

The Dublin Declaration of Scientists on the Societal Role of Livestock

Leroy, Frédéric; Ederer, Peer

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1 **The Dublin Declaration on the Societal Role of Livestock**

2 Frédéric Leroy¹, Peer Ederer²

3 ¹Industrial Microbiology and Food Biotechnology (IMDO), Faculty of Sciences and Bioengineering
4 Sciences, Vrije Universiteit Brussel, Brussels, Belgium

5 ²GOALSciences at Global Food and Agriculture Network, Rapperswil, Switzerland

6 Corresponding author: Frederic.Leroy@vub.be

7

8 The practice of science in livestock-related disciplines is often confronted with paralyzing references
9 to a scientific consensus that presents animal agriculture as a global *problem* that needs to be
10 downsized rather than optimized – a claim amplified by some prominent voices in media, policy, and
11 academia. This is a regrettable situation because science generally does not advance by
12 consolidation into consensus but by inquiry, dialogue, and attempts at falsification. In the context of
13 the role of animals in the 21st-century food system, we do not believe that any scientific consensus
14 exists to begin with and certainly not with respect to considering certain foods such as red meat and
15 dairy as inherently problematic. We cannot identify firm agreement among scientists, neither on the
16 place of animal-sourced foods in human nutrition, the role of animal agriculture in achieving
17 ecological balance, the contributions of livestock to livelihoods and societal prosperity, nor the
18 ethical aspects of animal production. In each of these fields, there are still huge benefits to be gained
19 from sustained and vigorous discovery of more scientific evidence. Meat is neither good nor bad; its
20 societal impact is a net effect of praxis-dependent benefits and harms through mechanisms that
21 need to be better understood.

22

23 In current global food systems discussions, livestock and the multiple foods derived thereof are the
24 constituents leading to contentious debates. This is likely not only due to the degree of both positive
25 and negative effects imposed on individual health and the environment, but also because of their
26 historical key role in human foodscapes, their symbolism, their cultural and economic capital, and
27 the ethical reality that the animal needs to give its life in favour of the human species. Moreover,
28 there is a widening gap between the often hyperbolic arguments displayed in contemporary
29 discourse, including mass media and some high-level reports, and what the evidence is showing or
30 not showing. Given the potential non-intended yet dramatic consequences a decimation of livestock
31 and animal-source foods could have on society, in parallel with a shift towards an untested food
32 system based on meat “alternatives” and emerging high-tech options, a group of scientists - of which
33 both authors were part - decided that a comprehensive and interdisciplinary evaluation of the
34 current state-of-the-art evidence on the matter was needed.

35

36 To this end, the International Summit on The Societal Role of Meat was organized on the 19th and
37 20th of October 2022 in Dublin, Ireland, hosted by the Irish Agriculture and Food Development
38 Authority (Teagasc). To create impact beyond the Summit, and “to give voice to the many scientists
39 around the world who research diligently, honestly and successfully in the various disciplines in
40 order to achieve a balanced view of the future of animal agriculture”¹, the organizing committee
41 issued the Dublin Declaration of Scientists on the Societal Role of Livestock ([https://www.dublin-](https://www.dublin-declaration.org)
42 [declaration.org](https://www.dublin-declaration.org)). Meanwhile, the Declaration has been endorsed by almost a thousand scientists
43 sharing our concerns – and is still open to receiving further signatures
44 (<https://www.dublindeclaration.org/signatures>).

45

46 In support of the Declaration and as an outcome of the Summit, a compilation of the evidence was
47 published in a Special Issue “The Societal Role of Meat” on the 15th of April 2023 (cf. editorial²),

48 dealing with the topics of nutrition and health^{3,4}, the environment^{5,6}, economics⁷, ethics⁸,
49 alternatives⁹, and future outlooks¹⁰. Some of its key messages are listed in Figure 1.

50

51 The significance of the Dublin Declaration and the accompanying publications reaches far beyond
52 the concerns of just livestock-related scientific experts. What members of future societies will eat,
53 where they will live, and how they will spend their time, is all strongly impacted by the role animals
54 will play within an evolving framework of human-animal interactions. A planet without livestock is a
55 different planet. A planet with twice as many animals as today is a different planet. A planet with 10
56 billion people each wanting healthy food, for which the global food system will need to double or
57 may be even triple today's output of bioavailable protein and other related micronutrients – a feat
58 we argue is unachievable without animals – is most definitely a different planet. How the global
59 commons and agricultural land will be used in the future has ramifications throughout society, from
60 finance to urban planning, from industrial production to options for leisure and far beyond,
61 penetrating the furthest corners of our foodscapes, landscapes, and thoughtscales.

62

63 We are not yet equipped with all the scientific evidence we need to answer all relevant questions. If
64 the urgency for action is high, a view we share, then it is not the best option to do something
65 actionistic with poorly understood consequences, but to step up the research and develop better
66 solutions. The Dublin Declaration is a call to all scientists to keep up the discovery – and to have a
67 sincere debate.

68

64 **Figure legends**

65 **Figure 1: A non-exhaustive overview of key messages to re-balance contemporary debates on the role of meat and livestock in a context of food systems change.** Key messages taken from Refs 1, 3-10.

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99 **Competing Interests**

100 FL is a non-remunerated board member of various academic non-profit organizations including the
101 Belgian Association for Meat Science and Technology (president), the Belgian Society for Food
102 Microbiology (president), and the Belgian Nutrition Society. On a non-remunerated basis, FL and PE
103 serve on the Scientific Board of World Farmers' Organization (WFO); on a non-remunerated basis,
104 FL serves on the Scientific Advisory Committee of the FAO/COAG Sub-Committee on Livestock.

Role of Meat & Livestock in the Food System



NUTRITION & HEALTH

Leroy et al. (2023)

"Meat supplies high-quality protein and various nutrients, some of which are not always easily obtained with meat-free diets and are often already suboptimal or deficient in global populations"



"When meat consumption is part of healthy dietary patterns, harmful associations tend to disappear, suggesting that risk is more likely to be contingent on the dietary context rather than meat itself"

Johnston et al. (2023)



ENVIRONMENT

Thompson et al. (2023)

"Well-managed animals function as an integral and productive part of agricultural systems [as] they can convert massive quantities of nonedible biomass [..], recycle plant nutrients back to the land, sequester carbon, improve soil health, and offer many ecosystem services"



"Environmental assessments of the livestock sector are all too frequently stated in simplistic terms, making use of a myopic selection of metrics, and overlooking underlying heterogeneity and complexities"

Manzano et al. (2023)



SOCIETY & ETHICS

Ederer et al. (2023)

"Expanding animal production output is the most readily available way to nourish the world sufficiently in the future"



"To deprioritize human rights to food today [...] in favor of animal rights and current and future environmental protection is neither defensible nor necessary. Instead, alternatives that better protect animals, people, and the environment from foreseeable, avoidable harms should be explored"

Croney & Swanson (2023)



FOOD SYSTEM TRANSFORMATION

Polkinghorne et al. (2023)

"It is critical that decisions and policies be based on evidence rather than ideology. The scientific community should strive for the highest standards of evidence"

Dublin Declaration (2023)

"Livestock is the millennial-long-proven method to create healthy nutrition and secure livelihoods, a wisdom deeply embedded in cultural values everywhere"



"Despite the billions of dollars being invested in "cellular agriculture", there are significant technical, ethical, regulatory, and commercial challenges to getting these products widely available in the market"

Wood et al. (2023)

UNDERESTIMATION OF BENEFITS

AVOID

OVERESTIMATION OF HARMS

UNDERMINING WHAT WORKS

AVOID

UNREALISTIC SCENARIOS