



# Overview of the PPILOW Project and its multiactor approach

Anne Collin, Monica Coletta

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# PPILOW Final Conference

PPILOW Final conference – Africa Museum, Tervuren (Brussels)

*11<sup>th</sup>-12<sup>th</sup> June 2024*

**Agenda of the  
PPILOW  
Final conference**

***Day 1***

Day 1 - 11 June 2024		
Time	Sessions	Chairman/Speaker(s)
13:45 - 14:00	Registration	
14:00 - 14:30	Overview of the PPILOW Project and its multiactor approach	R. Carelli, EAAP A. Collin, INRAE M. Coletta, AIAB
14:30 - 15:30	PPILOW applications for pig and poultry welfare self-assessment <ul style="list-style-type: none"> <li>• PIGLOW application</li> <li>• EBENE application</li> <li>• Feedback from farmers</li> </ul>	F. Tuytens, ILVO  E. Graat, ILVO
15:30 - 16:00	Coffee break	
16:00 - 17:00	How to avoid feather pecking in non-beak-trimmed hens and piglet castration? <ul style="list-style-type: none"> <li>• Early management and enrichment to limit feather pecking in laying hens</li> <li>• Management and genetics of non-castrated male pigs in low-input outdoor and organic systems</li> </ul>	T.B. Rodenburg, UU  S. Kliphuis, UU  B. Lebret, INRAE
17:00 - 18:00	Alternatives to the elimination of layer male chicks <ul style="list-style-type: none"> <li>• In ovo sexing tools</li> <li>• Dual-purpose breeds including multicriteria assessment, economic and business models</li> </ul>	S. Lombard, ACTA/ITAB S. Rehault-Godbert, INRAE M. Reverchon, SYSAAF H. Pluschke, TI S. Steinfeldt, AU P. Thobe, TI
18:00	End of Day 1	



Agenda of the  
PPILOW  
Final conference

Day 2

Day 2 - 12 June 2024		
Time	Sessions	Chairman/Speaker(s)
09:00 - 9:30	Registration	Welcome day 2 - A. Collin, INRAE
09:30 - 10:00	Genetics and range use by organic broilers	S. Steinfeldt, AU
	<ul style="list-style-type: none"><li>Adaptability of broiler strains to the free range and agroforestry</li><li>Individual variability of range use and genetic strategies</li></ul>	C. Castellini and E. Angelucci, UNIPG E. Le-Bihan-Duval, INRAE
10:00 - 10:30	Early management of broilers for welfare improvement	S. Steinfeldt, AU
	<ul style="list-style-type: none"><li>Incubation temperatures for improving the resilience of slow-growing broilers</li><li>On-farm hatching in organic and low input outdoor farms</li></ul>	R. Molenaar, WU A. Collin, INRAE
10:30 - 11:00	Coffee break	
11:00 - 11:40	Plants for better health of pigs and laying hens	S. Steinfeldt, AU
	<ul style="list-style-type: none"><li>Improving the gastro-intestinal health and welfare of laying hens by the use of dietary plant additives</li><li>Improving the welfare and health of pigs from low-input systems by controlling the parasitic fauna and the digestive microbiome, using aromatic and medicinal plants</li></ul>	R. Engberg, AU M. Spinu and V. Cozma, USAMV
11:40 - 12:10	Sow and piglet welfare in low-input outdoor and organic farms	S. Steinfeldt, AU
	<ul style="list-style-type: none"><li>Breeding strategies for piglet survival</li><li>Design of innovative farrowing huts with PPILOW farmers and involved partners</li></ul>	E. Merlot, INRAE P. Vanggaard, Vanggaard Staldmontage
12:10 - 13:30	Lunch break	



## Agenda of the PPILOW Final conference

### Day 2

13:30-13:40	Biosecurity and Welfare in low-input outdoor and organic pig and poultry farm	M. Coletta, AIAB A. Zuliani, VSF-Italia
13:40 - 14:20	How does PPILOW connect with the other European initiatives on Animal Health and Welfare?  <ul style="list-style-type: none"> <li>• aWISH</li> <li>• BIOSECURE</li> <li>• Partnership on Animal Health and Welfare</li> <li>• Synergies of PPILOW with other European projects</li> </ul>	M. Coletta, AIAB  F. Tuytens, ILVO E. Biebaut, UGent A. Boissy, INRAE L. Tourneur, ACTA
14:20 - 15:00	Consumer and practitioner views and lessons from the workshop on PPILOW business models	A. Collin, INRAE  J. Niemi, LUKE P. Thobe, TI
15:00 - 15:50	Round table with stakeholders on PPILOW impacts in the context of European legislation on Animal Welfare, organic farming and labelling initiatives  Céline Ledoux, DG SANTE Laurence Bonafos, DG AGRI Alain Boissy, INRAE Silvia Schmidt, IFOAM, Ines Grenho Ajuda, Eurogroup for Animals Anne Collin, INRAE	T. B. Rodenburg, UU
15:50 - 16:00	Acknowledgements End of the conference	A. Collin, INRAE
16:00	Farewell coffee	





# Overview of the PPILOW Project and its multiactor approach

*Chair: Riccardo Carelli*



*Anne Collin and Monica Coletta*



**PPILOW Final conference – Africa Museum, Tervuren (Brussels)**

*11<sup>th</sup>-12<sup>th</sup> June 2024*



## What is Animal Welfare?

*“The welfare of an animal is its positive mental and physical state as related to the fulfilment of its physiological and behavioural needs in addition to its expectations. This state can vary depending on the animal's perception of a given situation.”*

ANSES, 2018



### Why is it important to consider welfare in low-input outdoor and organic farming systems?

- High quality of the rearing practices and of the products
- Diversity of practices throughout Europe
- Still a need to improve animal welfare and limit mortality, in relation to the outdoor access challenging the animals, ethical issues, the wish of practitioners and societal expectations

**Objective of PPILOW: Identify, test and evaluate animal welfare-improving practices by taking into account environmental, economic and social impacts including human well-being**

*One Welfare concept (Garcia Pinillos et al., 2016)*



# H2020 PPILOW partners and collaborators



**PPILOW**

Poultry and Pig Low-input and Organic  
production systems' Welfare

2019-2024



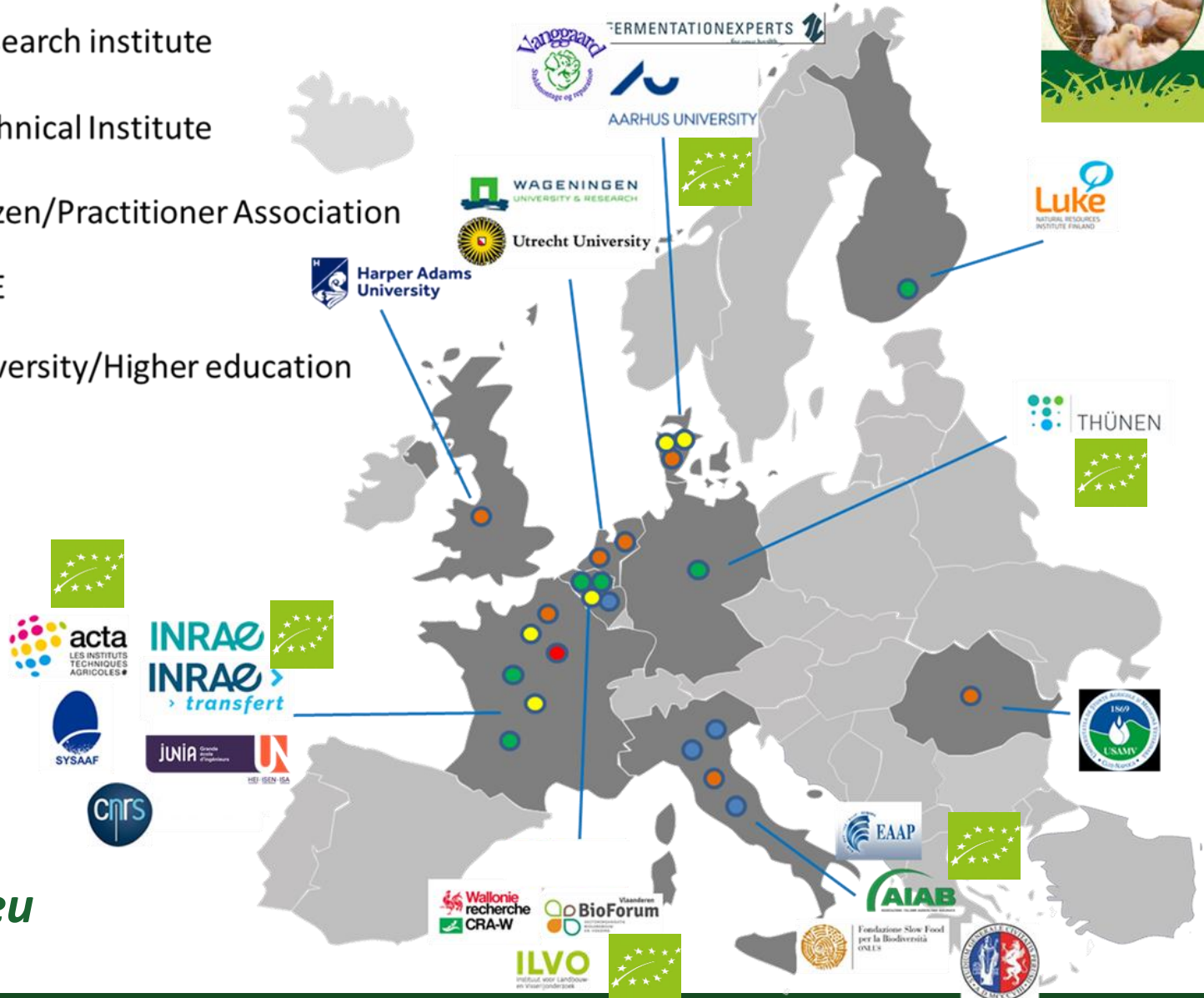
Coordination: **INRAE**

**22 PPILOW Partners in 9 countries**

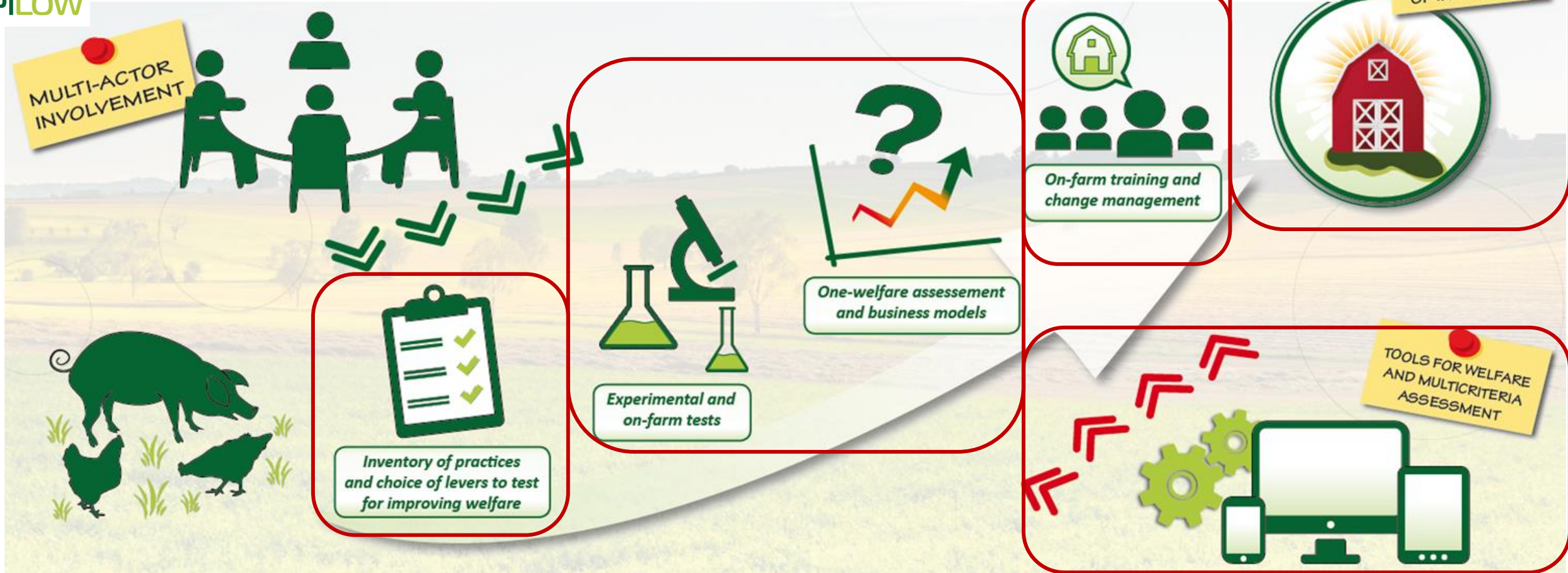
**9 National Practitioner  
Groups (NPG): 4 dedicated to pigs  
and 5 to poultry**

[www.ppilow.eu](http://www.ppilow.eu)

- Research institute
- Technical Institute
- Citizen/Practitioner Association
- SME
- University/Higher education



## Innovative breeding and rearing strategies



*Favouring positive behaviours, improving health and robustness*

*Avoiding piglet castration, beak trimming of laying hens, the elimination of layer male chicks*





# PPILOW What are the issues in poultry production ?

Data from publications and research projects



Health	Animal behaviour	Management practices
Parasitism		Risk of predation
Digestive diseases	Feather pecking	Weather risks
Arthrosis, Pododermatitis		Human welfare/well-being
Fractures, Osteoporosis	Fearfulness	
Mortality		
Lack of alternatives to antibiotics	Low use of the outdoor space	Culling of layer male chicks
Poor water quality		Depopulation & loading procedure
Lack of robustness	Lack of expression of natural behaviour	Range management
Unsuitability of biosecurity rules		

*Bonnefous et al. 2022, Frontiers Vet. Sci.*

# PPILOW What are the issues in pig production ?

Data from publications and research projects

General remark: **huge heterogeneity among countries, systems and among farms**

⇒ huge diversity of problems, that are highly **farm-dependent**

⇒ **solutions often already exist**

## Sows

Endo and ecto-parasitism

Reproduction: issues related to estrus, poor conception rate and abortion

## Piglets

Neonatal mortality (crushing, chilling)

Hunger, anemia, nutritional deficiency

Diarrhoea

Endoparasitism

## Growing pigs

Diarrhoea, respiratory problems: less significant outdoor than indoor

Endoparasitism

Piglet castration / management of non-castrated male pigs



# NATIONAL PRACTITIONERS GROUPS

Multi-actor groups in partner countries



## 5 NPGs poultry

- Denmark (l)
- France (l & b)
- Germany (l & b)
- Italy (b)
- Netherlands & Belgium (l)

l = layers b = broilers

## 4 NPGs pigs

- Belgium
- France
- Italy
- Romania

## Enhance Animal welfare through co-creation with National Practitioners Groups

- **Co-creation:** the process of designing in productive cooperation with the end-users and other relevant partners
- **Co-creators:** practitioners involved into research activity and interested to introduce changes in management and practices

### Adopting a scientific approach



©INRAE



©USAMV Cluj



©Thuenen



©AIAB





The One Welfare approach applied to the sustainability pillars and the test of Self-assessment tools supported discussion since the early stages of the project



SUSTAINABILITY PILLAR	ONE WELFARE DIMENSIONS
Animal Welfare (4)	Good Feeding
	Good Environment (Housing)
	Good Health
	Appropriate Behaviour
Environment (3)	Enhance biodiversity
	Reduce pollution (soil, air, water)
	Minimize external resources used
Economy (4)	Performance - quantity
	Performance - quality
	Returns
	Costs
Society (4)	Working conditions
	Job perception and motivation
	Connection with local community
	Social Acceptability

Use of the  
PIGLOW and  
EBENE welfare  
self-assessment  
applications



# PPILOW On-farm implementation

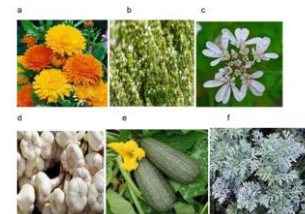
Country	NPG	Overview of the on-farm implemented innovation
NL		Working on <b>dual purpose genotypes</b> with a group of farmers and a coop with a focus on layers
DE		<b>Broilers from dual purpose genotype</b> (December 2021 to March 2022)
FR		<b>Broilers from dual purpose genotype</b> were reared in France (December 2021 – March 2022). <b>Laying hens of one PPILOW dual-purpose genotype</b> have been reared on the same farm since April 2022
DK	Poultry	Pullets from <b>two dual purpose genotypes</b> reared in France were then tested on-farm in Denmark. One farmer expressed interest in the dual-purpose genotypes during NPG-meetings and received <b>young hens</b> from two genotypes for the trial.
IT		<b>Use of enrichments with dual purpose genotypes</b>
FR		On-farm <b>hatching of slow growing chicks tested</b>
DE		<b>On-farm hatching:</b> comparison of hatchers a) Farmers own hatchholders ; b) one2born hatchholder
FR		<b>PIGLOW app training and test</b> in pig farms with IFIP
RO	Pigs	<b>Implementing the experiment on medicinal plants</b> for improving the immune system, limiting parasitism and pathogenic bacteria on-farm
FR		<b>Sow huts designed by Vanggaard and AU and tested in DK were installed in 2 farms</b>
BE		<b>Sow huts designed by Vanggaard and AU and tested in DK were installed in 1 farm</b>
IT		<b>Sow huts designed by Vanggaard and AU and tested in DK were installed in 2 farms</b>



Use of the  
PIGLOW and  
EBENE welfare  
self-assessment  
applications



Fig. 1 and 2 – Farrowing huts from the Danish PPILOW partner firm Vanggård Staldmontage (© Vanggård)



# PPILOW PARTNERS



Fondazione Slow Food  
per la Biodiversità  
ONLUS



Harper Adams  
University



Utrecht University



*Thank you for your attention*

[www.ppilow.eu](http://www.ppilow.eu)

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