# Robust animals in sustainable, mixed, free-range systems **ROAM-FREE** 2021-2024

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**Background:** Raising free roaming organic pigs complies well with consumer expectations and supports the organic principles of natural living. Free-range access may reduce inputs needed, but managing pigs free-range is also challenging in terms of biosecurity and land requirements.

Main objective: To investigate how mixed free-range production systems can improve animal robustness, environmental and economic sustainability, and biodiversity in organic pig farming, hence support a wider adoption of free-range, organic pig farming across Europa (Norway, Denmark, Romania, Italy, Slovenia).

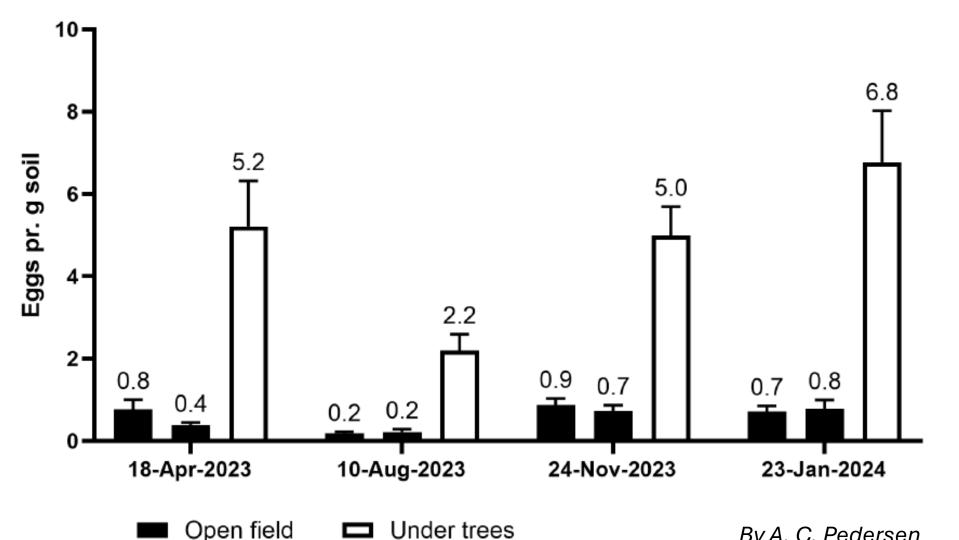
## Framework of the project

WP1: Assessing animal health and welfare in mixed free-range systems with pigs WP2: Assessing parasite preventive effects of specific crop species or management procedures WP3: Biodiversity and sustainability of mixed free-range systems with pigs WP4: Project management and final national workshops





#### Ascaris suum eggs in soil



kg  $CO_2$ -eq./kg liveweight/pig delivered, as  $GWP_{10}$ Manure, methane Machinery, housing, el. Transportation ■ Feed, sow Feed, weaners Feed, fattening pigs Expected organic freeexpected organic, Expected organic freefattening in barn range, low estimates range, high estimates

### Expected climate gas emissions per kg liveweight



By A. C. Pedersen

By M. Koesling

# **Selected outcomes**

- Characterisation of farms with pigs and other livestock species including health and welfare assessments of free-roaming pigs with a novel animal welfare protocol adapted to outdoor pigs
- Descriptions of anti-parasitic plants present on free-range organic livestock farms across Europe
- Assessments of insect biodiversity, health status and parasite occurrence on farms with free-range pigs
- Life cycle assessments (LCA) for pig farms in a free-range system (economical and environmental)
- Descriptions of different development pathways, sustainability challenges, and benefits identified through interview of framers
- National workshops with farmers, the industry, and other stakeholders





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