



Innovations improving welfare in low input and organic pig and poultry farms

The PPILOW project

Anne COLLIN* and the PPILOW consortium

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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

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

PPILOW partners and collaborators



PPILOW

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

2019-2024



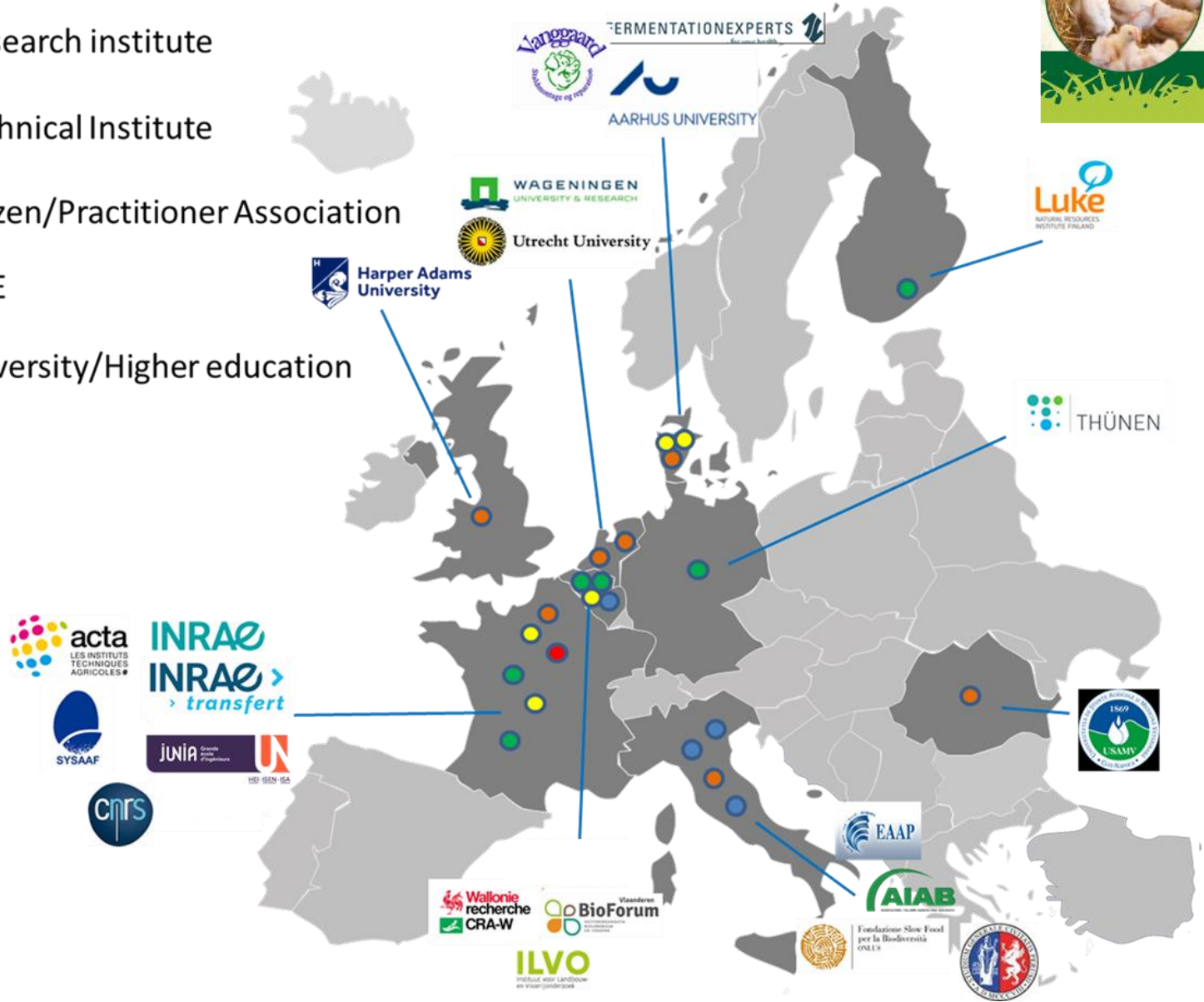
Coordination: **INRAE**

22 PPILOW Partners in 9 countries

9 National Practitioner Groups (NPG)

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



PPILOW Participative approach led by AIAB (Italy)



Practitioners involved:

- Farmers
- Breeding companies
- Hatcheries
- Nutrition firms
- Equipment firms
- Slaughter houses & Processors
- Retailers
- Production organisations
- Veterinarians...



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Different organisation scales depending on the country and production types

Other members of the society involved:

- Organic production syndicates, associations or federations
- Consumer associations
- Citizen associations, especially dedicated to animal welfare
- Policy makers



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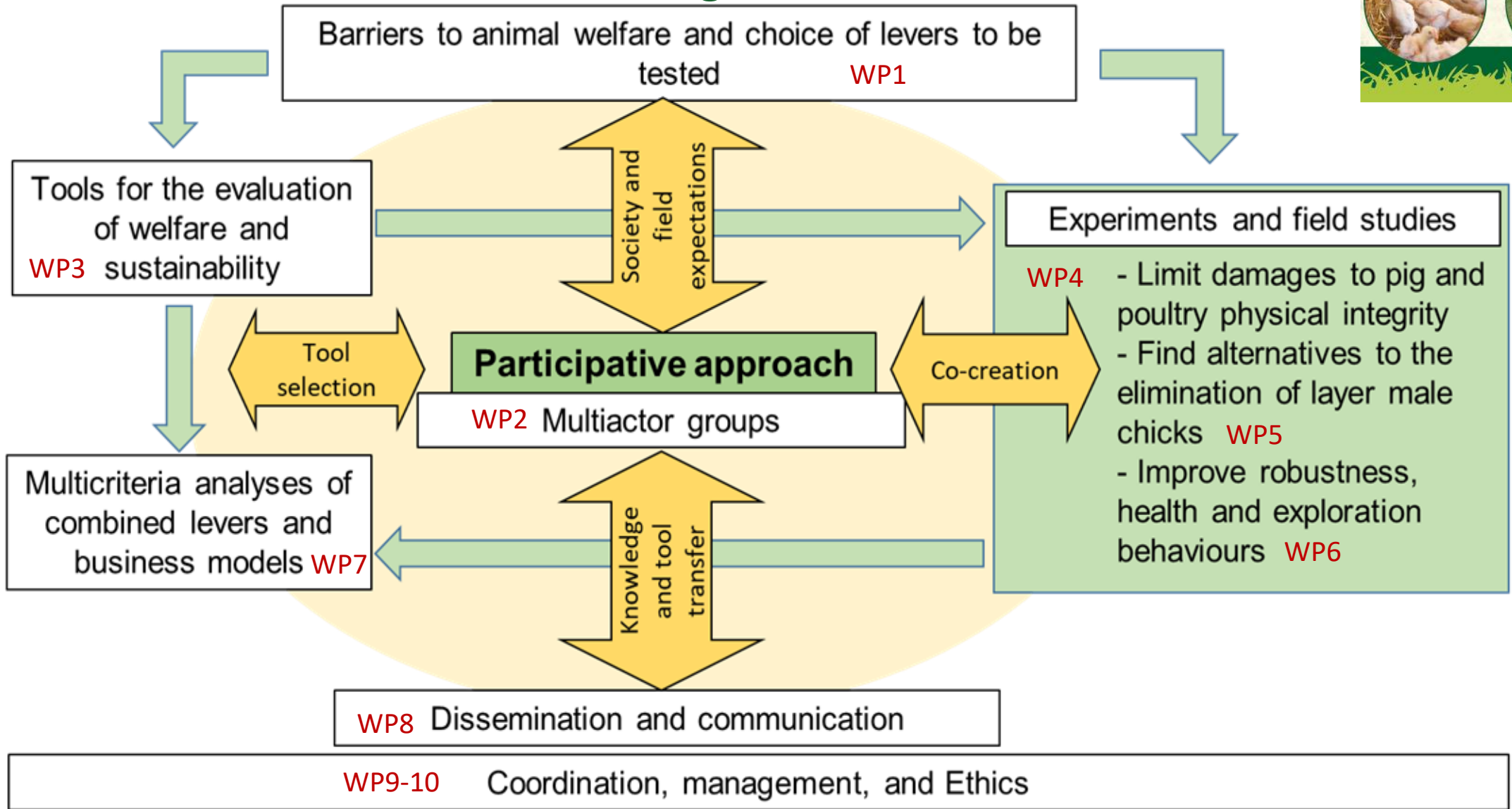
Innovative breeding and rearing strategies



Favouring positive behaviours, improving health and robustness

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

PPILOW Organisation



PPILOW first outputs



Barriers to animal welfare and choice of levers to be tested **WP1**

Shortlist of barriers and economically-sound potential levers for welfare improvements

frontiers | Frontiers in Veterinary Science

TYPE Review
PUBLISHED 05 August 2022
DOI 10.3389/fvets.2022.952922

Welfare issues and potential solutions for laying hens in free range and organic production systems: A review based on literature and interviews

Claire Bonnefous¹, Anne Collin¹, Laurence A. Guilloteau¹, Vanessa Guesdon², Christine Filliat³, Sophie Réhault-Godbert¹, T. Bas Rodenburg⁴, Frank A. M. Tuytens^{5,6}, Laura Warin⁷, Sanna Steinfeldt⁸, Lisa Baldinger⁹, Martina Re¹⁰, Raffaella Ponzio¹¹, Anna Zuliani¹², Pietro Venezia¹², Minna Väre¹³, Patricia Parrott¹⁴, Keith Walley¹⁴, Jarkko K. Niemi¹⁵ and Christine Leterrier^{16*}

Scientific programme Wednesday 7 September

Session 43.

Challenges in poultry nutrition, health and welfare (1)

Room: Piquete

Chair: Stadnicka / Daş

Session type: Working group session

Theatre Session 43

Book of Abstracts page

9:30 Animal welfare in broilers free-range and organic systems: economic implications at farm level

P. Thobe, M. Almadani, M. Coletta, J. Hercule, A. Collin and J. Niemi

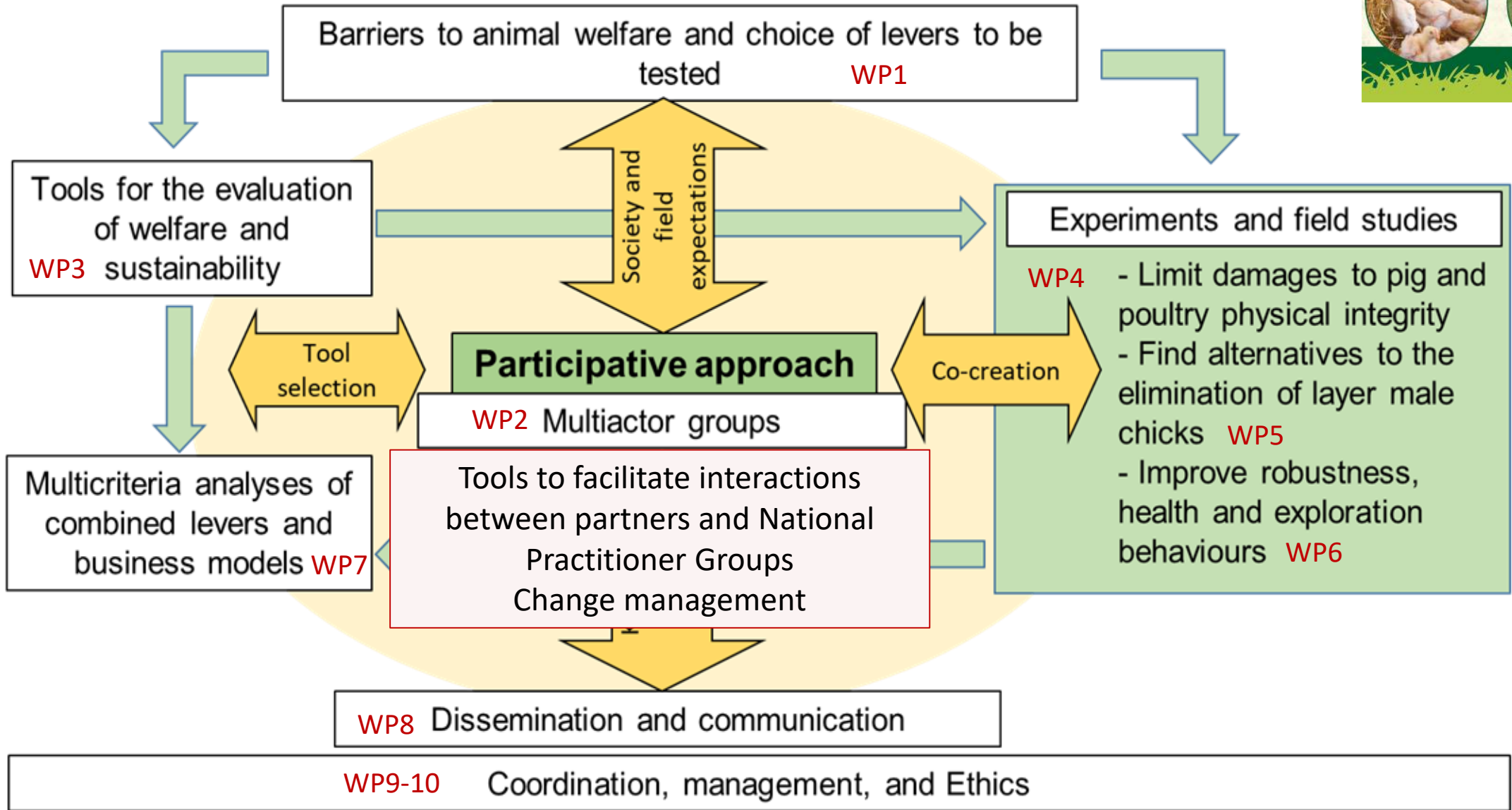
EAAP – Programme of the 73rd annual meeting, Porto 2022



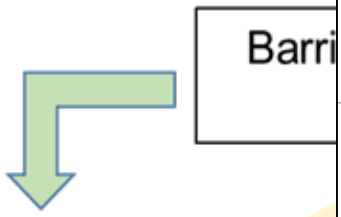
WP8 Dissemination and communication

WP9-10 Coordination, management, and Ethics

PPILOW **first outputs**



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



Tools for the evaluation of welfare and WP3 sustainability

Two applications for on farm welfare self-assessment PIGLOW and EBENE®,
Tables for collecting experimental and farm data for multicriteria One Welfare evaluations

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

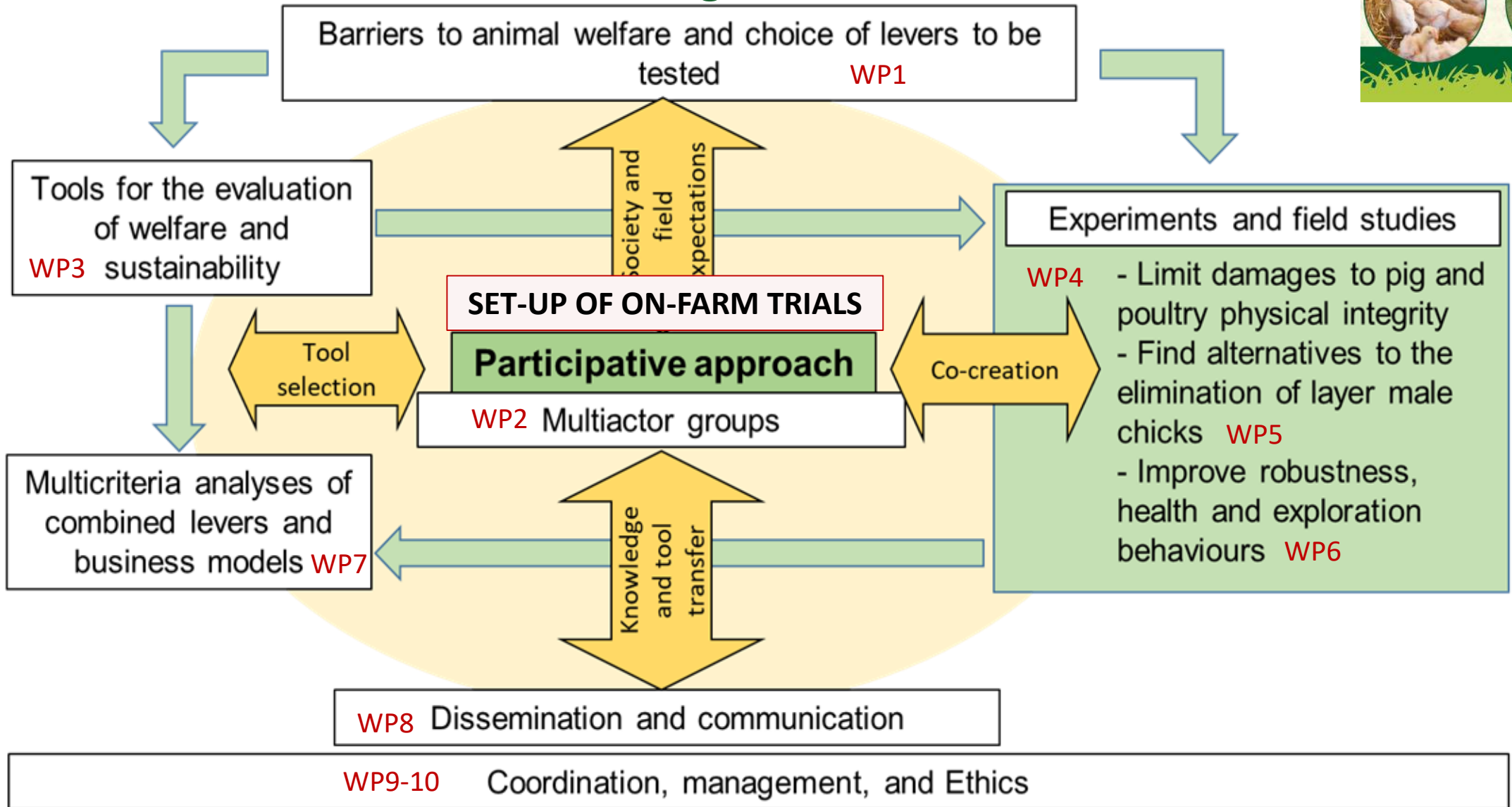
Use of the PIGLOW and EBENE welfare self-assessment applications

business, exploration WP6

WP8 Dissem
WP9-10 Coc



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scientific reports

OPEN Working for food is related to range use in free-range broiler chickens

Vitor Hugo Bessa Ferreira^{1,2,3,4,5}, Arthur Simoni^{1,5}, Karine Germain¹, Christine Leterrier², Léa Lansade², Anne Collin¹, Sandrine Mignon-Grasteau², Elisabeth Le Bihan-Duval¹, Elodie Guettier², Hélène Leruste², Ludovic Calandreau^{2,6,7} & Vanessa Guesdon^{1,6}

frontiers
in Veterinary Science

ORIGINAL RESEARCH
published: 07 February 2022
doi: 10.3389/fvets.2022.814054

Foraging Behavior Shows Individual-Consistency Over Time, and Predicts Range Use in Slow-Growing Free-Range Male Broiler Chickens

OPEN ACCESS

Vitor Hugo Bessa Ferreira^{1,2,3,4,5}, Arthur Simoni^{1,5}, Karine Germain¹, Christine Leterrier², Léa Lansade², Anne Collin¹, Sandrine Mignon-Grasteau², Elisabeth Le Bihan-Duval¹, Elodie Guettier², Hélène Leruste¹, Hanne Lovlie², Ludovic Calandreau² and Vanessa Guesdon^{1,6}

Edited by:
Stephanie Torrey,
Trouw Nutrition R&D, Netherlands

Scientific programme Wednesday 7 September

Session 43. Challenges in poultry nutrition, health and welfare (1)

Room: Piquete
Chair: Stadnicka / Day
Session type: Working group session

Theatre Session 43

Book of Abstracts page

11:30 Personality traits and exploratory behaviour of free-range slow growing broilers

C. Bonnefous, L. Calandreau, E. Le Bihan-Duval, V.H.B. Ferreira, A. Barbin, A. Collin, M. Reverchon, K. Germain, L. Ravon, N. Kruger, S. Mignon-Grasteau and V. Guesdon

EAAP – Programme of the 73rd annual meeting, Porto 2022



First experimental results on the use of:

- Incubation conditions and insect larvae for limiting feather pecking in non beak-trimmed hens
- Genetics and enrichment strategies for rearing entire male pigs
- Males and females from 2 dual-purpose crossbreeds or local/rustic breeds to avoid the elimination of day-old layer male chicks
- In ovo sexing tool
- Alternative feeds (plant extracts, fermented feeds) in hens and pigs for limiting pathologies and parasitism
- Early management levers for improving chicken resilience
- Genetic lines and new hut design for sow and piglet welfare and survival
- Broiler genetic lines and plants for free range exploration - early predictors...

> Foods. 2021 Apr 19;10(4):897. doi: 10.3390/foods10040897.

Dual-Purpose Poultry in Organic Egg Production and Effects on Egg Quality Parameters

Marianne Hammershøj¹, Gitte Hald Kristiansen¹, Sanna Steinfeldt²

Affiliations + expand

PMID: 33921822 PMID: PMC8072786 DOI: 10.3390/foods10040897

Free PMC article

Experiments and field studies

- WP4 →
- Limit damages to pig and poultry physical integrity
 - Find alternatives to the elimination of layer male chicks WP5
 - Improve robustness, health and exploration behaviours WP6

pathogens



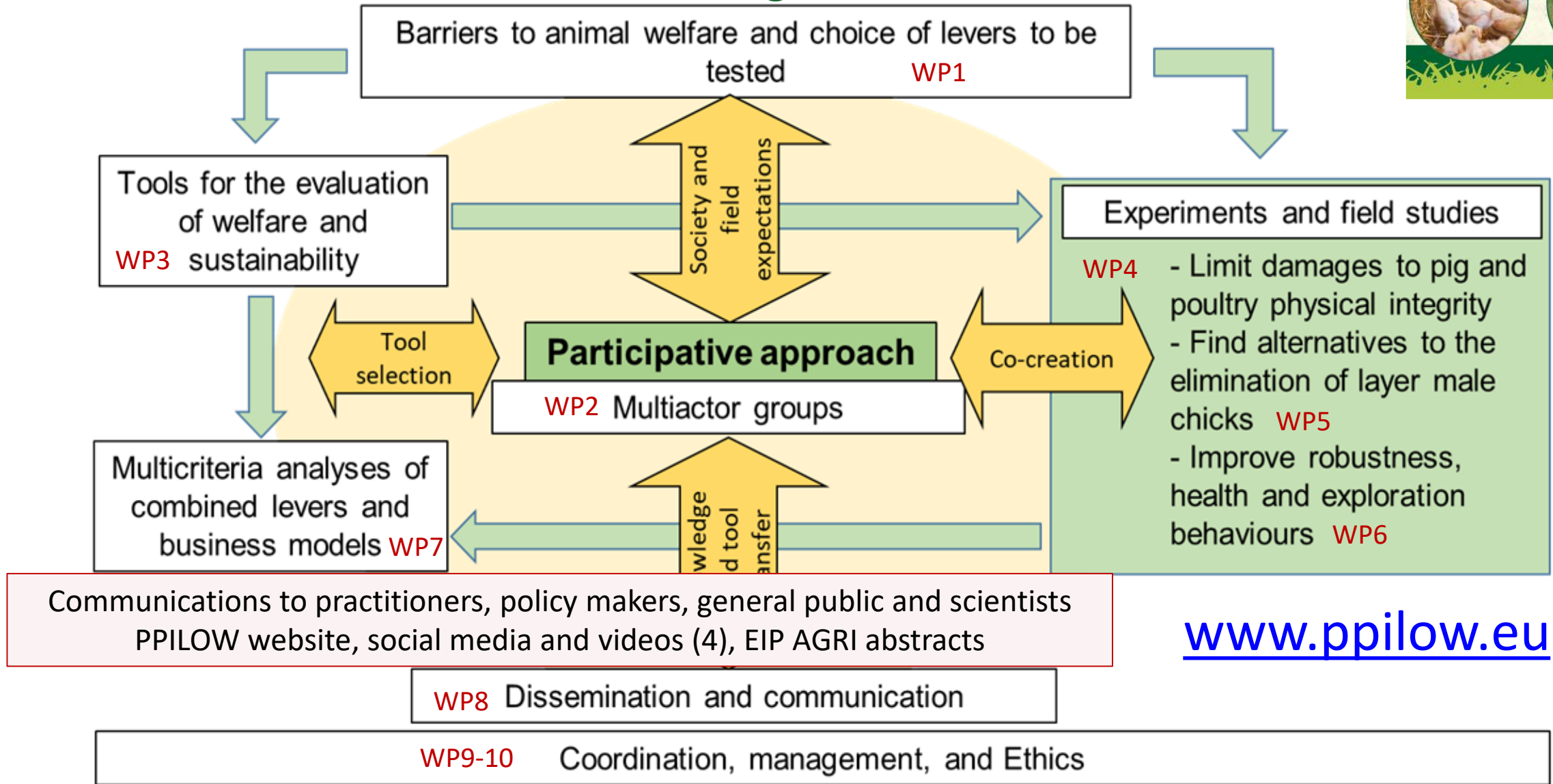
Article

Prevalence of Swine Gastrointestinal Parasites in Two Free-Range Farms from Nord-West Region of Romania

Mihai-Horia Băieș¹, Zsolt Boros¹, Călin Mircea Gherman^{1,*}, Marina Spînu², Attila Mathe³, Stefan Pataky³, Menelaos Lefkaditis⁴ and Vasile Cozma^{1,5}



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*... To be continued tomorrow in
Session 43
and at EAAP 2023*



Thanks for your attention!

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The PPILOW consortium: Collin A, Bonnefous C, Rocchi L, Meloni G, Re M, van Vooren L, Niemi J, Väre M, Lähtinen K, Tuyttens F, Graat E, Van den Hole C, Rodenburg TB, Kliphuis S, Giersberg MF, Tavares O, Desaint B, Lombard S, Steinfeldt S, Pedersen LJ, Engberg R, Almadani MI, Carelli R, Sciarretta M, Guilloteau LA, Réhault-Godbert S, Caillaud L, Bernardet N, Gautron J, Le Bihan-Duval E, Mignon-Grasteau S, Berri C, Guettier E, Baéza E, Chartrin P, Bordeau T, Raynaud E, Couroussé N, Cailleau-Audouin E, Crochet S, Collet J, Tourneur L, Guichaoua A, Van den Brand H, Molenaar R, Castellini C, Mattioli S, Reverchon M, Sourdioux M, Akakpo R, Rangel Pedersen N, Schepens R, Almind M, Grenier K, Dubuc D, Le Lann M-V, Ponzio R, Mainardi M, Accotto C, Coletta M, Guesdon V, Leruste H, Billiard B, Ferreira VHB, Hill N, Baldinger L, Pluschke H, Delanoue E, Warin L, Pertusa M, Stomp M, Travel A, Hercule J, Cadudal F, Quentin M, Germain K, Ravon L, Calandreau L, Leterrier C, Labas V, Teixeira-Gomes A.P, Uzbekova S, Maugrion E, Prunier A, Merlot E, Tallet C, Van Milgen J, Clouard C, Lebret B, Montagne L, Faure J, Zuliani A, Venezia P, Canario L, Ferchaud S, Cozma V, Spinu M, Băieș M.H, Courboulay V, Roguet C, Gaudré D, Chevillon P, Alibert L, Decruyenaere V, Wavreille J, Vanggaard P, Vanggaard JB, Micheloni C, Thobe P

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