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DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate E – Markets
**The Director (acting)**

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MINUTES
JOINT MEETING OF
The CDG ANIMAL PRODUCTS – Pigmeat Sector
And
The EXPERT GROUP FOR AGRICULTURAL MARKETS, in particular concerning aspects falling under the CMO Regulation – subgroup Animal Products
**4 July 2022**

**European Pigmeat Reflection Group – 3rd plenary meeting**

Chair: AGRI.E3 Animal Products

Delegations present:
- All Member States, except CY, IT, RO, SI, SK;
- All Organisations registered, except for AnimalHealthEurope, Beelife, BEUC, EFFAT, EFNCP, EMB, EPHA, ERPA and Birdlife Europe.

## 1. Approval of the agenda

## 2. Nature of the meeting

The meeting was non-public.

## 3. List of points discussed

### 3.1 Opening by the chair

After the kick-off meeting of 10 March (with an unavoidable focus on our dependency on imported inputs (energy, fertilizers and feed) under the spotlight by Russia's invasion of Ukraine) and two plenary meetings on 6 April and 25 May that reviewed the sector's socio-economic dynamics, the objective of this 3rd plenary meeting **of the European Pigmeat Reflection Group** was to open the challenging chapter **on environment and climate** in order to explore the following aspects:
1. Farming methods;
2. Carbon farming and carbon credits;
3. Emission and manure management;

The reflection was guided by **7 questions:**
→ Q1: To which extent can differentiated farming methods add value to the pigmeat sector?
→ Q2: To which extent can differentiated farming methods address environment and climate challenges?
→ Q3: Should certain farming methods be prohibited?
→ Q4: Is carbon farming taken into account in pig farming?
→ Q5: To which extent can carbon credits play a role in the pigmeat sector?
→ Q6: To which extent can pig farming mitigate emissions?

→ Q7: To which extent can manure management add value in the pigmeat sector?

### 3.2.1 Session 1 Farming methods

### 3. 2.1.1. An overview of pigmeat farming methods – academic from Hungarian University of Agriculture and Life Sciences

An academic expert from the Gödöllő University of Agriculture and Life Sciences presented an overview of pig farming methods and their environmental impact, focusing on the Hungarian pig meat sector. In Hungary, modern pig farming operates through different structures/models, ranging from specialized farms in one production phase to combined units covering several phases. Specialized farms can focus on breeding (parents' stock), piglet production or fattening.

Typical housing techniques in Hungary:
- Outdoor, indoor, indoor with outdoor access
- Indoor housing techniques characterized by manure removal
- litter-based housing
    - daily manure removal
    - deep litter
- slurry-based housing
    - fully slatted floor,
    - partly slatted floor,
    - concrete floor with manure channel

Building elements defer according to the phase of production (ventilation, heating, feed distribution, manure treatment and management, drinking equipment, etc.). Automatization is progressing mainly for animal feeding, drinking and cleaning. A sophisticated environmental approach has been developed for manure management which should minimize the contamination of surface and groundwater, soil and air.

Surveys and statistical analysis show that advanced ammonia emission reduction techniques for pig housing, external manure storage cover, manure processing and field application are not yet widespread. Compliance with specific environmental measures has been implemented differently (e.g., the Nitrates Directive has a high compliance level). It is essential to provide more information about these results influencing the environment, the applicability of each intervention, and their benefits in education and training, instead of prohibition of certain farming methods. It is also important to be attentive to the mechanisms that control the loss of manure N and the practices that can be performed at each level of manure management to minimize losses. The research and the literature analysis showed that in Hungary, Central Eastern Europe, and even some Western European countries, further developments are needed in proper manure management related to livestock farming.

Currently, while maintaining the weight and output volume of the livestock sector, the solution to reduce the environmental impact of animal production is to use science-based, practice-oriented emission abatement techniques/technologies that shift production processes towards sustainability. Each emission reduction measure introduced has some significance in terms of its contribution to local, national, and global reduction.

In order to reach farmers with this knowledge transfer and decision support tool, it is important to have the support of decision makers to ensure an accelerated availability of efficient and profitable emission reduction technologies to meet global targets.

Overall, in Hungary, the use of farm-level environmental/sustainability tools is spreading under official pressure, with very little voluntary interest. Consequently, it can be stated that there is still much to do to improve the awareness of farmers in the field of sustainable agriculture.

In the chat, EEB remarked that some technologies are efficient to reduce emissions but don't take animal welfare into account. Farmers must be aware of both aspects. The IED and BREF conclusions do not take account of animal welfare, which is a major challenge in pig production. Technological solutions should not be financed by public money but should achieve a price that reflects increased costs.

### 3.2.1.2. A conventional farmer's experience – COPA

The president of the COPA-COGECA Pigmeat Working Party presented the pros and cons of pig production methods from 4 angles: precision farming, traditional farming, organic farming and lab-grown alternatives to pork.

Precision farming (whether in one site with the advantage of avoiding animal movement, or in several sites avoiding sanitary problems between piglets and fattening pigs) allows for reducing the feed intake (with the correlated decrease in water and cereals use), reducing emissions (via temperature/humidity control), installing biogas production (green energy), lowering production costs and increasing biosecurity. On the down side, precision farming tends to concentrate in large farms and has difficulties to enforce certain animal welfare standards such as tail docking.

Traditional farming covers small scale open air autochthonous breeds, autochthonous breeds crossing with Duroc, open air pig fattening, Iberian pigs or open air autochthonous breeds with final fattening with acorn (cork tree plant). Traditional farming produces the best meat quality and provides for better animal welfare. On the down side, it requires more feed, increases production costs and difficulties in implementing biosecurity. It takes 4.5-5kg feed for a kg meat in traditional farming vs 2.2-2.4kg with precision farming.

Organic farming enjoys a very good marketing but has the same drawbacks as traditional farming.

Lab-grown alternatives to pork have a number of disadvantages: it's not meat but an ultra-processed product whose impact on human health is not yet known. The technology needed for such a production leads to concentration in only a few companies capable of implementing it. It would lead to countryside abandonment and has limitations in terms of sustainability.

As a conclusion, the future probably belongs to precision and traditional farming. Organic farming is faced with challenges linked to its costs. Utmost caution is needed when considering lab-grown alternatives to pork.

In the chat, EEB remarked that environmental arguments should not be used to justify unacceptable production methods from an animal welfare point of view. Pigs have physiological and cognitive needs. Optimising feed conversion has limits as well as the number of piglets a sow can have; weaning must be delayed; biosecurity must be rehumanised. ECVC indicated that there are growth prospects for organic pig production, provided that consumer perception changes as well as their readiness to pay a sustainable price for potentially lower quantities. EU legislation could help the transition. Some studies show that small farms are less at risk of ASF.

COPA mentioned that, given the diversity of pig rearing across the EU, there should be an EU approach to labelling them.

### 3.2.1.3. An experience from a farmer using alternative farming methods – ECVC

A representative of ECVC presented the concept of territorialized food system and reterritorialization of farming. Livestock farming is culturally related to aspects such as human-animal relations, meat processing and preservation techniques (butchery art and cured meat producers), increasing animal biodiversity, using unprofitable marginal areas, preserving

landscapes (the presence of animals as a symbol of the territory), preventing food shortages. Millions of poor farmers and workers survive thanks to livestock.

ECVC presented a research paper on *Semi-extensive agrosilvopastoral system as low-carbon livestock strategy: a case study on beef meat in Tuscany* written by a group of scientists and presented during the 5th European Agroforestry Conference in May 2021. The study was conducted at the "Tenuta di Paganico" organic farm, Paganico, Italy. The authors found out that the largest contributor to global warming potential (GWP) was enteric fermentation followed by manure management, and crop cultivation. The woodland ecosystem positively acted mitigating 66% of the GHGs emitted by a semi-extensive meat production system.

Referring to the EU target for organic production (at least 25% of the EU's agricultural land under organic farming), ECVC recalled another research report published in 2009 on *Carbon footprints of conventional and organic pork: assessments of typical production systems in the Netherlands, Denmark, England and Germany*. The graph presented by ECVC showed that organic pig production was less sustainable than conventional production in terms of carbon footprint.

ASF is a challenge for the sector and has direct negative repercussions on extensive farming system. Preliminary results of a study on *The on-farm slaughter procedure leads to increased animal welfare in pigs (2022)* seems to indicate that the on-farm slaughtering procedure can limit the animals' stress without worse meat safety or quality.

ECVC called for cages to be prohibited, for pigmeat prices to increase and for waste reduction at farm level, and drew attention to the importance of the following considerations:

- realize correct feeding plans that include grass and forest,
- promote agroecological and agroforesty in farming systems,
- consider a pasture-based diet both for macro/micro nutrients and digestibility (piglet, sucker, weaned, …)
- professionals availability to train pasture-based livestock keepers and butchers
- effective animal welfare evaluation method to promote & drive organic outdoor systems pig farms
- coexistence farmed/wild animals
- soil regeneration
- water management

### 3.2.1.4. A retail perspective - Eurocommerce

Retailers continue to observe strong consumer demand for healthier and more sustainable products, including for products linked to specific farming methods (organic farming, production with high animal welfare standards) or to short local supply chains.

For meat, considerations linked to animal welfare, such as no abuse of antibiotics or good living conditions for animals, are important to consumers, especially for those who have chosen to reduce meat consumption and adopt flexitarian diets.

However, surveys show that while demand by high-income consumers for healthier or more sustainable products continues to grow (+15% in 2022 compared to 2021 according to a EuroCommerce/McKinsey research), those percentages are decreasing for low-income consumers, for whom price is the most important consideration, especially during the current inflationary crisis.

Retailers in Europe are committed to the green transition, taking action by cooperating with farmers and other supply chain actors, promoting sustainable and heathier products and supporting sustainable practices.

Sustainability agreements are likely to become more common when further legal clarity is being brought about by the new Common Market Organisation Regulation and accompanying guidelines on sustainability agreements expected in 2023.

Retailers are already active in a number of sustainability agreements, supporting farmers (through extra remuneration, guaranteed orders, marketing campaigns) transition towards organic production or implement higher animal welfare standards (linked to the origin of the meat, living space for animals, use of antibiotics).

### 3.2.2 Session 2 Carbon farming and carbon credits

#### 3.2.2.1. A policy overview –DG AGRI B2

DG AGRI B2 presented the EU carbon farming initiative, based on carbon removals and sustainable carbon cycles.. Carbon farming practices provide increased carbon removals, additional income for land managers, more biodiversity and increased climate resilience of farm and forest land. Examples of effective carbon farming practices include:

- Afforestation and reforestation according to ecological principles
- Use of conservation tillage, catch crops, cover crops and increasing landscape features
- Restoration, rewetting and conservation of peatlands and wetlands
- Targeted conversion of cropland to fallow, or of set-aside areas to permanent grassland
- Agroforestry and other forms of mixed farming
- Blue carbon: coastal wetlands, regenerative aquaculture, marine permaculture

Barriers to carbon farming initiatives arise in the following areas:

- Financial burden (cost of management practices, uncertainty about revenues)
- Uncertainty or lack of public trust in the reliability of voluntary carbon markets
- Concerns around environmental integrity, additionality or permanence
- Unavailability, complexity or high costs of monitoring, reporting and verification systems
- Insufficiently tailored training and advisory services

Carbon farming initiatives can be financed via the CAP and other public funding instrument such as State aid (aid for agri-environmental-climate commitments, investments, advisory services, R&D, cooperation, result-based carbon farming schemes, incentive payments for forest ecosystem services). The CAP 2023-2027 provides for the following opportunities:

- Good Agricultural and Environmental Conditions obligations (Basic conditionality for Direct Payments):
    - preserving carbon stock (GAEC 1 - Maintenance of permanent grassland)
    - protection of carbon-rich soils (GAEC 2 - Protection of wetland and peatland)
    - maintenance of soil organic matter (GAEC 3 - Ban on burning arable stubble)
    - others
- Support to carbon farming practices through eco-schemes or rural development measures (e.g. list of potential agricultural practices that eco-scheme could support)
    - larger flexibility in designing their support schemes
- EIP-AGRI and new Agricultural Knowledge Information System, supports cooperation and testing of new approaches
- Advisory services, knowledge exchange, training, collective and cooperation approaches and innovation actions,
- Limitations: land eligible to CAP, timeframe, administrative burdens for a robust MRV for carbon credits.

There are also examples of co-financed projects on carbon farming under LIFE programme and European Regional Development Fund (LIFE Carbon Farming Scheme, ITERREG Carbon Farming project.

In 2022 the Commission will come forward with a legislative proposal to develop a regulatory framework for certifying carbon removals based on robust and transparent carbon accounting to monitor and verify their authenticity.

In the chat, COPA mentioned that pigs are raised on large farms in LT and some other MS. Theoretically, it should be easier to install biogas plants and emission reduction devices on large farms, but the EU does not allow subsidies for large farms, while small farms don't have enough manure to make profitable biogas production and don't have good prospects from an economic as well as a biosecurity point of view.

EEB reacted by saying that large farms should not be supported. They should pay for their emissions and the number of pigs should be reduced.

**3.2.2.2. A young farmer's perspective - CEJA**

A representative of CEJA presented a young farmer's perspective on carbon farming and carbon credits. Climate change consequences are huge for farmers' income and food production. Carbon farming can be part of the solution both from a climate and farmers' income diversification perspectives. Agriculture is an important contributor to climate mitigation thanks to the potential of soils to sequester carbon and various practices allowing to lock-in greenhouse gases that would otherwise be released into the atmosphere:

- Nature-based solutions – such as reforestation and forest management, afforestation, agroforestry, permanent grassland, temporary pastures or particular techniques for soil carbon sequestration – provide many ecosystem co-benefits;
- No tillage, cover cropping, crop rotation, intercropping.

In pigmeat production, carbon farming is related to the choices made in terms of grazing and foraging. CEJA believes that the achievement of EU GHG emission reduction targets set in the EU Climate Law and the Fit for 55 Package goes also through carbon farming but with support for farmers.

CEJA presented a list of challenges linked to carbon farming and carbon credits:

- No uniform capacity: there is no uniform capacity or uniform way to be a carbon farmer. A lot of factors have to be considered. Farms are diverse; soils and pedo-climatic contexts differ from one country to another, but also at a much more local level. Such a diversity leads to a differentiated potential in terms of sequestration, with not all fields starting from the same point. Farmers, especially young farmers, have limited capacity due to financial opportunities:
  - difficulty to access investment: certain carbon farming practices come at a high cost in time, equipment and expertise, but also land when it is requested to give more space to animals, grazing
  - knowledge and skills: required for farmers to assess the specific levers that they can activate in order to improve their carbon performance.
- Reversibility of carbon farming – carbon sequestration in the soil is a reversible and limited phenomenon
- Scalability issues, land availability and land use change – the establishment of a new market based on carbon credits can lead to additional competition in land, driving capitalisation and prices up, and making it even more difficult for young farmers to access their primary resource.
- Trade-offs and synergies – carbon sequestration in the soil involves more relationships than simply decreasing atmospheric $CO^2$. It can improve soil quality and biodiversity or water filtration. It also involves trade-offs depending on the practices used. Soil sequestration is one of the five functions of soil. Therefore, it is necessary to consider all the surrounding effects that arise from this practice.
- Generational renewal and on-farm constraints – many practices for carbon sequestration deliver results in the long-term. Young farmers are left with acting towards sustainability

while managing short-term constraints on a productive, technical, and regulatory front, but also from an economic and social point of view. The difficulty for young farmers to secure land ownership or long-term leases does not create adequate conditions to implement long-term, time-consuming practices for carbon sequestration.

The representative of CEJA presented also recommendations and concerns on carbon credits and certification:

- **Reward farmers' efforts:** young farmers believe in the potential of carbon removal certifications as an instrument to boost the green economy and provide additional income streams for farmers. It will depend on the functioning and the level of additional income, related to costs and efforts.
- **Comprehensive framework, no complex and reliable accounting system: f**or carbon removal certifications to be translated into an effective and efficient instrument, it is first and foremost necessary to create a simplified and reliable accounting system. Knowledge gaps surrounding soils at EU level make it difficult to implement a certification system, for which it would be essential to know the starting storage capacity. There is a need for strong and reliable indicators, allowing to measure accurately the results of farmers' efforts. The use of digital tools to do so would be helpful, yet their uptake still remains too low.
- **If labels on carbon sequestration**: reflection on the readability and coherence granted to these labels.
- **Sharing risk management –** carbon sequestration in the soil is not a permanent phenomenon and must therefore be accompanied with solid risk management strategies. In this perspective, both public and private risk management instruments remain an ally which should be further promoted at policy level. The certification system would allow for private companies to balance their own emissions by remunerating farmers for their ecosystem services. Those operators must also contribute to the risk management efforts. It should also be carefully regulated to avoid that farmers end up compensating for the inaction of other sectors.

Finally, CEJA encouraged to read their last position paper entitled "Solid grounds for agriculture a young farmer perspective on soils".

### 3.2.2.3. A Member State's view – Ministère de l'Agriculture et de la Souveraineté alimentaire, France

A representative of the FR Ministry for Agriculture presented France's approach to supporting climate-friendly agricultural production and a "low carbon label" as an example of a carbon credit scheme for agriculture.

The FR low carbon strategy is an ecological and inclusive transition towards carbon neutrality. In France, agriculture accounted for 19% GHG emissions in 2018 (-8% from 1990), compared to 31% for transport. At the same time, agriculture and forestry provided carbon sinks, offsetting 1/3 of its emissions. GHG emissions from agriculture come primarily from methane emissions (45%), followed by N2O (42%) and CO2 (13%) emissions.

The FR low carbon strategy (to reach carbon neutrality by 2050) sets a specific target for agriculture: -18% GHG emissions by 2030 (compared to 2015). The development of technologies and practices (agro-ecology, precision farming, organic farming, etc.) will be supported, the bio-economy will be stimulated and consumer habits will be driven to reducing waste and adopting healthier and more sustainable diets.

A methodology is in preparation under the FR "low carbon label" to support pig farming decarbonisation. The aim is to reduce GHG emissions from the pig sector via feed efficiency, manure management and energy efficiency, as well as increasing carbon sequestration via cover crops, agroforestry, legume crops, etc. Financing would come from the CAP and the Recovery Plan but also from national resources for methanisation.

So far, one agricultural project is labelled for livestock-crop farming. It involves 300 farms for an equivalent of 140 000 t CO2. It combines GHG emission reduction (from inputs, fuel/electricity, fertilisation, herd management, feed efficiency and manure management) and carbon sequestration (through cover crops, avoiding bare soil, agroforestry and grassland management). Monitoring is built in the project, including of social and environmental co-benefits: soil fertility and food performance, water quality and consumption, reduced deforestation, renewable energy, air quality, biodiversity and landscape.

In the chat, LV mentioned that livestock GHG emissions must be reduced through "polluter pay" taxes and not with carbon farming subsidies. Carbon credits should be given only for carbon stored safely for a long time.

### 3.2.2.4. CLITRAVI short presentation on carbon farming by the Danish Food and Agriculture Council

On behalf of Clitravi, a representative of the Danish Food and Agriculture Council shared insights on concrete measures taken by companies, and used these examples to reflect on perspectives for the emerging legislative carbon farming policy framework.

On the former, he recalled pledges by a number of companies to be climate neutral by 2050, and that significant investments had been undertaken to reduce emissions at plants – including by optimizing the production chain by means of life cycle analysis (LCA) measures. There was a need to further pursue and expand such efforts – the process needed to be data driven, which also required comparisons to be made within product categories and the use of particular rather than standard data to access production processes.

On the latter, he noted the current debate on the definition of carbon farming – whether it should take a narrow sequestration pathway, or whether carbon farming in the EU should include on farm and on plant mitigation measures, the latter being the preferred option to generate a new source of revenue for more expensive mitigation measures taking a range of forms form manure evacuation and feed additives on the farm to technological solutions at the plant. In this context, Representative of Clitravi called for the full implementation of the EU Climate Law, which sees carbon farming respecting food security and establishing 'new business models'. He made the point that in a market economy, new business models should be market driven – not dependent on subsidies. Whilst CAP funds under the existing framework could be mobilized for pilot carbon farming projects, in the future carbon farming in the EU should be marked driven. In a regulatory system, the value of carbon farming emission credits would be very significant for the entire sector - processors and primary producers alike.

### 3.2.3 Session 3 Emissions and manure management

### 3.2.3.1. An overview of the potential of the sector – academic from the Wageningen Livestock Research

A researcher from the Wageningen Livestock Research gave an academic view on emission reduction in pig meat production.
Manure is valuable in many ways:

- Essential resource for food supply
- Nutrition for plants and healthy soils (organic matter, N, P, K, Ca, Mg, S, Na, micro nutrient and trace elements)
- Source of energy

In the NL, surplus manure that cannot be used on the farm must be processed or exported. To prevent emissions in the barn, several technical solutions are available: end of pipe solution (air scrubber: 70-95% reduction of NH3) and reduction of emission at the source (reduction of 30-70% pf NH3) by: quick manure removal from barn by scrapers piping systems, flushing, manure belt), dilution of manure (low ammonia liquid), decrease of emitting surface (manure pit design),

separating urine and faeces (perforated manure belt, scrapers with urine drain), preservation by cooling, acidifying, air tight storage.

There are several reasons for manure processing:
- extract water to decrease transport costs
- make manure products better suited for crop and soil with less losses (increase circular use of manure, RENURE)
- reduce amounts of manure that have to be transported from farm
- produce green energy

The researcher also presented a number of processing techniques:
- slurry separation
- production of mineral NK-concentrate by reverse osmosis (liquid fractions of pig slurry, veal slurry)
- stripping scrubbing
- nitrification/denitrification (veal slurry)
- composting (solid manure and solid fractions), for example in rotating drums or in buildings
- drying and pelletizing (poultry manure)
- incineration (poultry manure)
- fermenting (biogas production)

In conclusion, the scientist stated that in order to reduce ammonia and methane emissions it is necessary to quickly remove or separate urine and faeces from the barn. Manure processing is important for methane reduction, but long-term storage should be avoided.

### 3.2.3.2. A policy overview – DG ENVI C4

The Commission adopted a proposal[1] for a revision of the industrial emissions directive and a related Regulation on the pollutant transfer register (E-PRTR) on 5 April. The livestock sector needs to tackle its emissions of methane and ammonia that have not reduced significantly since the early 2000s, while emissions from industry covered by the IED has decreased its key pollutants by 45 to 75% over a decade.

The inclusion in the IED of cattle farms for the first time and the inclusion of additional pigs and poultry farms target the 13% largest livestock farms overall (currently + newly covered farms). These farms are responsible for 60% of the ammonia and 43% of methane pollution from EU livestock.

Farmers will have to implement emission reduction techniques by mid-2029, leaving time for the sector to prepare. Under the current CAP that runs until 2027, Member States may include support measures for reducing emissions of methane and ammonia, both support to operational costs and investments. Whether further support measures would be needed for the subsequent years may be considered as part of the design of the CAP for the next financial period.

In order to limit administrative burden for both farmers and the EU's Member State permitting authorities, a lighter "tailored" permitting regime will be put into place for livestock farms under the new IED. The proposal also allows Member States to implement a registration system that is compatible with the minimum requirements of the tailored permitting system.

This will enable farmers to be informed about and deploy optimal pollution control and pollution reduction and decarbonisation solutions, using the latest techniques, whilst keeping the burden relatively light.

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[1] https://environment.ec.europa.eu/publications/proposal-revision-industrial-emissions-directive_en

Estimated methane emission reductions from cattle are based on a nutrition technique that reduces enteric emissions by 10%. This is a minimal estimation. DG SANTE approved in April 2022 the use of a feed additive that reduces enteric methane by 25; furthermore, scientific publications report higher emission reduction potentials (c. 36-50%). For pigs, methane reduction is estimated at just over 35%. Detailed assessment of specific feeding techniques for both types of animals will validate such potential savings. Ammonia emission reductions have been estimated at 12% for cattle, around 7% for pigs, and approximately 20% for poultry.

Even these minimal estimations result in a highly positive benefit to costs ratio for society of over 11, resulting in total human health benefits of around €5.5 billion per year. It means that the costs for operators and permitting authorities to implement the obligations are 11 times lower than the human health benefits. In reality, the ratio is even higher, as the generally accepted available monetisation methodologies are based solely on human health economics and as such do not fully enable the calculation of the ecological benefits of a cleaner environment and safeguarded biodiversity.

### 3.2.3.3. A farmer's perspective- COPA - Vall Companys Group

A representative of Vall Companys Group presented their approach to reduce emissions from pig production. In a proactive way, Vall Companys Group defined a sustainability strategy towards 2030 (Penta Programme[2]).
In November 2021, the main environmental objectives were validated by the Science-Based Target Initiative:, a C02 emission reduction of -42% of scope 1 and 2, and -31% of scope 3, and with regard to N and P emissions, new developments in animal nutrition allow to reduce excretion in manure / air. The most important Best Available Techniques are:

- ✓ Multi-phase feeding - Precision Feeding
- ✓ Reduction of % crude protein of the diets:
  - Digestible amino acids in feed formulation
  - Commercial availability of new synthetic amino acids
  - Enzymes to increase protein digestibility
- ✓ Reduction of % Phosphorus levels of the diet:
  - Digestible Phosphorus in feed formulation
  - Use of new phytases with a major phytic-P release.
- ✓ Reduction of the amount of feed consumed per animal (better FCR) due to improvements in genetics, housing, management and health
- ✓ Optimization of diets with environmental criteria

The application of these techniques result in excretions of less than 3,5 kg of N per place and year (50% of the legislation reference values) and less than 1,5 kg $P_2O_5^-$ per place and year (30% of the legislation reference values).

In order to minimize the Carbon Footprint (CO2) of producing 1 kg of meat, we should evaluate the origin and type of raw materials as well as the Biogenic Emissions. The most important factor is the Land Use Change value for some raw materials, therefore, sourcing from non-deforested areas is a key factor to reduce the footprint of the meat production chain.

As a conclusion, there are tools to continue the reduction of emissions in a sustainable and economical way. Future developments in efficiency result in improvements of the environmental footprint. Communication is a key factor. The challenge is to find a balance between reductions in the environmental impact with a sustainable increased cost of production and economic viability of the industry.

### 3.2.3.4. A trader's perspective – UECBV

[2] https://www.vallcompanys.es/sostenibilidad/en/penta.html

A UECBV representative shared information on the organisation's efforts for responsible actions improving sustainability.

Being one of first signatories of the "Code of Conduct" in July 2021, UECBV is preparing a report on actions carried out and preparing 2 workshops before the end of 2022, in particular on climate.

After more than 4 years' cooperation with Australia and New Zealand, UECBV published a harmonized methodology: the Red Meat Footprint Category Rules (FCRs), covering beef, lamb and pork in 9/2019. This peer-reviewed methodology is the first of its kind for the red meat sector, with no other existing Life Cycle Assessment (LCA) for the value chain. The main goal of the methodology is to calculate the full environmental footprint of EU red meat in a stable, robust and science-based way. The Red Meat FCRs aim to improve the environmental performance of the sector at each stage. See link.

Wageningen University will soon publish its PEF sensitivity analysis "Evaluation of allocation methods in beef and pork production at slaughterhouse level" giving facts and figures on what allocation system can be relevant.

To increase the valued part of the carcass of a pig, it is necessary to be able to find markets for all parts, which requires export as a necessity for the reduction of waste and more sustainability.

An example of innovation and research is given: the Water2Return project. UECBV is participating in that circular economy approach to turn wastewater treatment facilities in slaughterhouses into bio-refineries. The 3-years project will be finalized in 2022 showing pilot plants with an integrated system to treat wastewater while recovering nutrients, a novel combination of technologies and processes in cascade maximising the extraction of valuable products.

UECBV asks the Commission to be supportive of those efforts and ease the transition as well as find a more balanced argumentation in public when it comes to the role of livestock and meat.

### 3.3 Conclusions by the chair

The chair expressed appreciation for the input that all participants, speakers in particular, prepared and shared during the meeting. The wealth of information that is exchanged allows everybody to learn something new, to get inspired by others' experiences and get to know in greater details developments that may happen in part of the EU but would otherwise stay unknown for the rest. She expressed hope that reflection continues over the summer break, as the year-long initiative has already reached mid-term and needs to gradually unfold into an inspiring report for the sustainability of the pigmeat sector.

## 4. Stakeholder organisations' and Member States' written contributions

**Four Member States** sent a written contribution (**PL, CY, MT, NL**).

For **PL**, a combination of differentiated scale of production methods can be very beneficial to the sector, the economy and the consumer. Smaller farms can add value to production through organic or conservation breeding. Large farms using modern production technologies designed for mass production add value to the sector through a sufficiently large scale production, sales to large processors and access to most consumers. The production of pigmeat other than conventional, i.e., for example, organic, in quality systems, on the basis of conservation breeds, on the basis of own feed, with non-GMO feed, with the keeping of animals in a higher welfare, allows for the marketing of a product with a distinctive feature, which increases the value of production and makes it possible to strengthen the role of producers in the production chain.

PL is of the opinion that in order to achieve the climate and environmental goals of the Green Deal, while increasing producers' incomes and strengthening EU competitiveness, a sustainable food system will be essential. All actors in the food chain have a role to play in achieving food chain sustainability. Farmers should change their production methods, make the widest possible

use of environmentally based, technological solutions to achieve better climate and environmental performance, increase resilience to climate change and reduce and optimise the use of inputs (e.g. pesticides, fertilisers). According to experts, relatively small-scale production is more beneficial for the environment and climate than large-scale production. A larger number of animals per farm results in the production of more manure. The reduction in land area per animal increases the amount of nutrients entering the soil, posing risk to water quality. This problem is exacerbated by the greater regional concentration of production. More intense production together with poorly functioning manure management also leads to increased air pollution, including emissions of odours and ammonia. Smaller farms are able to produce pigs in an efficient, diversified and less environmentally damaging way using their own feed, organic fertilisers, with limited use of antibiotics, using renewable energy sources (photovoltaics, heat pumps, biogas plants). On the other hand, also technological changes (e.g. regarding pigsties, manure storage and disposal systems and alternative energy sources) and management methods (e.g. changes in feed composition and fertiliser spreading patterns) help to reduce the problems associated with swine farming. Technological changes, such as feed composition, can be beneficial to all farmers, reducing both production costs and environmental pollution risks. Large swine farms can significantly reduce their adverse impact on the surrounding area. The concentration of protein in pig feed and its digestibility are a key factor influencing odour levels. Increasing production efficiency and reducing the amount of protein in the feed allow for a significant reduction in ammonia emissions.

PL believes that pig production in accordance with the legislation in force should not be prohibited.

PL informed about willingness to implement the eco-scheme *Carbon agriculture* under the CAP Strategic Plan. The aid is to support farmers who apply certain cultivation practices on their farms that favour the increase in the content of organic matter in soils, and thus the retention of carbon compounds, and thus - improve the balance of greenhouse gas emissions. The proposed practices include: extensive use of permanent grassland with livestock, winter catch crops /undersown crops, development and compliance with the fertilization plan - the basic variant and the liming variant, varied crop structure, mixing manure on arable land within 12 hours of application, application of liquid natural fertilizers by methods other than splash and simplified cultivation systems. Guidelines for certification of carbon farming are to be published by the end of this year, which will start a detailed discussion on the subject.

PL is of the opinion that pig farming can mitigate gas emissions through the use of modern production technologies, cleanliness of pigsties, broadly defined breeding conditions, on-farm production of feed and the use of renewable energy sources. Through proper manure and slurry management, the use of mineral fertilisers, which are produced using fossil fuels with significant gas emissions and environmental damage, can be reduced.

For PL, the use of manure reduces the cost of mineral fertilizers and protects the environment. Studies have shown that optimising the management and efficient use of livestock manure can reduce emissions of harmful gases into the environment. Manure storage and application should be carried out in such a way as to reduce atmospheric emissions, e.g. by providing watertight slurry tanks and properly constructed manure pads, fertilisation according to specific schedule as well as direct fertilization to the soil or quick covering of the fertilized area to retain nitrogen in the soil and increase its availability to plants. In addition, slurry and manure can be used as a source of heat for the farm or the local community and in a biogas plant.

For **CY,** organic farming and traditional breeds (extensive and intensive) can add value to the pigmeat sector. Organic pig production reduces negative effects on the environment. Carbon and ammonia emissions can be reduced by improvement in the disposal of pig manure.

CY is of the opinion that any specific farming methods should not be prohibited but probably stricter measures for wastewater management could be applied through European Regulations. For example, the provision of the Decision (EU) 2017/302 should be applied to smaller pig

farms. This will contribute to the efficient management of wastewater. Pig farming methods that are detrimental to the environment should be banned over a transition period. Environmentally friendly methods that are economically viable should be favoured.

Carbon emissions are not taken into account before authorising a pig farm but are taken into account during its operation. Large pig farms (which fall within the scope of the European Industrial Emissions Directive) are required to apply the Best Available Techniques. CY has decided that large pig farms, in order to be licensed, (due to lack of land for disposal and their proximity to residential areas) must used privately owned or third-party anaerobic treatment and electricity and biogas plants.

CY informed that carbon emissions for the production of pig meat are not taken into account, but due to EU Regulations and National Legislative Frameworks, wastewater management creates additional operating costs. CY believes that pig farming can reduce emissions, given that incentives will be provided for investments in appropriate pig processing infrastructure, as well as waste storage and disposal. In CY this is achieved through the Rural Development Programme. Better management of pig units through stricter legislative frameworks (European and National) and possibly with the development of organic farming in most units. In addition, through the Agro-Environmental measures, pig farms are subsidized to implement practices going beyond the obligations arising from the legislative framework.

CY is of the opinion that manure management will be best combined with renewable energy (biogas) plans. Appropriate waste treatment can significantly contribute to reducing emissions, but also to improving the economic parameters of pig farms from the electricity produced. In addition, anaerobic treatment plants are able to handle other organic waste. Also, promotion of this information to consumers that has no environmental impact, may give added value to the product.

For **MT**, adding value to products can be accomplished in several different ways, but it generally falls into one of two main types: innovation on farm through differentiated farming methods and coordination to promote this innovation as added value to consumers.

MT is of the opinion that differentiating farming methods can meet a broader spectrum of consumer demands, and thus more consumers, thus adding value to the sector by retaining consumption (i.e. slowing the rate at which pork consumption is falling) and demanding better prices as the produce matches consumer demands.

MT believes that there is no simple answer to the Q2, as the achievement of environmental and climate goals are context specific and vary across different geographical realities. By way of example, improved on-farm conditions for pig rearing may require investment in energy-hungry cooling system, which, without prejudice to the efficiency of such systems, have a net environmental cost in the form of CO2 emissions. In the local context, the environmental and climate impact of differentiating farming need to be understood in terms of the opportunity cost this would have. If local pig production were to shift to non-conventional methods, land requirements would increase; this would come at a considerable financial cost (given the high prices of land and property given its scarcity), and environmental costs (if spread onto virgin land, at a cost to biodiversity and soil health). Expansion (in physical size) of pig farms would likely have a negative effect on already-threated local above- and below-ground biodiversity. Manure treatment is key to reducing pig systems' environmental and climate impact; non-intensive systems are less likely to be able to address this challenge, and thus differentiation is unlikely to abet emissions on this front. Research and innovation, if oriented towards specific sectorial challenges such as the environmental/climate cost of feed production systems and/or trade, it may contribute towards the reduction of negative environmental impacts. Likewise, improved climate resilience of genetic stock may contribute to alleviating climate pressures, particularly if they result in reduced need for cooling effort, etc.

Considering the crises that the pigmeat sector is currently undergoing, MT is of the opinion that farming methods permissible by law should not be prohibited at this time. Moreover, the minimum requirements for pig farming currently legislated in the EU are amongst the highest worldwide and protect animal and public health as well as basic animal welfare. However, one should consider the possibility of specific and if possible ring-fenced financing regimes whereby breeders are supported to move away from less sustainable farming methods. This would turn the current challenging circumstances into a launchpad for improved, and higher value adding production methods in the future, ready to hit the ground running when market conditions improve.

MT informed that they do not have the capacity to produce feed for the pork sector and as such carbon farming is not taken in account at this stage. Locally, if a carbon credit system is to be integrated within the pigmeat sector, farmers need to be assured that this will not bring about higher costs (due to food security interests). Whilst in theory, recourse to carbon credits should not be excluded, this may only work within the context of a pan European system which ensures that is equally feasible for large scale and small (including micro-scale) farmers. MT cannot afford to have a system which supports the strong market players and further undermines farms with a handful of heads.

MT believes that major savings of emissions may come from better treatment/use of manure preferably within the context of a circular economy. Increasingly, the need is being felt to facilitate recourse to renewable energy for pig-farming systems, in particular small-scale systems which are feasible for small scale farms, and the facilitation of investment therein to reduce the environmental impact of energy. The need for such investments is expected to increase as, for animal welfare reasons, farms are expected to have to increase investments in cooling systems to increase their resilience to climate change. When it comes to feeds, both land-use change to facilitate feed production and the transportation thereof has a substantial climate impact. Improvements in feed utilisation performance and growth rates, support for the local feeds to mitigate market failures, and the development of new feeds with a lower environmental footprint but similar performance should be encouraged.

MT is of the opinion that manure is a valuable resource that can add considerable value to the pigmeat sector. As occurs in ruminant systems, pig manure should increasingly be used on-site or in the area surrounding pig production units, either as a fertiliser in crop production or to produce energy (which presents a double saving in that it mitigates emissions from improper use of manure, and those from the burning of fuel which biogas from methane replaces). However, as above, there are issues of scale associated with the deployment of such technologies locally.

**For NL**, free range pig farming as market standard method has added value for the pigmeat sector. There is also added value for organic pig farming, but the potential depends on consumer readiness and retail purchasing. The added value will currently only apply to a limited number of companies.

NL is of the opinion that methane emission could be reduced by pig farmers by taking manure measures, although the contribution of enteric methane by the pig sector is small. This concerns first of all technical measures by adapting barns. An example is the separate collection of manure and/or fast removal of manure from the barn by a downstream technique such as manure fermentation. In addition to technical measures, a number of management measures can also be taken in the barn. For example, the manure behaviour of pigs matters in relation to the separation of manure. In the NL, through the research programme 'Integraal Aanpakken' (Integral Approach) and through the Netherlands subsidy scheme for innovation and sustainability of barns (Sbv-scheme- Subsidie onderzoeken en ontwikkelen innovaties stalsystemen (rvo.nl)), a great deal of research into and experience with the development of new measures that can be taken to limit methane emissions by the pig sector. The measures that are being developed have a large reduction potential, up to 90 % reduction.
NL listed the points related to farming methods and animal welfare that need to be considered:

- work towards a ban on tail-docking of piglets. Measures other than tail docking need to be implemented to control tail-biting and its adverse effects for welfare.
- special attention needs to be paid to provide pigs with more space, partly slatted floors and the possibility to perform exploration and foraging behaviour.
- the use of anaesthesia and prolonged analgesia must be introduced as a condition for surgical castration of piglets, until the constraints for a stop of surgical castration are cleared away.
- sows must be kept in groups from the time of weaning and for gilts from the time of introduction into the service area.
- work towards loose housing of sows and piglets in the farrowing pen instead of housing sows in farrowing crates and thus support for the European Citizens' Initiative "End the Cage Age".
- increasing the minimum weaning age of piglets.

NL informed that exploring the approach to carbon reduction, including via carbon credits, through private initiatives are emerging in the NL to achieve a voluntary carbon market. At this moment the initiatives do not focus on specific sectors. Examples are:
- Stichting Nationale Koolstofmarkt,
- PlatformCO2Neutraal
- Rabo Carbon Bank.

Important factors to succeed are the price of the carbon certificates and the usability of the required methods for calculating / measuring the carbon sequestration.

NL believes that livestock housing systems can be very helpful in the mitigation of emissions. Air scrubbers can considerably reduce emissions of ammonia from livestock housing in the pig sector. Currently development on separation of urine and faeces at source are developed. The reduction of greenhouse gas-emissions from housing systems is in development. Moreover, the reduction of nutrients in food can help to reduce nutrients in manure and make the conversion of feed to meat more efficient. The use of waste or by-products as source for animal feed reduces the use of raw materials and agricultural surface that can be used for food. The use of different fertilizer products (liquid, solid manure), that are collected and analysed, can be used at the right rate, right time and right place.

NL is of the opinion that manure can be a valuable product as fertilizer in the arable farming in the EU. However, the market of these products needs further development. The current situation in the NL is that pig farmers pay money to export manure from their farm. Manure processing is helpful to produce high-quality fertilizers that can substitute chemical/synthetic nitrogen fertilizers. By setting quality criteria in the nitrates directive (e.g. RENURE), the EU can play a major role in the circular use of nitrogen. Export of livestock manure from one to another MS needs sanitation to reduce the veterinary risks. The regulation on animal by-products sets already clear criteria for this export. This can be taken up in the fertilizer regulation. Pig manure as a source for biogas production can give added value for farmers (or groups of farmers). At the location where manure is digested, also further processing is possible.

## 6. Next steps

The Commission asked participants to send their written contributions after the meeting, if not done before.

## 7. Next meeting

12 September 2022

Michael SCANNELL
(e-signed)

List of participants– Minutes

**MEETING OF**
**THE EXPERT GROUP FOR AGRICULTURAL MARKETS, in particular concerning aspects falling under the single CMO Regulation –**
**Animal Products**

**Joint with**

**MEETING OF CIVIL DIALOGUE GROUP ANIMAL PRODUCTS**

**4.07.2022**

| Member State | Ministry or Organisation |
|---|---|
| BE | SPWARNE |
| BE | Vlaamse overheid |
| BG | Ministry of Agriculture |
| CZ | Ministry of Agriculture |
| DK | Danish Ministry of Food, Agriculture and Fisheries |
| DE | Bundesministerium für Ernährung und Landwirtschaft |
| EE | Ministry of Rural Affairs |
| IE | Department of Agriculture Food and the Marine |
| EL | Ministry of Agriculture |
| EL | Ministry of Rural Development and Food |
| ES | Ministerio de Agricultura, Pesca y Alimentación |
| FR | FranceAgriMer |
| FR | Ministère de l'agriculture |
| HR | Ministry of Agriculture |
| IT | Ministero politiche agricole alimentari e forestali |
| IT | MIPAAF |
| LV | Ministry of Agriculture |

| | |
|---|---|
| LT | Ministry of Agriculture |
| LU | ASTA |
| LU | Service d'économie rurale |
| NL | Ministry of Agriculture, Nature and Food Quality |
| NL | Rijksdienst voor Ondernemend Nederland |
| AT | BMLRT |
| PL | MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT |
| PT | MA-GPP |
| RO | Ministry of Agriculture and Rural Development |
| RO | Permanent Representation of Romania to the EU |
| SI | Ministry |
| SI | Ministry of Agriculture, Forestry and Food |
| FI | Ministry of Agriculture and Forestry |
| SE | Board of Agriculture |

| **Organisation** |
|---|
| CEJA |
| CELCAA |
| COGECA |
| COPA |
| ECVC |
| EEB |
| EFA |
| EuroCommerce |
| EuroGroup for Animals |
| FESASS |
| FoodDrinkEurope |
| IFOAM Organics Europe |

## Ad hoc experts present