



PPILOW

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



PPILOW, a European project dedicated to Welfare in Poultry and Pig Low-input outdoor and Organic production systems (2019-2024)

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PPILOW project: many advances with practitioners despite the sanitary issues - by Anne Collin (INRAE)

In the challenging context of avian influenza that has hit farmers and their animals of outdoor poultry production systems very hard for this dark past year, and after COVID-19 issues and uncertainties due to war at the door of the EU, let’s hope that the poultry and pig low input and organic practitioners will know a respite in the coming months. Fruitful discussions and involvement of practitioners in PPILOW activities and field studies, and PPILOW partners’ work have fortunately developed within the last three months for the benefit of poultry and pig welfare in organic and free-range systems. In this newsletter will be presented an overview of our last advances through the publication of PPILOW EIP AGRI practice abstracts, the interest of European practitioners for PPILOW innovations, and insights within the exploratory behavior of chickens reared outdoor. Enjoy reading this news and the information about our dynamic PPILOW young collaborators and the update on the coming events organized by PPILOW partners!



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Transfer of innovation from Denmark to France and Italy: improving outdoors sows housing – by *Martina Re (AIAB)*

Within the PPILOW project, the Work package 2 has the aim to facilitate the change process of the National Practitioners Groups (NPGs) involved and to help the transfer of innovations from experimental Work packages to NPGs. In particular Task 2.3 is dedicated to the scaling up of innovations for improving animal welfare of poultry and pigs at farm level. Innovations have been developed through experiments and reported to National Practitioners Groups. Farmers had the opportunity to show their interest in one or more experiments and ask for implementing the chosen innovation. So far the innovation on the farrowing huts developed by the Danish company Vangaard Staldmontage has been required by different farmers in France (2 farms) and Italy (2 farms). Pig farmers are interested in improving the management of farrowing sows outdoor: piglets management, pigs rotation, sows welfare and health are of prior interest in organic farming and low input farming. The new Danish farrowing huts are characterized by a new design structure that will address the abovementioned issues. Farmers will be asked to test the farrowing huts, monitor and report observations. This process will be carried out with a simple protocol and it will be replicable in other contexts. In the following months we will establish the pig farrowing huts and report the first results and observations. Once PPILOW experiments on levers for welfare improvement will be concluded, the WP2 will try to facilitate the transfer of these new practices and innovations through NPGs facilitators.



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First wave of PPILOW EIP Practice Abstracts – by *Léa Tourner (ACTA)*

[Deliverable D8.3 “First wave of EIP Practice abstracts”](#) has been submitted to the European Commission in February 2022. This deliverable is the compilation of best practice abstracts that highlight farm and research led innovations which demonstrate ways to improve the welfare of poultry and pigs reared in organic and low-input outdoor farming systems. The practices covered in these abstracts have been identified via the Executive Committee, through state-of-the-art reviews and first results analysis. The abstracts cover areas of interest for end-users, describing main information/recommendations/practices that can be used in their daily practice. This mid-term achievement delivers 12 best practice abstracts and are written using the standard EIP Agri format. They are hosted both [on the PPILOW project website](#) on a more appealing format, called

Factsheets and [the EIP Agri website](#). The 12 Factsheets (+ 4 bonus Factsheets that will be delivered to the EIP-Agri platform and to the European Commission on a later stage) reflect a range of combination of practical solutions for welfare improvement that can be applied on a pan-European basis. Some practices can offer cross-sectorial, or cross-country learning opportunities.

Chickens with different personalities use the range differently - by Vitor Hugo Bessa Ferreira and Vanessa Guesdon (JUNIA)



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In the third PPILOW newsletter, we mentioned our on-going experiments (a collaboration between JUNIA and INRAE) on the inter-individual behavioural differences of free-range broiler chickens and how these differences were linked to range use. Our previous results showed that, despite being raised in the same flock and under the same conditions, some chickens tended to be more exploratory (more foraging behaviour) and were more likely to make efforts to obtain their food during a standardized test (i.e., contra freeloading), while others were less exploratory and preferred to

obtain their food from more accessible and easier sources. More interestingly, these individual characteristics could be seen early in the chick's life and were positively correlated to range use (Ferreira et al., 2021), which encouraged us to carry out further experiments to improve our understanding of the relationship between individual exploratory behaviour (a possible axis of the animal personality) and range use.

In our most recent publication, on the journal *Frontiers in Veterinary Science*, we followed the behaviour of free-range broiler chickens throughout their whole lives, from an early age, before range access, until the last weeks of life, before slaughter. During this time, we observed behaviours both in home environment (barn, range), and in individual tests (measuring exploration and social motivation). Our results showed that chick foraging in the barn may be a useful predictor of range use along different rearing periods (before range access, first weeks of range access, and last weeks of range access) and seasons (spring and fall). Also, foraging was the only behaviour to show within-individual consistency from an early age and across different rearing periods. Combined, these results indicate that chickens' foraging behaviours and range use could be part of an exploratory personality axis. In short, chickens with different personalities use the range differently. If responsive to environmental influences, foraging behavior should thus be promoted to maximize the use of the range by chickens in free-range systems (Ferreira et al., 2022).

Ferreira, V. H. B., Simoni, A., Germain, K., Leterrier, C., Lansade, L., Collin, A., et al. (2021). Working for food is related to range use in free-range broiler chickens. *Sci. Rep.* 11, 6253. doi:10.1038/s41598-021-85867-2.

Ferreira, V. H. B., Simoni, A., Germain, K., Leterrier, C., Lansade, L., Collin, A., et al. (2022). Foraging Behavior Shows Individual-Consistency Over Time, and Predicts Range Use in Slow-Growing Free-Range Male Broiler Chickens. *Front. Vet. Sci.* 9, 1–12. doi:10.3389/fvets.2022.814054.

New people in the PPILOW project: Chloé Fivet, Sarah Lombard, Brieuc Desaint



Chloé Fivet (CRA-W, Junior researcher)

Chloé has a bachelor's degree in economics (UNamur), completed by a master in agricultural sciences and a master in environmental sciences and management (UCL). As a facilitator for the Walloon NPG, she will organize pig stakeholders' meetings, together with Virginie Decruyenaere, and favor the discussions around the practices considered within the project.

Sarah Lombard (ITAB, Mission head)

Sarah joined ITAB in November 2021, just after her graduation as Ingénieur Agronome, equivalent to a Master of Science Degree in agronomy. She is specialized in animal production with a particular interest in animal welfare. In ITAB, she is working on organic pigs, poultry and rabbits production. Her main topics are feeding and animal welfare. She is involved in different French projects such as Valorage (use of silage and grazing in pigs and laying hens feed), Farinelli (breeding of non-castrated male pigs and reduction of pain during castration of pigs), Devlapinbio (adaptability of rabbit organic farms in relation with the new organic rules). She is also involved in the European project PPILOW, mostly in the work package 5 in which she follows French trials in commercial farms.



Brieuc Desaint (ITAB, Mission head)

Brieuc joined ITAB in 2020 and he works on organic pigs and poultry production, with a focus on feeding and animal welfare. He is involved in PPILOW in WP2 for NPG group facilitation concerning poultry and pig welfare, and in WP5 for on-farm trial (broilers and layers hens for dual purpose breeds). His other projects are concerning fodder valorization by monogastric (Valorage), co-conception of mixed system with agroforestry (AGROMIX) and training for on-farm feed making.

Coming events

List of the upcoming events with PPILOW project partners attendance.

Event 	Date 	Location 	Partners 
World Poultry Congress 2022 Session "One Welfare in low input outdoor and organic poultry production systems"	7-11 August 2022	Paris, France	INRAE, LUKE, EV-ILVO, UU, JUNIA, UNIPG, AU, Thuenen, ITAVI, HAU, AIAB, SLOWFOOD, VSF, IDELE, CRA-W, BioForum, USAMV
EAAP Annual Meeting 2022	5-8 September 2022	Porto, Portugal	The PPILOW consortium



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