

Broom Report on the welfare of ducks in foie gras production: an unscientific and erroneous document

The report written in 2015 by Professor Donald Broom and Dr. Irene Rochlitz of the Department of Veterinary Medicine, University of Cambridge (cited below as "Broom Report") "on the welfare of ducks during foie gras production" argues that the practice of force-feeding for the production of foie gras is detrimental to the welfare of farmed ducks. The purpose of this paper is to highlight the methodological problems and factual errors in this report regarding the practice of force-feeding and foie gras production in Europe.

A partisan rather than scientific approach

A report made without contact with the field



First of all, no investigation into goose or duck farms was conducted by the authors, whose report simply consists of a literature review, which is very problematic when it comes to draw conclusions from the field.

Even within this narrow research framework, several relevant studies for the stated purpose have not been included in the report.¹ As for the few studies used, they are not given the same value: the study of the 1998

¹ Among which :

- Z Erisir & al. 2009, "Effect of different housing systems on growth and welfare of Pekin ducks", *Journal of Animal and Veterinary Advances* 8(2).
- MS Dawkins, 2012, "Commercial scale research and assessment of poultry welfare", *British Poultry Science*
- E Baéza & al., 2005, « Canards de Barbarie, Pékin et leurs hybrides : aptitude à l'engraissement », *INRA Productions*
- P. Chartrin & al., 2004, « Effet du génotype et du gavage sur les dépôts de lipides intramusculaires dans le filet de canard », *Viandes et Produits Carnés, Hors-série des 10^e Journées des Sciences du Muscle et Technologies des Viandes* »

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Scientific Committee on Animal Health and Animal Welfare (SCAHAW) - of which Mr. Broom was one of the authors - is used frequently², while the one of Faure and al. (2001)³ for example is rejected without thorough analysis (p.6).

A flagrant conflict of interest with the animalist movement

The Broom report was first published on September 14, 2015 along with a press release from the Global Action in the Interest of Animals (GAIA)⁴, an association accustomed to fundraising appeals to conduct sensational campaigns for "animals exploited for food production, fur, experimentation, amusement and as pets".⁵ The authors do not fail to thank the organization "for supporting the preparation and writing of this report" (p.3) and the organization has widely published it as a commissioned work.⁶ Even worse, the report advertises a product marketed by GAIA: the "faux-gras", a plant-based product presented as a substitute for foie gras. It is therefore clear that this report presents a flagrant conflict of interest with any objective scientific approach.

No peer review and cognitive bias

Contrary to the current practice in scientific disciplines, the report was not submitted for independent external scientific peer review. In parallel with the lack of investigation in foie gras farms, the omission of this important step before publication reinforces the lack of control and signals the content of this work as only binding for their authors.

Furthermore, the report is tainted by methodological confusion. Indeed, the report is intended to be a review article examining the state of scientific knowledge about the welfare of mulard ducks in foie gras production (p.2). However, only three types of reviews are methodologically acceptable, and this report does not belong to any of the following:

- A meta-analysis - where scientific studies based on the same hypothesis are compared in their data in order to derive reliable results - is not valid here, given the large number of parameters studied and the variety of studies used, most of the time very different.
- An aggregative summary covering a majority of publications in the field. However, the bibliographic research is far from being complete since, as already mentioned, several studies relevant to the stated objective are missing.

² Scientific Committee on Animal Health and Animal Welfare (SCAHAW), 1998, "Welfare aspects of the production of foie gras in ducks and geese", CEC, DGXXIV

Available on: https://ec.europa.eu/food/sites/food/files/safety/docs/sci-com_scah_out17_en.pdf

³ Faure & al., 2001, "Is there avoidance of the force-feeding procedure in ducks and geese?", dans *Animal Research* 50, pp.157-164

⁴ Global Action in the Interest of Animals : "New report on the welfare of ducks in foie gras production" 14.09.2015, accessed 10.01.2018

⁵ <https://www.gaia.be/fr/maltraitance-animale-les-bons-reflexes>

⁶ GAIA, "New report on the welfare of ducks in foie gras production" 14.09.2015

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- An integrative synthesis is dependent on a certain neutrality. Yet, this neutrality is far from obvious in the presentation of the selected studies. The presence of opinions is also problematic for what is supposed to be a construction taking into account personal and research biases.

Overall, the methodology appears to be hybrid and inconsistent with the objective of the report. The examples below show the presence of clearly displayed opinions which are not based on scientific evidence:

- « *The results of Guémené et al (2001, 2006a) and Flament et al (2012) on corticosterone levels before and after force-feeding are not in agreement with those of Mirabito et al (2002c) and Mohammed et al (2014). We conclude that levels of blood corticosterone are a poor indicator of welfare in the studies reported on mulard ducks.* » (p.6)

A simple contradiction between several studies is enough to reject a physiological indicator (corticosterone), yet commonly used in the evaluation of stress in birds.

- « *[...] there are few data on post-mortem findings, at a gross and microscopic level, of the upper digestive tract before, during and at the end of force-feeding. It seems that the likelihood of injury may be greater with group housing because of the need to catch, position and restrain the birds.* » (p.5)

To overcome a lack of information, the authors suggest a hypothesis based on a personal opinion rather than on empirical data.

- « *The gag or pharyngeal reflex is a reflex contraction of the back of the throat, evoked by touching the roof of the mouth, the back of the tongue, the area around the tonsils or the back of the throat. There is a contraction of both sides of the posterior oral and pharyngeal musculature, (...) The reflex helps to prevent material from entering the throat, except as part of normal swallowing, and protects against choking and aspiration. Some people have a hypersensitive reflex while others can learn to inhibit it (for example, sword swallows). There is controversy as to whether the reflex is present in ducks; we agree with SCAHAW (1998) that it is. Unlike some birds such as pelicans and storks, mulard ducks consume food by dabbling and sieving and do not swallow large food items. There is no reason why the pharyngeal reflex would be absent in these ducks.* » (pp.20-21)

This is purely an anthropomorphism-based opinion, where the human nausea (pharyngic) reflex is compared with that of the duck as if they were two physiologically similar species, both at the level of reflex and perception. This type of analogy is solely the responsibility of its author.

- « *Force-feeding may cause injury and pain to the bill, face, eyes, nostrils, neck and upper digestive tract. However, descriptive studies of these conditions are lacking.* » (p.43)

It is not only without a visit but also without any descriptive study that the report makes an allegation about injuries at the time of force-feeding. This claim is undocumented and refuted by producers in the field.

Response to erroneous conclusions about force-feeding and welfare of ducks

No, force-feeding does not undermine the welfare of ducks

In the same way as wild birds that swallow large quantities of food before migratory journeys, foie gras palmipeds have particular anatomical characteristics: absence of glottis and elastic esophagus which can be distended in the manner of a snake - allowing them to swallow large prey such as fish or frogs. Indeed, these characteristics are present in the species most suited for force-feeding (mulard duck and muscovy duck) although they do not migrate. As demonstrated by several scientific studies⁷, they thus have the ability to swallow large amount of food without pain or stress. In addition, it is important to note that ducks spend 90% of their life outdoors and that the production of foie gras is based on an extensive breeding method.

In addition, females have now been fattened for several years as the sector has developed a lean meat sector (eg. filet of duck) for these animals. In France, for example, female ducklings are exported for seasonal productions to countries such as Germany and Italy but also to the Maghreb.

No, the liver from a force-fed duck is not sick

The animals are fattened for 10 to 14 days with two meals a day, and only after checking that the animal has correctly digested its previous meal. As Bénard and Labie explain, the liver is, for birds, the main organ for the synthesis of fatty acids from glucose, whereas it is the adipose tissue that plays this role for mammals.⁸ Ducks are thus able to synthesize and use enormous quantities of lipids in a very short time and without any pathological consequence. In case of pathological consequence, their liver could not be edible. This process is of course impossible with other livestock because of their distinct digestive system.

⁷ See P. Chartrin & al., 2004 et E Baéza & Collab., 2005

⁸ G. Bénard, C. Labie, 1998

No, maximum liver growth is not the goal of force-feeding

Breeders are not paid on the basis of the weight of the liver but on its quality. The main criteria for the quality of a foie gras are its texture, soft feel and color. When the animal enters the fattening phase, its weight is about 4 kgs. At the end of this phase, it is about 5 kgs and a half, which is an increase of about 37%. The reality is therefore far from what is described in the Broom report, which argues that increasing the weight of the liver leads to an increase in body weight of 50 to 85%.

It is important here to emphasize that the European definition of a minimum weight of 300g and 400g respectively for duck and goose livers is essential to ensure the beginning of fattening of the whole liver. These minimum regulatory weights must be maintained so that consumers can make informed choices and not be deceived by the product they buy.

No, panting is not a sign of malaise

Falsely considered as heat stress in the Broom report, duck panting is actually a thermoregulatory reflex due to the absence of sweat glands and to their plumage insulating heat. So instead of sweating to reduce the heat of their body especially during digestion and in summer, ducks pant as it refreshes their body. This reflex is not specific to the fattening phase: it is found at all ages and all stages of breeding both indoor and outdoor.

Yes, collective cages are compliant with the Recommendation of the Council of Europe of 22 June 1999

The foie gras palmipeds sector has shifted to collective cages, following the Recommendation of the Council of Europe of 22 June 1999⁹ prohibiting the use of individual cages for the production of foie gras. The collective cages used by the sector meet all requirements of the Recommendation such as the possibility for ducks to stand with a normal posture, flap their wings, turn around without difficulty or perform normal social interactions.¹⁰ European producers meet these welfare goals while finding solutions that ensure satisfactory sanitary conditions.

Moreover, it should be noted that foie gras palmipeds are kept in collective cages only during the fattening phase, namely for a period of 10 to 14 days. The rest of the time, that is to say during 90% of their life, ducks live outdoors.

⁹ Recommendation adopted by the Standing Committee of the European Convention for the protection of animals kept for farming purposes (T-AP) : <https://bit.ly/2Qm6eJG>

¹⁰ See all objectives in recital 4 and art. 10§7 of the Recommendation

No, the mortality of foie gras ducks is not higher than that of other farmed ducks

The mortality rate of foie gras ducks is between 3% and 3.5%. Mortality has declined in recent years due to several factors such as improvements in housing or genetic progress. This mortality rate is thus lower than that of Pekin ducks which reaches 5.2%, according to the figure given in the report (p.12).

The report still tries to use this statistic against force-feeding by explaining that over 12 days (average duration of force-feeding), the mortality rate of Pekin ducks is lower than that of foie gras ducks. To say so, the report divides by 4 the mortality rate of Pekin ducks, knowing that 12 days correspond to about a quarter of the breeding time of this species. The mortality thus reaches 1.3% for Pekin ducks over 12 days. This calculation is obviously absurd since it is based on a purely linear distribution of the mortality of Pekin ducks, which does not correspond to the reality on the ground.

In addition, the comparison is questionable due to the different breeding durations of these species. While the Pekin duck is raised only for about 50 days, foie gras ducks live about twice as long, and mostly outdoors with the associated risks (predator attacks etc.). In spite of this, foie gras ducks have a relatively low mortality rate and the foie gras sector obviously has an interest in continuing on this path.

Yes, the level of corticosterone in the blood is a reliable indicator of the welfare of mulard ducks

Birds react to stimuli of their environment. When these stimuli are perceived as threatening, they cause the activation of the axis of stress - scientifically called hypothalamic-pituitary-adrenal axis - and the release of corticosterone by the adrenal gland. Data from several poultry species indicate a link between corticosterone release and fear behaviors: high corticosterone levels indicate a higher level of fear and insecurity. Moreover, consistent patterns of behavioral responses to a wide range of stimuli can be identified in birds. The level of corticosterone in the blood is therefore a good indicator of the welfare of fattened ducks, especially when the feeder approaches the animal.¹¹ Guéméné and al. conclude after analysis that force-feeding does not increase the level of corticosterone in the blood and that there is no indication that the fattening phase generates stress in ducks.¹²

¹¹ J. Cockrem, 2007, "Stress, corticosterone responses and avian personalities", Journal of Ornithology

¹² D. Guéméné & al., 2001, "Force-feeding procedure and physiological indicators of stress in male mule ducks", British Poultry Science

CONCLUSIONS :

The report by D. Broom and I. Rochlitz is an opinion piece and not a scientific study. Indeed, the methodological approach and the orientation of the conclusions, associated with a clear link with a partisan organization creates, if not a bias, at least a suspicion of bias towards the following conclusion: the production of foie gras is supposedly be bad (ethically and physiologically) for the animal. In addition, the publication history, format, and communication around this document show that it serves political purposes, which goes against the goal of scientific information/dissemination.

For further information

To access objective information based on the daily work of hundreds of foie gras producers in 5 European countries, we suggest to take note of the various initiatives of the European Federation of Foie Gras, both at European and national level, for the welfare of foie gras palmipeds: http://www.eurofoiegras.com/en/page/initiatives_p171/.

Among these, the certification of optimal welfare conditions by the Animal Welfare Service of the Operational General Directorate of Agriculture, Natural Resources and the Environment of the Public Service of Wallonia in Belgium and the initiative "Palmi G Confiance" in France: a voluntary initiative launched by farmers to let an independent body control the correct application of the 12 points of the [European Charter on breeding of waterfowl for foie gras](#).



Euro Foie Gras also regularly organizes visits of foie gras farms. For a field and transparent experience, do not hesitate to contact us by mean of our contact form available here: <http://www.eurofoiegras.com/fr/contact/1>

It is also possible to discover the production of foie gras on a farm in Belgium with the video available here: <https://bit.ly/2RHjJ2F>

Created in 2008, Euro Foie Gras, the European Federation of Foie Gras, brings together producers' federations from France, Belgium, Bulgaria, Spain and Hungary. Its goal is to establish a continuous exchange of good practices, know-how and promote the profession of foie gras producer.