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Life Cycle Assessment of different poultry production systems around Europe: mEATquality project



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EAAP
European Federation
of Animal Science



UNIVERSIDAD
DE
CÓRDOBA

One of the main objectives of the H2020 mEATquality project is to generate information about producing more sustainably through extensive husbandry practices, meeting animal welfare and environmental concerns.





- Wageningen Research(coordinator)
- Wageningen University
- CLITRAVI
- MAREL Poultry B.V.



- Institute of Genetics and Animal Biotechnology
of the Polish Academy of Sciences
- Poznan University of Life Sciences



- Aarhus University
- Danish Technological Institut



- Research Centre for Animal Production
- Stazione Sperimentale per l'Industria
delle Conserve Alimentari



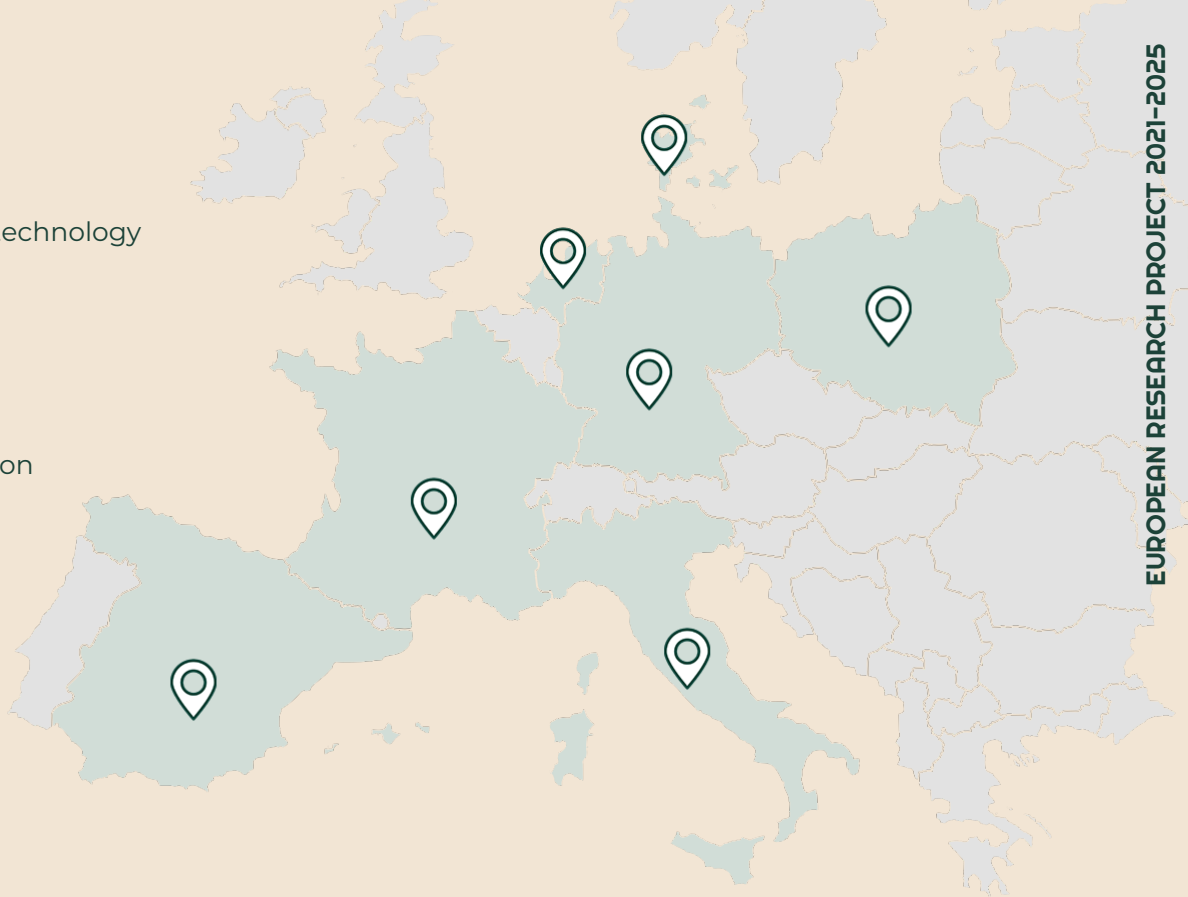
- Naturland
- Saarland University
- University of Rostock



- ECOVALIA
- University of Salamanca
- University of Córdoba
- CARREFOUR



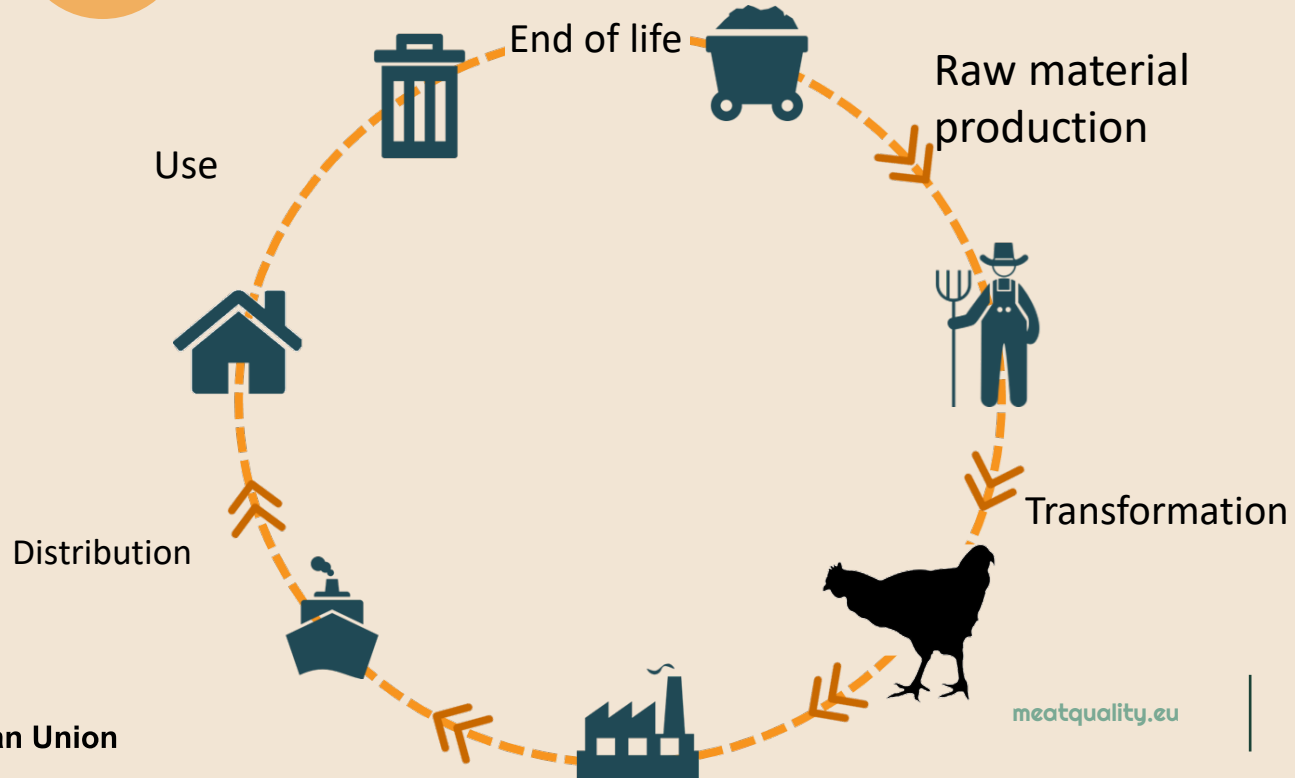
- HUBBARD S.A.S.



Life cycle assessment

For environmental evaluation

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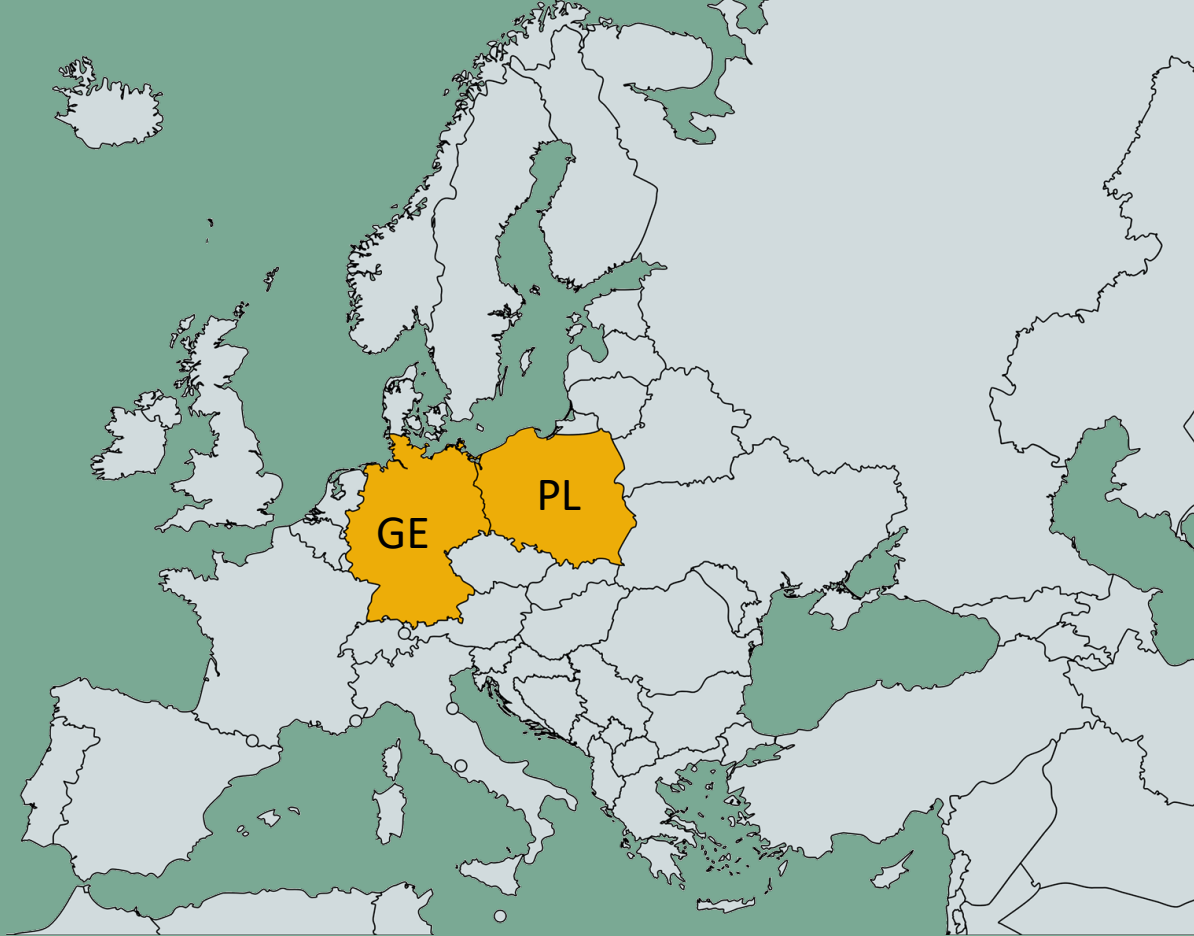


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30 poultry
farms per
country



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Wide range of models and husbandry practices

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Intensive farms



Free range farms



Conventional farms

Organic farms



Small farms

Large farms



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Methodology

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Direct interview to farmers

Functional Units:

- kg of live weight at the end of the fattening period
- kg of carcass

Limits of the system: cradle to gate



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Methodology

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The **manure handling** emissions were calculated using **Tier 2** equations on **IPPC guidelines**.

Greenhouse gas emissions from the production of environmental impact associated with **external feed input, use of energy and machinery use** are calculated with **Agribalyse database**.

The **not differentiable emissions** such as such as energy consumption **are assessed by economic approach**



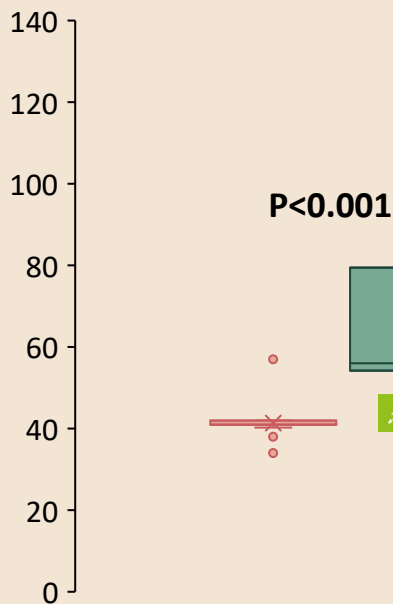
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Preliminary results

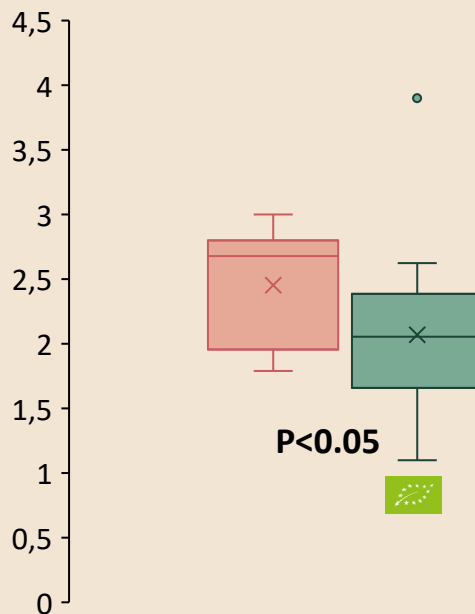
Technical parameters

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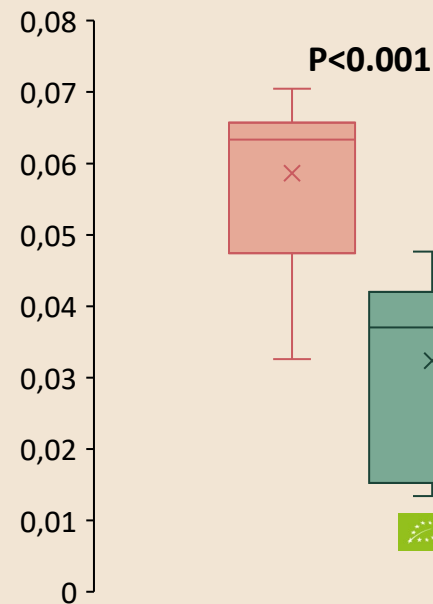
Days of life



Final weight



Daily weight gain



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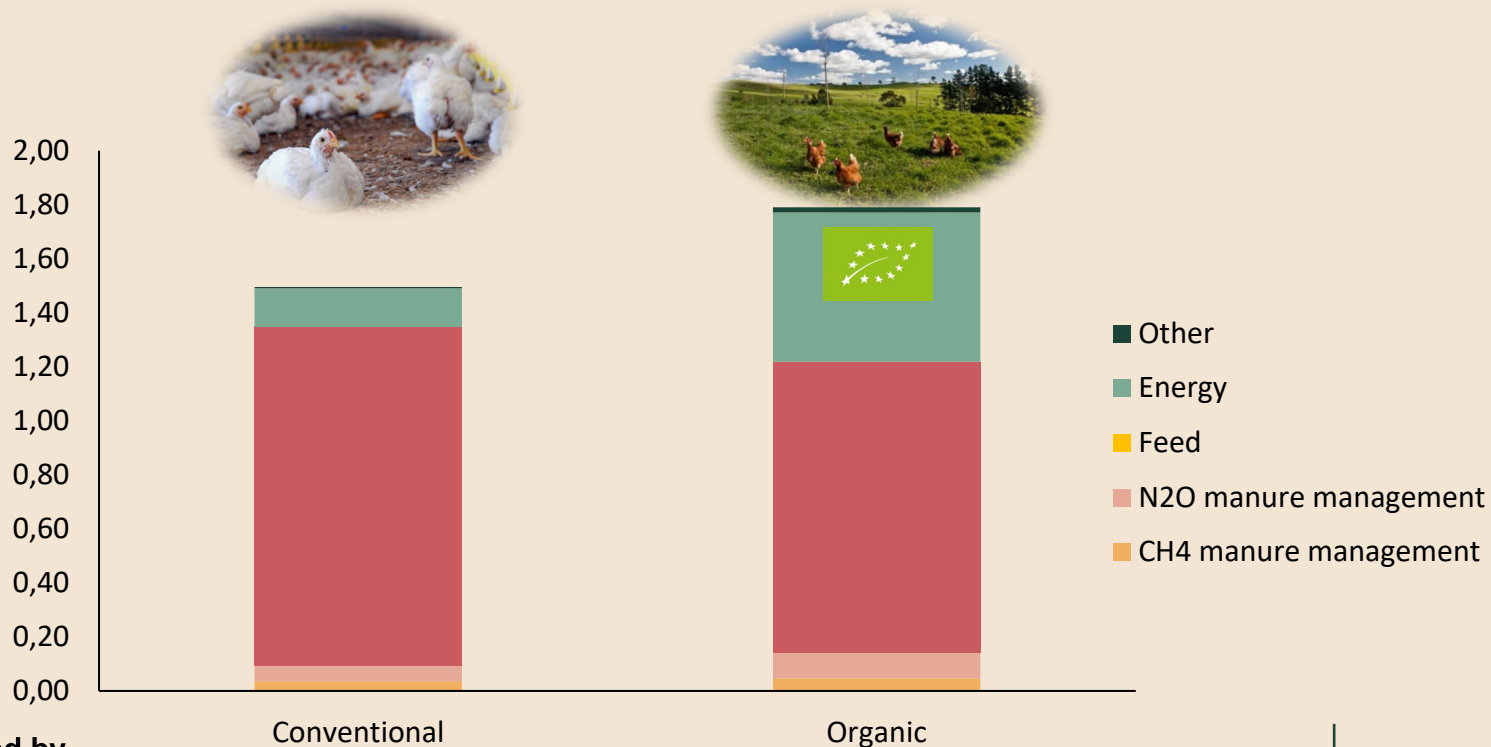
CONV ORG

Preliminary results

60 poultry farms

Carbon footprint

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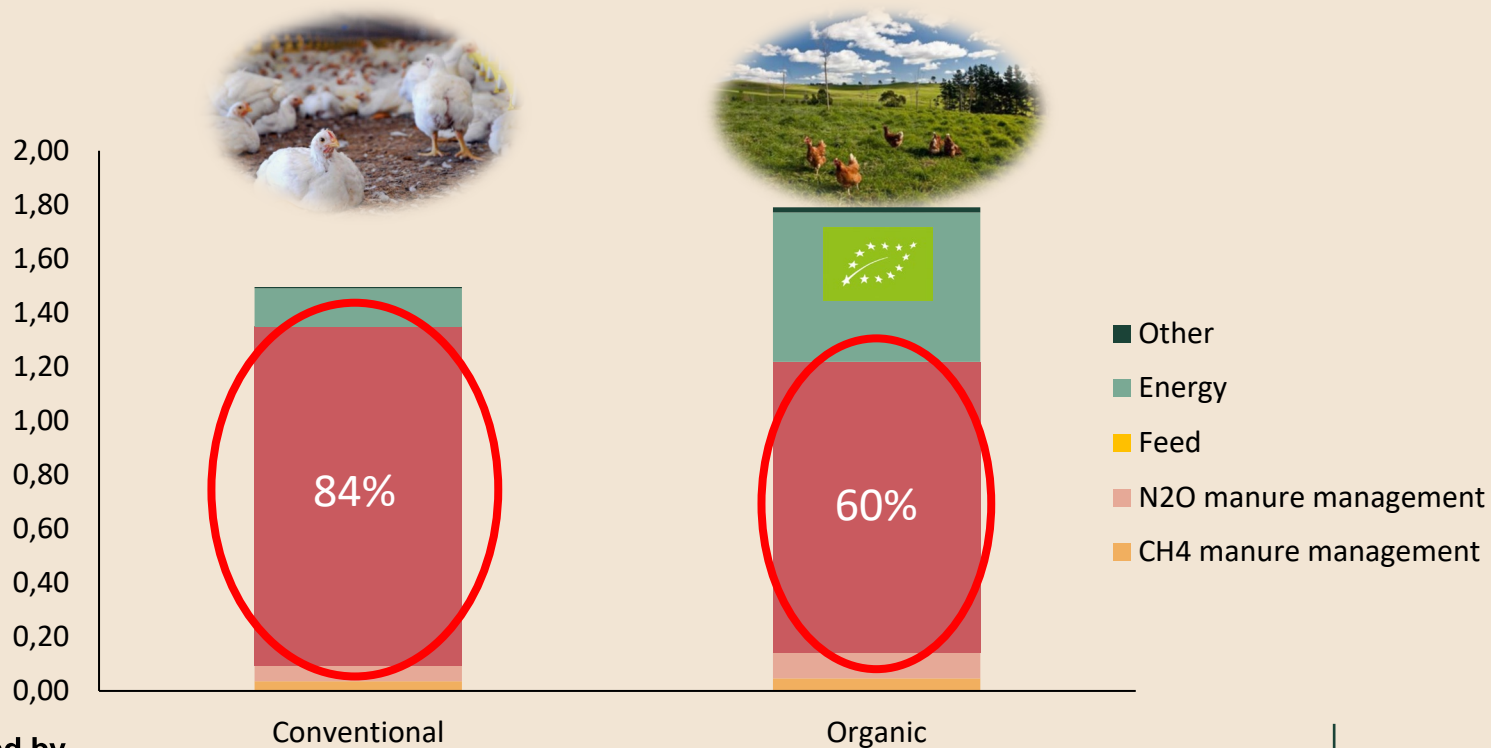
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Preliminary results

60 poultry farms

Carbon footprint

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Conclusions

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It is expected that the analysis of different management systems (such as stoking rate, extensification...) will show differences in the environmental impact of the farming systems.

The organic systems have less impact related to feed consumption but are less efficient in energy consumption to heat the buildings.

The feeding is the best parameter on which to act to reduce the environmental impact of poultry production, because it represent in all cases more that 60% of emissions.



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Thank you for your attention

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