Sub-group on the protection of animals at the time of killing

Fifth meeting, 19/09/2022 (Videoconference)

- MINUTES -

Attendance

Independent expert	Birte Nielsen
Civil society organisations	Eurogroup for Animals Compassion in World Farming
Business and professional organisations	UECBV FVE (excused) European Meat Network
Member States	Denmark Spain Netherlands Sweden Ireland (excused)
European Commission	SANTE G5 (Chair)
Guest(s)	EY (contractor for the impact assessment study)
	MAREL ¹ (4 experts)

Discussions

The meeting was solely dedicated to the option of banning the use of carbon dioxide at high concentration for stunning pigs.

1. Presentation by MAREL (see presentation attached)

MAREL experts presented their views on the subject, first by describing the current situation both from a commercial and technical point of view. Then, they indicated the possible consequences of non-EU action and the main impacts (equipment costs, stress for pigs, meat quality, export market) of an EU phasing out

¹ https://marel.com/en

the use of carbon dioxide at high concentration for the stunning of pigs (switching to electrical stunning or the perspective of alternative gas methods). They concluded by presenting MAREL vision on the future of stunning.

2. Questions and answers on the MAREL presentation

One member asked why gas systems for pigs have been developed only for high-capacity slaughterhouses. MAREL experts explained that it is technically possible to develop gas systems for low or medium capacity slaughterhouses, but MAREL focused its activities on high-capacity slaughterhouses.

Another member wanted to know if the recent increased cost of carbon dioxide would offset its advantages compared to electrical stunning. MAREL experts replied that the cost of carbon dioxide is not the only point to consider from an economic point of view. Electrical stunning requires a higher number of people to handle pigs. In addition, the amount of carbon dioxide for stunning pigs is relatively small compared to the beverage industry.

Another member asked why the use a multi-stage gas stunning (with carbon dioxide) has not been developed for pigs compared to broilers. MAREL experts replied that first, from an economic standpoint, the broiler industry become highly concentrated earlier than the pig industry. The concentration in few big slaughterhouses allowed more possibility for research and innovation. Secondly, from a technical point of view, the respiratory anatomy and physiology of birds differs from pigs. The knowledge and know-how developed for birds cannot be directly applied to pigs. The first gas method for broilers took 5 to 6 years to develop in the 1990s, followed by 12 to 13 years of optimisation (with the multi-stage method).

One member mentioned that in the Netherlands, there is an increasing public pressure for shutting down slaughterhouses using carbon dioxide at high concentration for pigs. Some experiments are going on with multi-line electrical stunning. MAREL experts confirmed that some works were ongoing to study alternatives to carbon dioxide, but results could not be disclosed yet. They, however, stated that meat quality issues remain unsolved at this stage while it is an important driver for operators to choose carbon dioxide.

One member considered that we cannot compare carbon dioxide high concentration vs head only electrical stunning under optimal conditions. This member was convinced that electrical stunning was carrying a higher risk of not being operated optimally compared to gas stunning. The member believed that carbon dioxide remains the least poor stunning method for pigs. The member mentioned that the development on nitrogen foam is ongoing, but the method remains slow for slaughterhouses and the perspective of replacing carbon dioxide for stunning pigs is uncertain and distant.

Another member evoked the animal welfare problems related to pigs stuck into automatically moving gates, a practice associated with the use of carbon dioxide. Another member replied that this risk is not linked to the gas method itself and can be easily addressed if gates are operated by people.

3. Discussion on the problem definition

The Chair wanted to ask the group to express their opinion in defining the problem linked to the use of carbon dioxide at high concentration for pigs. He referred to the EFSA opinion stating that the method is aversive.

MAREL experts challenged the scientific evidence of aversiveness of carbon dioxide at high concentration, stating that it is was rather a certain level of "discomfort" during a very short time (less than 30 seconds). They, however, admitted that public perception was also important to consider.

One member stated that reducing carbon dioxide concentration will necessarily lead to increase the period of induction.

Another member stated that there was scientific evidence of aversiveness. Pigs exposed to high concentration of carbon dioxide consistently refused to be exposed a second time when they have the choice, something that does not happen when pigs are exposed to inert gases.

Another member confirmed that exposure of carbon dioxide at high concentration irritates the respiratory track and human beings exposed to similar situation feel a sense of breathlessness and urgent need for air ("air hunger"). For this member, the time to lose consciousness is around 20 seconds but varies.

MAREL experts maintained that scientific evidence was not that strong and time to lose consciousness could be even 15 seconds. For them, more research would be needed to establish the level of seriousness of the animal welfare issue related to the exposure of carbon dioxide at high concentration.

Another discussion arises among members on the risk of shortage of carbon dioxide compared to the availability of electricity. Carbon dioxide being today a by-product of the fertilisers industry, it is exposed

to possible shortage in the context of the current gas crisis. There has been a shortage of carbon dioxide in the past in the UK due to the competition with the beverage industry (beer, sodas), which then led to the culling of healthy pigs that could not be slaughtered due to this shortage, and disposing the animals instead of sending them to the food chain. MAREL experts said that supply of carbon dioxide could be ensured via other sources and optimisation is possible since quantity needed remains low.

The Chair concluded that the exposure to carbon dioxide is aversive. Pigs experience to a certain level of discomfort for a limited period of time and the experience is sufficiently unpleasant to avoid it later. On the other hand, electrical stunning requires handling pigs into single lane, leading to a high use of electrical prods. In addition, some members believe that the operational aspects of electrical stunning present higher risk of bad welfare (bad positioning of the electrodes, current not properly adjusted to each individual).

4. Discussion on the consequences of the no EU action

Several members supported the view presented by MAREL experts on the absence of perspective of change without EU action. No one defended the perspective of spontaneous move towards more animal welfare friendly methods.

5. Discussion on the impacts of a ban

5.1 Switching to electrical head-only stunning

The point was extensively described in the MAREL presentation.

One member asked if, despite the current disadvantages, there was possibility of improving electrical stunning for pigs.

MAREL experts referred to the work on this subject presently carried on in the Netherlands. However, they do not see a substantial possibility of improvements.

A member stated that the problem was mainly linked to the need for individual restraint, that leads to the use of electrical prods.

5.2 Perspective of alternative gas methods

The Chair wanted to have the view of the group, regarding the relevance of implementing a ban to stimulate and speed up the research towards more animal welfare friendly methods. The debate on carbon dioxide at high concentration has been already pointed out by EFSA in its 2004 opinion and very little has changed since then.

MAREL pointed out that a ban will not speed up the development of alternatives because time is needed independently from the legal situation. They argue that after a five-year period, alternatives might be available, but the impact will depend very much on the uptake of a new method by operators. Alternative methods would have to be not only more welfare friendly but also provide business advantages to be adopted by operators.

One member considered that a ban with a time limit would be necessary to stimulate research and change. This view was supported by other members advocating for a time limit.

On the other hand, several members disagreed for a ban without having operational alternatives. They consider that this would be a very dangerous choice. They were instead supportive of more research. One of these members also suggested that we should accept that there is always a certain uncomfortable phase during the induction of anaesthesia. In addition, MAREL experts underlined that a ban would not apply to third countries, and this could affect the competitiveness of the EU pig companies exported outside the EU.

Following a question from the Chair, MAREL experts confirmed that one driver for changes in the broiler sector was the level of concentration of the industry. The broiler industry was also more automated and opened to technical innovation for historical reasons. They also confirmed that more resources on research and development like the current EU funding projects on non-aversive stunning methods for pigs would be helpful to drive changes. They also declared that the pig industry was conscious of the increasing

public demand in Europe. They also stated that research for better welfare at slaughter was closely linked to meat quality and this explains why the meat industry is interested in making progress.

One member was more critical on the possibility of changes without banning the use of carbon dioxide at high concentration. This member recognised that a ban would not solve the issue if there were no alternatives. However, the member reminded the group that since EFSA stated that there was a need for a better stunning method than CO2 in 2004, there was a very low number of published papers on alternative methods (only 9 empirical studies in the last 18 years). Then, the member questioned how we can drive the change in face of such lack of new developments.

One member concluded the discussion by proposing a more "blue sky thinking" on the way slaughter could be performed, by preventing stress from transport and handling in slaughterhouses.

6. Calendar for the next meeting and any other business

The Chair concluded the meeting by asking the members suggestion for the participation of guests for the next meetings (26 October on fish slaughter and 23 November on the ban of the killing of day-old chicks).