using Rapid Ecosystem Functions Assessment methods**
Speaker: Giovanni Antonio Puliga, Thünen Institute of Biodiversity, Germany
4. **Faba bean (*Vicia faba* L.) in wheat-dominated cropping systems: spill-over effects on densities and parasitism rates of vegetation dwelling natural pest control agents?**
Speaker: Katharina Schulz, Thünen Institute of Biodiversity, Germany
5. **Biodiversity and regulatory ecosystem services in soybean (*Glycine max*) cropping systems**
Speaker: Daniel Alejandro Amthauer Gallardo, Thünen Institute Biodiversity, Germany

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14:15-15:45 Room Amazonas 2+3

Session 14: Designing and optimising interspecific mixtures

Chairs: Lars Kiær (University of Copenhagen, Denmark),
Odette Weedon (University of Kassel, Germany)

1. **Design and assessment of diversified low input cropping systems in southwestern France: an application of agroecological principles aiming at decreasing pesticides and N-fertilizer use**
Speaker: Eric Justes, CIRAD, France
2. **Analysis and design of strip cropping systems**
Speaker: Dirk van Apeldoorn, Wageningen University & Research, The Netherlands
3. **Can the APSIM crop growth model simulate the growth of pure cultures and intercrops of wheat and faba bean in temperate zones in Europe?**
Speaker: Herman Nicolaas Cornelis Berghuijs, Swedish University of Agricultural Sciences, Sweden
4. **Soybean as a diversification crop for western France: using intercropping to mitigate risks linked to the introduction of a new crop**
Speaker: Timothée Cherie, INRA, France
5. **Optimizing organic lentil crops in Sweden**
Speaker: Nicolas Carton, Swedish University of Agricultural Sciences, Sweden

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15:45-16:45 Room Amazonas 2+3

Workshop: Breeding for crop mixtures: Opportunities and challenges

Convenors: Alison Karley (The James Hutton Institute, United Kingdom),
Lars Kiær (University of Copenhagen, Denmark)

Background

When carefully combined, crop mixtures such as intercrops and variety mixtures are found to enhance agronomic performance and ecosystem services such as improved resource use efficiency, pest and pathogen management and yield stability. However, ideotypes for sole cropping may not perform well in crop mixtures, and the need for developing specific genotypes of crops for intercropping has long been recognized.

Workshop format and objectives

The cross-disciplinary workshop will feature flash talks from representatives of breeding, ecology and agronomy. Facilitated discussions will address key challenges for the practical implementation of modern breeding programs for crop mixtures:

- Identifying relevant breeding targets;
- Identifying operational breeding methods;
- Managing genotype-environment interactions;
- Market opportunities and challenges.

14:15-15:15 *Room Ganges 1+2*

Workshop: Technology inspired by ecology for the adoption in practice of spatial crop diversity

Convenors: Cristina Castognotto (Industrias David, Spain),
Wijnand Sukkel (Wageningen University and Research, The Netherlands)

Background

Technology has shaped 20th century agriculture neglecting or even excluding ecology. Compared to monocultures, cropping systems with a high spatial diversity have proven to (potentially) perform better on resilience, resource efficiency, productivity and biodiversity. To make use of the potential benefits of diverse cropping systems a different approach is needed in the relations between agronomy, ecology and technology. How should technology inspired by ecology look like? What are the current developments in technology which could support the adoption of diverse cropping systems? And what kind of cooperation, support and inspiration is needed for the transition to a new paradigm in farm technology?

Workshop format and objectives

The workshop will be introduced with a short talk:

1. Technology lock ins for the adoption of spatial crop diversity, relevant technology developments and experiences in the Netherlands

Speaker: Wijnand Sukkel (Wageningen University and Research, The Netherlands)

Facilitated discussions will address the following objectives:

- Identifying technology needs in primary production and the food chain to enhance adoption of spatial crop diversity;
- Identifying relevant technology developments which can help to overcome the technology lock ins for adoption of spatial crop diversity;
- Drawing a discussion brief for actions needed to support technology development to support the adoption of spatial crop diversity.

15:15-16:45 *Room Ganges 1+2*

Session 7: Soil microbial functional diversity enhanced by cropping system diversification

Chairs: Sören Thiele-Bruhn (Trier University, Germany),
Raúl Zornoza (Universidad Politécnica de Cartagena, Spain)

- 1. Crop diversification - Implications on microbiologically mediated soil ecosystem services**
Speaker: Christoph Tebbe, Thünen Institute of Biodiversity, Germany
- 2. Effects of diversification on agricultural soil fungal biodiversity and community structures under Mediterranean conditions**
Speaker: Luigi Orrù, CREA, Italy
- 3. Ecological service provided by cover crops on agroecosystem mycorrhization: the MA% indicator**
Speaker: Alessandra Trinchera, CREA, Italy
- 4. Aromatic plants as intercrops in viticulture - Consequences for soil biology**
Speaker: Felix Dittrich, Trier University, Germany

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14:15-15:15 *Room Amazonas 4+5*

Workshop: Supporting collaboration rather than competition between diversification value chains in Europe

Convenors: Barbara Koole (University of Amsterdam, The Netherlands),
Kevin Morel (INRA, France)

Background

This workshop explores how competition between stakeholders plays out in collaborative innovation processes for crop diversification. It specifically zooms in on the interactions between scientists and other actors within collaborative research settings. It hopes to facilitate a dialogue based on experiences and theoretical insights from niche management and co-competition literature.

Workshop format and objectives

The workshop will be introduced with a short talk on the outcomes of a preliminary workshop which was held during the DiverIMPACTS annual meeting in Alnarp, Sweden, in July 2019. The workshop will also include flash talks from scientists who faced tensions due to competition in working with value chain actors. Facilitated discussions will address the following objectives:

- Discussing possibilities and strategies to foster collaboration and sharing rather than competition between actors of diversification value chains in Europe (especially between small and big players);
- Exploring the position of scientists when facing issues of competition in collaborative research settings;
- Exploring concrete possibilities to develop a European network for exchanging information for diversification value chain development (especially post-harvest management, processing, marketing, business models and setting prices).

15:15-16:45 *Room Amazonas 4+5*

Workshop: Policy recommendations to make the sociotechnical systems more disposed to crop diversification

Convenors: Bálint Balázs (ESSRG, Hungary),
Barbara Pancino (University of Tuscia, Italy)

Background

Agricultural policies have contributed to shaping cropping systems over the last decades and play a major role, together with other drivers, in the sociotechnical lock-in that prevents crop diversification despite its benefits. Several measures have been introduced or are being proposed to enhance crop diversity in European agriculture. Overall, current policies may not provide sufficient incentives to promote crop diversification and it is paramount to take stock of the actual implementation of existing policy instruments and discuss which measures could foster crop diversification while accounting for the high diversity of agroecosystems and socio-economic situations.

Workshop format and objectives

The workshop will be introduced with two talks:

- 1. How to promote crop diversification across Europe**
Speaker: Barbara Pancino (University of Tuscia, Italy);
- 2. New governance solutions for legume-based food systems**
Speaker: Bálint Balázs (ESSRG, Hungary).

Facilitated discussions will be based on the experience of case studies from the H2020 Crop Diversification cluster (<https://www.cropdiversification.eu/>) and will address:

- Policy incentives and barriers to crop diversification;
- Processes to identify measures and indicators that could be implemented by policy makers.

Some policy-makers will be invited to reflect on the outcomes of discussions.

16:45-17:00 *Coffee break*

17:00-17:45 **Closing session**

Chairs: Dóra Drexler (DiverIMPACTS, ÖMKi, Hungary),
Raúl Zornoza (Diverfarming, Universidad Politécnica de Cartagena, Spain)

17:00-17:30 *Room Amazonas 1*

Feedback from stakeholders

Viljami Fakava (FAO regional office, Hungary)

Attila Králl (Agri Kulti Nonprofit, Hungary)

Donal Murphy-Bokern (Independent researcher, Germany)

Andrew Whitley (BreadMatters, United Kingdom)

17:30-17:45 *Room Amazonas 1*

Conclusion

Anikó Juhász (Ministry of Agriculture, Hungary)

Antoine Messéan (DiverIMPACTS, INRA, France)

18:15 **Bus for the boat trip (optional)**

Saturday 21 September

8:00-16:00 **Optional excursion - discover the vineyards of Hungary**