



## OWC 2020 Paper Submission - Science Forum

### *Topic 3 - Transition towards organic and sustainable food systems*

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### **ORGANIC PIG FARMING AMONGST ALTERNATIVE PIG PRODUCTIONS IN FRANCE**

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#### **Preferred Presentation Method:**

**Full Paper Publication:** Yes

**Abstract:** A survey was made in organic and other pig farms alternative to indoor housing on fully slatted floor with the aim of describing the different housing systems and of identifying the pig health problems, the possible improvements in animal welfare and biosecurity levels. The answers from 102 questionnaires were analysed with multiple correspondence analyses followed by hierarchical clusterings. Three main types of systems were identified: farms close to conventional farms as regard to the housing premises, farms mainly under the French 'Label Rouge Fermier' and with part of their pigs raised outdoors and farms mainly organic, characterized by runners allowing outdoor access (sows, gilts, fattening pigs) and litter bedding for indoor compartments (farrowing sows and weaners) and by more frequent reproduction disorders in sows and a lack of sanitary lock. Our study confirmed a diversity in alternative housing systems but a relative homogeneity in organic systems in the study sample.

**Introduction:** French organic pig farms and other non-conventional farms are gaining ground with consumers demand. However, results of previous studies indicated that critical points may exist in these systems regarding pig welfare, health and biosecurity (Wu et al., 2012; Dippel et al., 2014). They appear diversified regarding their housing and production types (Früh et al., 2014). These studies were carried out to assess the diversity of housing systems, health or welfare of organic pigs, but few large-scale studies were conducted on the non-conventional farming systems as a whole. Thus, the objectives of our survey were to characterize the housing systems in organic pig production and in other alternative pig production in France, identify the pig health problems as well as possible improvements in terms of animal welfare and describe the biosecurity levels. Here we present some of the results of this survey and particularly the characteristics of organic farms compared to other alternative farms.

**Material and methods:** A e-questionnaire was sent to 446 farmers identified by their production organizations as non-conventional farmers. An alternative or non-conventional farm was defined as having at least one housing system different from closed building with fully slatted floor in at least in one part of the production stage. The

target population was farms with more than 10 sows or more than 100 fattening pigs and with at least 30% of the pigs housed on alternative system. After asking general information on farm (localization, installation date, etc.), the questionnaire aimed to identify for each physiological animal stages: 1) the housing facilities (indoor/outdoor, floor type), 2) the main health disorders with regard to the age of the animal (type, occurrence, percentage of affected pigs) and 3) the main welfare improvements that the farmer could expect. Some other questions focused on 4) the protection of the farm against wildlife. The Sphinx survey Software was used to send the questionnaire in an electronic version to the farmers and to collect the data. Some farmers were also contacted by telephone to take part in the e-questionnaire. The answers of farmers were converted into variables with several modalities and the data were then analysed by multiple correspondence analyses followed by hierarchical clusterings. Due to the diversity of the production types, three different analyses were conducted: 1) with the farms having farrowing buildings, 2) with farms having weaners and 3) with farms having fatteners.

**Results:** One hundred and two farmers among the 446 contacted answered to the e-questionnaire: 65 had farrowing buildings, 82 had weaners and 94 had fatteners. The different analyses pointed out several clusters of farms, from which three main types of systems were identified: cluster 1 mainly farms with less than 50% of alternative places, therefore having a large part of their housing facilities similar to the conventional facilities; cluster 2 mainly farms with quality brands, particularly the French “Label Rouge Fermier”, and with some of their pigs raised outdoors; cluster 3 mainly organic farms.

Among the 29 organic pig farms 16 had farrowing buildings, 8 had weaners and 23 had fatteners. They had more than 50% of alternative places. Half of them had an additional animal production and 83% have been in organic production for less than ten years. Cluster 3 was characterized by the farm location: either in Center France (44%) or in Western France (48%). Farms from clusters 1 and 2 were also often located in Western France (53%); however, only two organic farms (7%) were located in Brittany, while 36% of other farms in alternative production were in this main French pig production region. Most of organic farms were located in an area with a low density of pig farms.

Organic farms with farrowing stage ranged from 16 to 210 gestating places. Gilts, sows in service and pregnant sows were mainly housed in buildings with runners allowing access to the outside (respectively 43%, 44% and 44%) or were fully reared outdoor (respectively 37%, 31% and 50%). Lactating sows and their piglets were housed outdoor (50%) or indoor on litter (25%). The interval between batches ranged from four to six weeks. The main health disorders reported by the organic farmers were reproduction disorders for gilts and sows in service (infertility, mastitis-metritis-agalactia). In clusters 1 and 2, gilts and sows were housed indoor on litter or slatted floor. Farmers from cluster 1 mentioned leg disorders as main health problem for gilts. Organic weaners and fatteners were housed either on litter (respectively 72% and 22%) or in buildings with runners allowing access to the outside (respectively 28% and 78%). Fattening places ranged from 100 to 1200. In other alternative farms, weaners were mainly housed on slatted floor and growers on slatted floor (cluster 1) or outdoor (cluster 2). Farmers from these non-organic farms mentioned leg disorders, diarrhea in weaners and biting damages as main health problems.

Suggestions on possible animal welfare improvement, made by 17 farmers, were the enhancements of the housing conditions: better outdoor access, better adaptation to temperature variations. Farmers from cluster 2 mentioned the need for outdoor access and farmers from cluster 3 cited free farrowing and, for piglets, pain alleviation during castration,

suppression of tail docking and reduction of mortality. Organic farms were characterized by neither sanitary lock nor quarantine facilities.

**Discussion:** Our survey and analyses confirmed the diversity of housing systems among alternative systems in France in which organic farms forms a separate and relatively homogeneous cluster, maybe related to the organic standards that organic farmers have to comply with. Few welfare improvements or specific health problems were reported from the organic farmers, but some failure in biosecurity appeared in this cluster.

The results from this preliminary study need to be considered carefully, because data were collected on a voluntary basis, and only a part of the contacted farmers took part. Farmers may also have under- or overestimated the health, welfare or biosecurity levels of their herd. On-farm visits with standardized and quantified descriptors would overcome this possible misclassification. Thus, the next part of our research project consists in an on farm-study which should provide objective data to identify the best facilities and practices related to significant improvements.

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**Disclosure of Interest:** None Declared

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