

The Dublin Declaration of Scientists on the Societal Role of Livestock

Purpose of this Declaration

Livestock systems must progress on the basis of the highest scientific standards. They are too precious to society to become the victim of simplification, reductionism or zealotry. These systems must continue to be embedded in and have broad approval of society. For that, scientists are asked to provide reliable evidence of their nutrition and health benefits, environmental sustainability, socio-cultural and economic values, as well as for solutions for the many improvements that are needed. This declaration aims to give voice to the many scientists around the world who research diligently, honestly and successfully in the various disciplines in order to achieve a balanced view of the future of animal agriculture.

Challenges for Livestock

Today's food systems face an unprecedented double challenge. There is a call to increase the availability of livestock-derived foods (meat, dairy, eggs) to help satisfy the unmet nutritional needs of an estimated three billion people, for whom nutrient deficiencies contribute to stunting, wasting, anaemia, and other forms of malnutrition. At the same time, some methods and scale of animal production systems present challenges with regards to biodiversity, climate change and nutrient flows, as well as animal health and welfare within a broad One Health approach. With strong population growth concentrated largely among socioeconomically vulnerable and urban populations in the world, and where much of the populace depends on livestock for livelihoods, supply and sustainability challenges grow exponentially and advancing evidence-based solutions becomes ever more urgent.

Livestock and Human Health

Livestock-derived foods provide a variety of essential nutrients and other health-promoting compounds, many of which are lacking in diets globally, even among those populations with higher incomes. Well-resourced individuals may be able to achieve adequate diets while heavily restricting meat, dairy and eggs. However, this approach should not be recommended for general populations, particularly not those with elevated needs, such as young children and adolescents, pregnant and lactating women, women of reproductive age, older adults, and the chronically ill. The highest standards of bio-evolutionary, anthropological, physiological, and epidemiological evidence underscore that the regular consumption of meat, dairy and eggs, as part of a well-balanced diet is advantageous for human beings.

Livestock and the Environment

Farmed and herded animals are irreplaceable for maintaining a circular flow of materials in agriculture, by recycling in various ways the large amounts of inedible biomass that are generated as by-products during the production of foods for the human diet. Livestock are optimally positioned to convert these materials back into the natural cycle and simultaneously produce high-quality food. Ruminants in particular are also capable of valorising marginal lands that are not suitable for direct human food production. Furthermore, well-managed livestock systems applying agro-ecological principles can generate many other benefits, including carbon sequestration, improved soil health, biodiversity, watershed protection and the provision of important ecosystem services. While the livestock sector faces several important challenges regarding natural resources utilization and climate change that require action, one-size-fits-all agendas, such as drastic reductions of livestock numbers, could actually incur environmental problems on a large scale.

Livestock and Socio-Economics

For millennia, livestock farming has provided humankind with food, clothing, power, manure, employment and income as well as assets, collateral, insurance and social status. Livestock-derived foods are the most readily available source of high quality proteins and several essential nutrients for the global consumer. Livestock ownership is also the most frequent form of private ownership of assets in the world and forms the basis of rural community financial capital. In some communities, livestock is one of the few assets that women can own, and is an entry point towards gender equality. Advances in animal sciences and related technologies are currently improving livestock performance along all above mentioned dimensions of health, environment and socio-economics faster than at any time in history.

Outlook for Livestock*

Human civilization has been built on livestock from initiating the bronze-age more than 5000 years ago towards being the bedrock of food security for modern societies today. Livestock is the millennial-long-proven method to create healthy nutrition and secure livelihoods, a wisdom deeply embedded in cultural values everywhere. Sustainable livestock will also provide solutions for the additional challenge of today, to stay within the safe operating zone of planet Earth's boundaries, the only Earth we have.

For scientific evidence, please refer to presentation recordings from the 19/20 October 2022 International Summit on the Societal Role of Meat. Evidence will also be published in the March 2023 Special Issue of *Animal Frontiers*.

Name	Research field	Position/Organisation	Date	Signature
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* The wording of this paragraph is from the Solution Cluster on Sustainable Livestock at the UN Food System Summit 2021.

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