



Research and Innovation in the small scale pig meat sector - in regard to environment, climate and *social* challenges

September 12th 2022 - Pig Meat Reflection Group

European Coordination Via Campesina

Programme of the meeting and questions

Q4: Is the pigmeat sector kept actively informed of research and innovation in pig farming?

Q5: What are the benefits expected from R&I projects for the pigmeat sector?

Q6: What's the expected timeline of R&I projects before they can effectively apply to pig farming?

Q7: What's the cost of implementing R&I projects for pig farming?

2.3. 14:30-17:20 Research & Innovation projects nr 1, 2 and 3

2.3.1. Overview of the main elements of a R&I project on feed efficiency and sustainability - academic

2.3.2. Overview of the main elements of a R&I project on manure management - academic

2.3.3. Overview of the main elements of a R&I project on reducing ammonia emissions and odour -academic

2.3.4. A small farmer's perspective- ECVC

2.3.5. A retail perspective –Eurocommerce

2.3.6. A MS' perspective – IE

RESEARCH AND SMALL SCALE PIG BREEDERS

- Tiny productions (less than 200 animals) need different solutions to those of pig industry
- Small scale productions often produce their own feed and as model are not represented in studies
- approach to livestock data can be confusing as to the workings and impacts of different models
- the acceptance of the diversity in research of small models that will allow Europe to regain its balance in terms of livestock farming and consequently agriculture.



Research on outdoor pig production and environmental impacts

Q4: Is the pigmeat sector kept actively informed of research and innovation in pig farming?

Outdoor pig fattening at two Swedish organic farms—Spatial and temporal load of nutrients and **potential environmental impact**

[E Salomon, H Åkerhielm, C Lindahl...](#) - ... [ecosystems & environment](#), 2007 - Elsevier

... **pig** excretory behaviour when modifying **outdoor** systems. ... the **environmental impact** and suggest improvements for nutrient management in two **outdoor** systems for fattening **pigs**. ...

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Nutrient excretion by **outdoor pigs**: a case study of distribution, utilization and **potential for environmental impact**

[J Eriksen](#), K Kristensen - [Soil Use and Management](#), 2001 - Wiley Online Library

... nutrients within sow paddocks and the **consequences** of the distribution for the utilization in the succeeding crop and for the **potential** for environmental **impact** of **outdoor pig** production. ...

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Evaluating **environmental impacts** of contrasting **pig** farming systems with life cycle assessment

[JY Dourmad, J Ryschawy, T Trousson, M Bonneau...](#) - [Animal](#), 2014 - Elsevier

... and generally **outdoor** raising of fattening **pigs**. **Environmental impacts** were calculated at ... was to assess **potential environmental impacts** of different categories of **pig** farming systems ...

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Ammonia and odour emissions from UK **pig** farms and nitrogen leaching from **outdoor pig** production. A review

[J Webb](#), M Broomfield, S Jones, B Donovan - ... of the total [environment](#), 2014 - Elsevier

... In particular, we were asked to review recent work in order to assess whether views on means to reduce the **environmental impact** of **pig** production had changed within the last 10 years...

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Research often misses the target for us:

- Emissions and ecologic impacts need to be assessed more precisely: Animals are able to thermoregulate, move differently in different farming systems.
- Farming systems needs to be defined more adequately=> Organic certified feed, for organic pork production comes from global market with a high carbon footprint: inconsistency with environmental targets



Review: Concrete outdoor runs for organic growing-finishing pigs – a legislative, ethological and environmental perspective

C. Wimmer^{a,*,1}, H.M. Vermeer^{b,1}, C. Leeb^a, E. Salomon^a, H.M.-L. Andersen^d

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<https://doi.org/10.1016/j.animal.2021.100435>
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Research needs to be applicable:



- Clearly communicated and dropping down to the farmers and the local public authorities in short time
- more Dissemination of the research results in a practical way through local veterinary services, farming associations?
- Example 1: African Swine Fever in Italy a real problem because Inspectors in the farm are the only judge and can have different approaches

Dissemination of innovative changes in the EU-Regulation

Example: local veterinary services (for example in Italy) struggled to implement:

COMMISSION DELEGATED REGULATION (EU) 2021/1422 of 26 April 2021 amending Deleg. Reg. (EU) 2019/624 as regards certification in case of slaughter at the holding of provenance - that allows slaughter on the farm

=> means risk for the veterinarian and more work in an already tight, wrenched system of public services in many Member States.

Funding needed in these areas:

- Research in Slaughterhouse density throughout Europe
- and the mapping and connecting mobile Abattoirs systems
- Research into “natural produced meat” => Nutritional aspects, some research has already been done on free-range and organic, but is not disseminated and applied => we need a difference in carcass grading systems
- Research dissemination methods: who knows and applies what, who and when?



Research and funding is needed in these areas:

- **Research into applying European regulations:** hygiene regulation for small scale productions exist on a regional level (polyfunctional processing facilities, and multi-use processing for multiple producers) but often are not applied and its possibilities communicated
- **Socio- economic research into pig farmers welfare:** decreasing numbers of workers in the sector, with a high average age
=> motivation, working conditions, and retribution need to be looked at in order to keep jobs in the rural areas => interdisciplinary research needed
- **Research into strengthening of regional food networks**

Commission and Governments should:

- a) **include small scale farmers** who have been particularly marginalised by industrialised systems, **in the development, governance and decision-making processes** for new technologies.
- a) use participatory processes to decide to what extent new technologies might contribute to, or detract from food sovereignty
- a) **regulate corporations and other technology developers**, including research institutions, such as universities, based on this assessment
- a) allocate public funds for research and subsidies towards **a transition to technologies for small-scale food producers' organisations and grassroots-led, publicly accountable research initiatives**

EXAMPLE FOR ONGOING RESEARCH: (Semi)- Mobile Slaughter Units Confédération Paysanne (FR)

Slaughterhouse situation in Member States is similar every:

=> decline in number of slaughterhouses (France has less than 250 slaughterhouses)

=> research is done locally but is difficult to disseminate

=> Confédération Paysanne held webinar and let countries compare situation

Research needed because... (France)

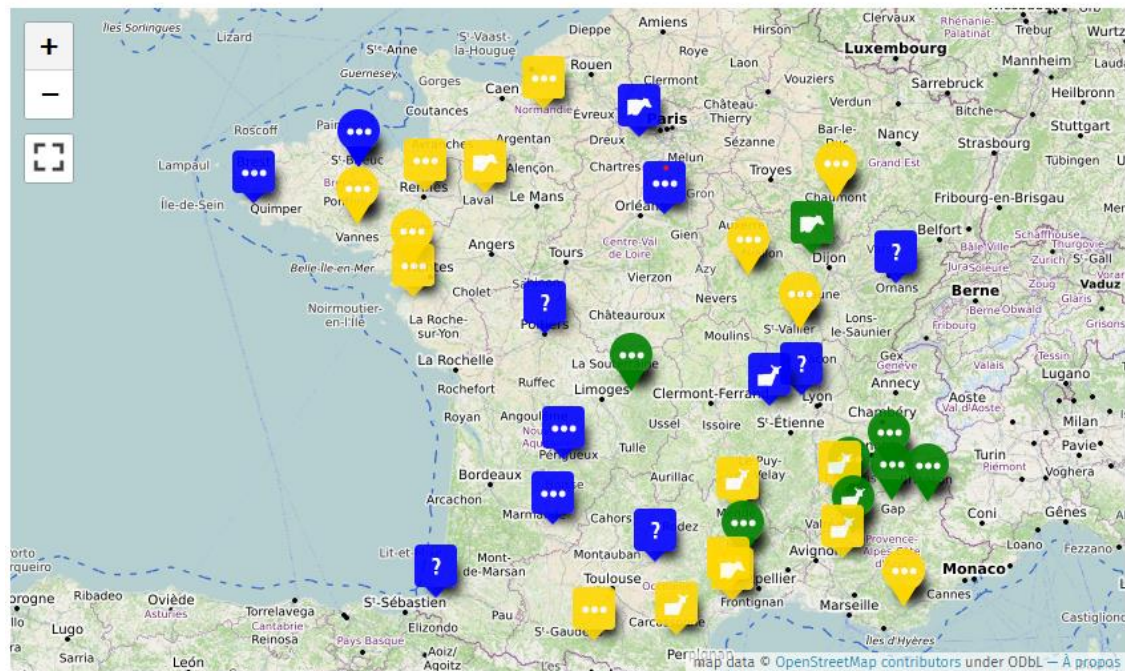
- Development of short supply chains (23% of farms in 2020 in France)
- Closures of slaughterhouses (1/3 fewer slaughterhouses in 20 years: less than 250 slaughterhouses for pigs and bovine in 2022)
- Growing concern about animal welfare in slaughterhouses.

Innovation in small scale slaughter



- Takeover of fixed slaughterhouse threatened with bankruptcy by farmers
- Establishment of a fixed slaughterhouse
- Creation of a complete mobile slaughterhouse (perfect for ASF areas!)
- Creation of mobile slaughter units ("slaughter boxes") dependent on a fixed slaughterhouse
- Creation of fixed carcassing units without a cage, which is supplied by slaughter boxes
- Creation of slaughterhouses that can move to animal assembly areas ("plots").

Map of mobile slaughter - projects from Conf. paysanne



Afficher la légende

La couleur de l'icône représente le niveau d'avancement du projet



En réflexion



En cours d'élaboration



En service

La forme de l'icône représente la forme d'abattage :



Fixe



Mobile

Le contenu de l'icône représente l'espèce ou les espèces concernées :



Petits ruminants



Multi-espèces

New European regulatory interpretation since March 2022:

Any culling device must :

- a non-divisible slaughterhouse (fixed or mobile), processing the livestock from the entrance of the live animal until the exit of the cold carcass;
- or slaughter only certain animals as defined in chapters VI and VIa of section I of annex III to regulation 853/2004 – namely only dangerous or injured animals, and are of the bovine, porcine or equine species. (not talking about smaller ruminants)

=> Immediate stop to all projects including slaughter boxes and/or plots and/or carcassing units.

The needs of small farmers...

27 September: European Commission + Member States meeting to discuss regulatory issues and possibly change the regulations.

Need for a coalition of Member States, around France for: clarification / regulatory change to allow all projects to access the status of approved slaughterhouse:

- Mobile slaughter units ("slaughter boxes") dependent on a fixed slaughterhouse, including for small ruminants and non-hazardous cattle/pigs.
- Fixed carcassing units supplied by slaughter boxes.
- Slaughterhouse that can move to animal assembly areas ("plots").

Main problems for small scale farmers



- Pig farmers average age and generational shift
- Innovative solutions for environmental adaptation are not arriving through agricultural associations
- Small scale production means: few investment possibilities ... few information for funding

Tools for small scale pig farmers - Farm data

- There are tools to share information among a farming community quickly, and new apps that enable farmers to sell their products directly.
- Digital tools can also be used in agroecological approaches by open-source information sharing of, for example, crowd-sourced soil and feeding data, and experimental stable set-ups for pig housing and animal welfare.
- These are just a few examples of advanced technologies that can support peasant agroecology while corresponding to our needs in terms of adaptability, performance, control and accessibility.

Innovation projects for ECVC- low cost

FARM HACK.



How to innovate and disseminate on small scale:

- Farm Hack is a community-led platform for agroecological knowledge exchange
- ... to improve tools, generate new ideas, increase the confidence and capacity of small-scale farmers to build their own farm tools, stable designs.
- Public policy in the EU is increasingly focused on bigger machinery, and fewer people in the fields.

Participation of ECVC Members in current research projects:

- ECVC is in the VACDIVA project aiming at vaccine research for African Swine Fever
- And the COACH project: Coventry university and the ECVC LTP

The COACH project aiming to facilitate collaboration between farmers, consumers, local governments and other actors to scale up short agri-food chains which rebalance farmers' position, create win-wins for producers and consumers and drive innovation in territorial food systems.

Thank you for your attention

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