

Wrap-up session

Edith Le Cadre, ESA president

L'Institut Agro Rennes-Angers (IA RA)

UMR SAS IA RA – INRAE Joint unit research Soil Agrohydroystems and Spatialisation

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18th Congress of the European Society for Agronomy in Rennes, France



INRAe





Main conclusions from ESA 2024

Scientific conclusions

With the kind help of co-chairs

B Dumont (Liege U - Belgium), A. Delgado (Sevilla U - Spain), B. Rapidel (CIRAD - France), J. Rischawy (INRAE-France), C Aboua (IRC – Benin), M. Malatsetxebarria (EHU - Spain), D. Marusig (Udine U - Italy), C. Simon (CIRAD - France), J Whish (CSIRO - Australia), K. Klem (Czech Rep), T. Schut (WUR - Netherlands), A.B. Milford (NIBIO - Norway), Icíar Giménez de Azcárate Bordóns (ETH - Switzerland), MF Nazar (UNIMORE -Italy, Gabriele Nerucci (Sant'Anna U - Italy), S Skorupinski (INRAE-France), J Zhang (Plant Food Research Institute- New Zealand), L Stefan (Agroscope - Switzerland), F.Stoddard (U Helsinki - Finland), T. Klemm (Zalf - Germany), Simon Treier (Agroscope - Switzerland), L Blanc (Lleida U - Spain), T.Song (CAU & WUR - China,Netherlands), T. Green (CSIRO - Australia), B Dumont (Liege U - Belgium), V. Faloya (INRAE - France), A. Metay (Institut agro - France), A. Pepin (INRAE - France), S. Hull (Stellenbosch U, South Africa), M. Juarez (EHU -Spain) M Beikufner (Osnabrück U - Austria), W. Reyman (FIBL-Switzerland), JP Cohan (Arvalis - France), C. Bissuel (Institut agro - France), T.Nesme (INRAE - France), E. Marraccini (Udine U. - Italy), R. Reumaux (SLU - Sweden), Maria Giovanna Sessa (Bologna U. Italy), AF. Didelot (Institut agro - France) M. Slovenc (SASA - Slovenia), E. Wang (CSIRO - Australia), R. Neugschwandtner (BOKU - Austria), M. Palka (Zalf - Germany), E. Marraccini (Udine U. - Italy), T. Reuter (- Austria), A. Triacca (Pisa U. - Italy), A. Alignier (INRAE-France), JN Nieto (- Spain), C. Nendel (ZALF Germany), A. Delgado (U Sevilla - Spain), A. Virili (Udine U. - Italy), S. Harchaoui (INRAE - France), C. Lefevre (INP - France), R. Mettauer, M. Prebibaj (BOKU- Austria), A. Delbaere (Institut agro - France)

scientific committee:

Bruno Rapidel, Elisa Marraccini, Enli Wang, Claas Nendel, Evelin Loit, Olivier Godinot, Vincent Faloya, Matthieu Carof

keynote speakers:

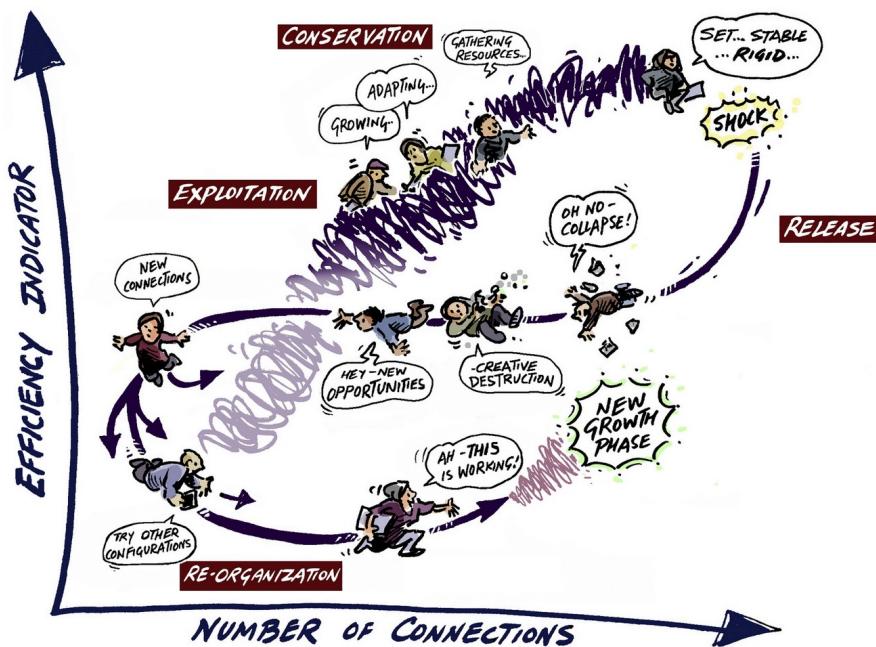
Simon Cook, Guillaume Martin, Mika Tarkka





**And a final meeting, a collective
finalization during Fri. morning**

ESA 2024 Central hypothesis



- Track Synergies between technologies
- Track Synergies between disciplines
- Track Synergies between short and long-term
- Track Synergies between researchers, farmers and society

Darnhofer I (2021) Resilience or how do we enable agricultural systems to ride the waves of unexpected change? *Agric Syst* 187:102997.

Urruty N, Tailliez-Lefebvre D, Huyghe C (2016) Stability, robustness, vulnerability and resilience of agricultural systems. A review. *Agron Sustain*

Carof M, Godinot O, Le Cadre E (2022) Biodiversity-based cropping systems: A long-term perspective is necessary. *Science of the Total Environment* 838.

Achievements of the ESA 2024 conference

➤ Great participation of young researchers

- Short keynote by young researchers « **inspiration** » including the way to do science differently
- Round table discussion or panel discussions ?

➤ Great debate on introducing transdisciplinarity

- Existing but need to be supported
- Invite sister societies

➤ Participative, collaborative experiments and research

- Engage ESA community with end-users : impact-oriented side events, invitation to technical institutes ?

Emerging trends

- Shift of ESA contributions to resilience studies
- Fruitful collaboration with modellers
- Adaptative on-farm experiments, collective experimentation

Probably existing trends but hardly identified

- Little integration between technologies : splitted in sessions ?
- Root – soil interactions & communication
- Expected impacts of ESA (decision-making)

Avenues for collaboration

- Synergies for High-Tech & Low Tech
- Long-term to boost
- Addressing the origins of problems, not only try to solve them
- Slow sciences approaches
- Transition and trajectories (theory of change ?)

Avenues for collaboration for ESA network

- **Include crop nutrition research, including fertilization, in intercropped studies, including long-term**
 - A large body of research on crop nutrition mostly monocropped
 - Mobilize our large expertise community of ESA towards innovative systems
 - **Ecological interactions and fertilizer management to tackle multiple objectives of intercropped systems**
- **Artificial intelligence and design to capture different types of knowledge**

Main conclusions from ESA 2024

Carbon footprint

Methodology

- Travels and accomodation
- Energy consumption buildings
- Food (production, recycling)
- Local transportation

To be published on website

Young scientist awards

By Olivier Godinot, ass. prof. L'institut Agro Rennes Angers, UMR SAS



BEST POSTERS



Two awards (500 € each)

- **Alexandre de Haldat du Lys**
"Morphological indicators of young tree health and recovery in agroforestry systems"
- **Tom Lorée**
"WS-Cl: a web service for predicting the biomass and nitrogen uptake of intercropping cover crops"

Thanks to jury panel : Goran Berqvist (SLU), Gabriela Alandia (Udine University), Matthieu Carof (L'Institut Agro Rennes-Angers), Olivier Godinot (L'Institut Agro Rennes-Angers),

BEST ORAL

One award (500 €)



- **Jennifer Thompson**
« Winter wheat-soy strip intercropping supports natural enemy abundance and pest control in an intensive farming system »

Thanks to jury panel : senior chair sessions

ESA « marinière » award

**By Antonin Pépin, researcher at INRAE, UMR SAS
and graduate students jury panel : Pierre Rysman, Thomas Haag, Esther Paris**

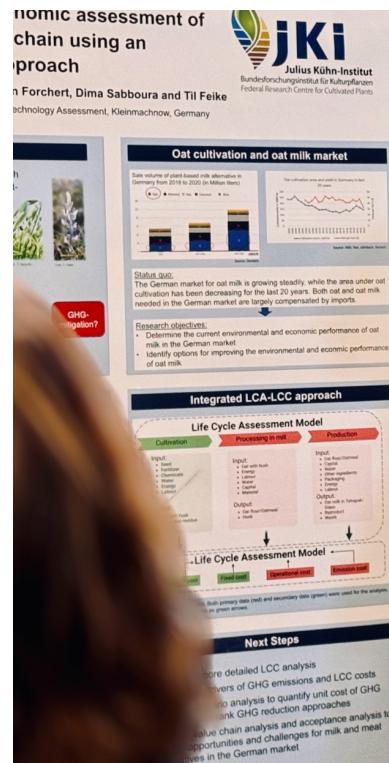


The DAY TRIP « marinière »



By Karolyn KUNTZ
Day trip 3

The SCIENCE « marinière »



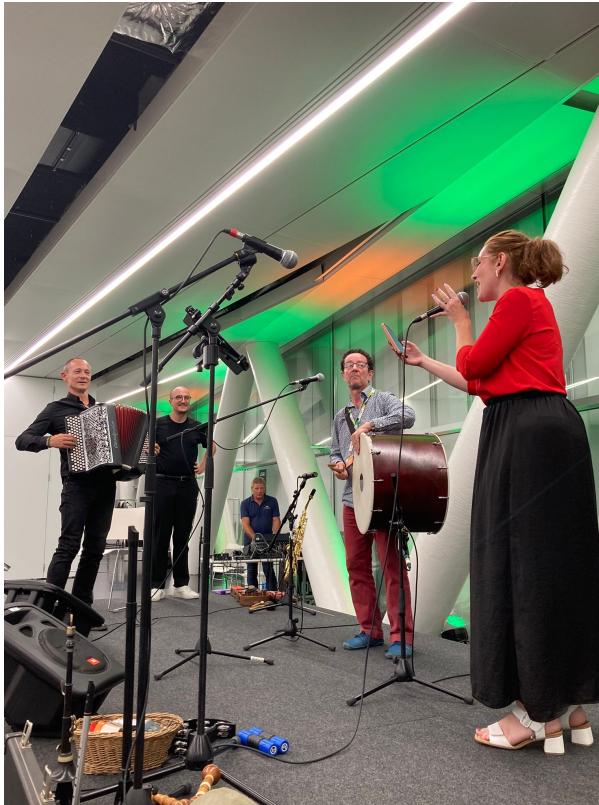
By Mr/Mrs FORCHERT

The FUN « marinière »



By anonymous

The MOST PROMISING « marinière »



PABLO ROSSO

for his outstanding commitment to entertain and assist ESA 2024 organizers

Acknowledgements



Olivier Godinot

L'institut Agro Rennes Angers, UMR IA RA - SAS

Matthieu Carof

The scientific and local organizing committee

- **The core and extended scientific committee**

President : Edith Le Cadre (L'Institut agro Rennes-Angers)

Enli Wang (CSIRO), Davide Cammarano (Aarhus U.), Masahiro Ryo (ZALF), Claas Nendel (ZALF), Sara Hallin (SLU), Antonio Delgado (Sevilla U.), Karel Klem (Czech Globe Institute), Maria Manzanares (Institut agro), Christine Bissuel (Institut agro), Christine Watson (SRUC), Bruno Rapidel (CIRAD), Matthieu Carof (L'Institut agro Rennes-Angers), Vincent Faloya (INRAE), Audrey Alignier (INRAE) , Safya Menasseri (L'Institut agro Rennes-Angers), Elisa Marraccini (Udine U), Ariani Wartenberg (ZALF), Evelin Loit (EMU), Olivier Godinot (L'Institut agro Rennes-Angers), Antonin Pepin (INRAE),

- **The local organizing committee**

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- **The administrative and technical staff from l'Institut Agro Rennes-Angers**

Michèle Béguinel, Stéphane Guigues, Sylviane Gilabert

Our volunteers

Virginie Parnaudeau, Vincent Faloya, Antonin, Pepin, Michèle Beguinel, Sylvain Busnot, Eric Beaucher, Annie Masson, Karine Derrien, Hussein Al Mohammad, Céline Bouillis, Pauline Buysse, Julie Rischawy, Julien Amelin, Léna Marion, Esther Paris, Pierre Rysman, Thomas Haag, Jan-Mickaël Busnel, Rémi Dupas, Valérie Viaud, Julie Auberger, Albert Besancenot, Souhil Harchaoui, Marine Pichot, Anne-Flore Didelot, Morgane Roquier, Romane Mettauer, Arnaud Delbaere, Maïna Philippe, Léopold Iachkine, Christine Bissuel, Stéphane Guigues, Anne Marie Cortesero, Clotilde Blancféné, Blandine Lemercier, Cendrine Mony, Sébastien Boisnot, Véronique Lucas, Anne Jaffrezic, Thierry Morvan, Fabrice Béline, Philippe Leroy, Yannick Hamon, Virginie Parnaudeau, Sylviane Gilabert, Ghislaine Rallier, Nathalie Hommet, Vinciane Marchais
and many others

THANKS TO ALL OF YOU

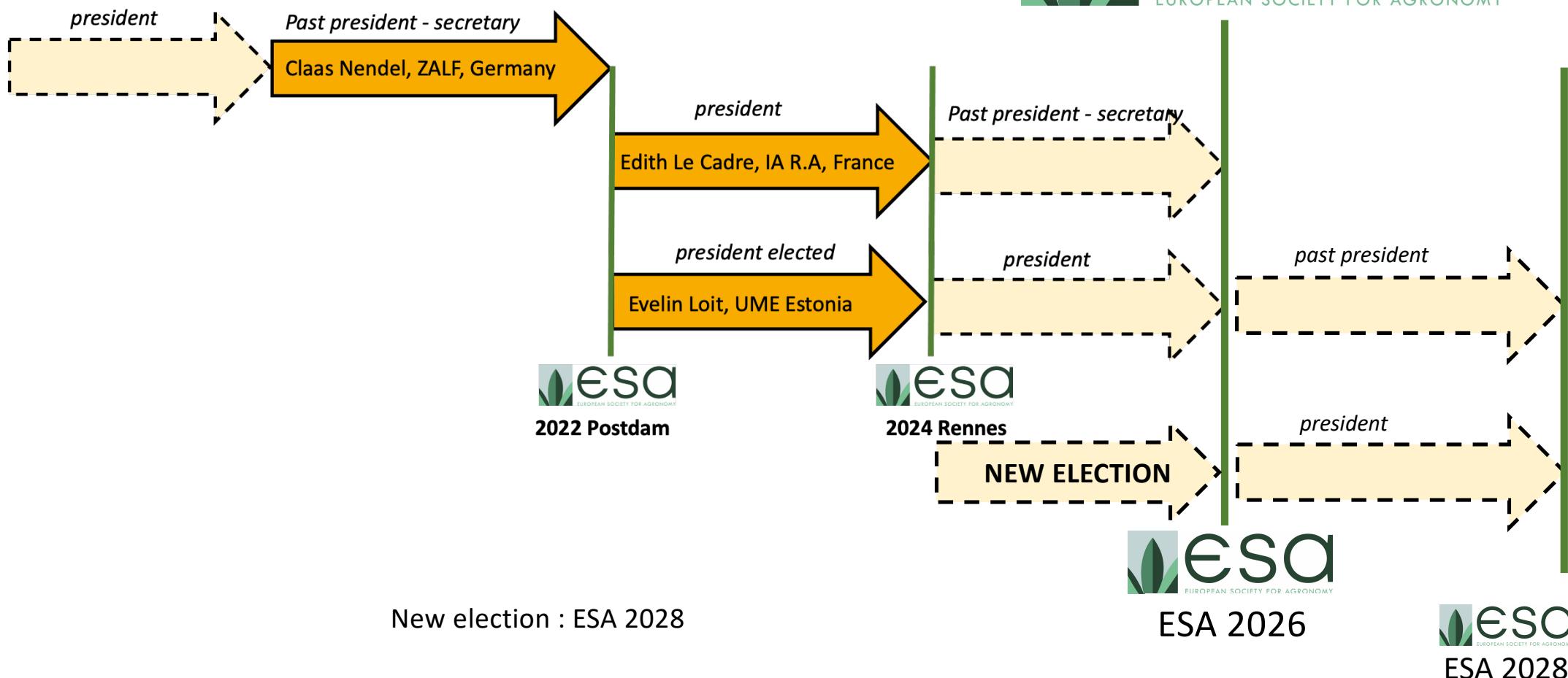


ESA president hand-over

Prof. Dr. Claas Nendel

By Prof. Dr. Edith Le Cadre

ESA president board



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By Prof. Dr. Edith Le Cadre

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ESTONIA, Tarttu

By Prof. Dr. Evelyn Loit