



Veterinarians commit to sustainable food systems

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Switzerland
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EASVO
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EVERI
Veterinarians in
Education, Research
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The Federation of Veterinarians of Europe (FVE) - representing around 300,000 veterinarians across 39 European countries - aims to enhance animal health, animal welfare, public health and to protect the environment by promoting the veterinary profession. The FVE and the European veterinary profession play a key role in One Health, animal health, animal welfare and public health.

Introduction

The livestock sector contributes substantially to the European economy and is a key component of the agri-food systems¹.

Veterinarians are special advisors to livestock farmers and keepers and are fully committed to sustainable livestock and aquaculture production by promoting day-by-day animal health and welfare, public health and protecting the ecosystems². Veterinarians contribute to keeping EU food at a global gold standard³ by:

- Advising and supporting farmers through the transfer of knowledge, skills, and competencies;
- Enforcing legislation;
- Applying innovation and effective technologies throughout food supply networks;
- Providing scientific support to policy-makers and decision-makers;

Throughout this paper, FVE intends to provide a list of the most important areas where the veterinary sector actively contributes to sustainable food systems throughout the promotion of animal health, welfare and public health. FVE points to the need to further invest in these crucial areas as they represent the backbone for improved sustainability, global health and security.

One Health

Veterinarians contribute to the [One Health](#) approach through improved communication, collaboration and networking with other animal health, human health and environmental health partners; including monitoring & surveillance of diseases in animals, thereby minimizing the likelihood of zoonotic spillover events.

- [FAO-OIE-WHO: a worldwide cross-sectoral strategy for One Health \(click\)](#)
- [Improving 'One Health' is more important than COVID-19 blame game \(click\)](#)
- [One Health in action \(click\)](#)

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¹ Future of EU Livestock ([click](#))

² FVE position paper on veterinarians' contribution to the UN Sustainable Development Goals ([click](#))

³ EU Council conclusions on Farm to Fork (F2F) ([click](#))

Veterinarians are at the forefront of public health protection, using their knowledge and expertise in infectious diseases and epidemiology. For example, during the COVID-19 pandemic, the basic reproduction number of the virus (R0 or the R factor), isolation/quarantine and shielding entered the vocabulary of the general public for the first time.

Managing optimum stocking density, quarantine of animals displaying clinical signs and biosecurity between cohorts of farm animals is normal professional practice for veterinarians. This is further supported in the animal health sector by refining the use of medicines, by research, development and applying innovative therapies and vaccines.

- Recent advances in viral vectors in veterinary vaccinology ([click](#))
- Contribution of vaccination to the global animal & public health: present and future (N. De Briyne, [WVA Congress, 2019](#))

The transdisciplinary One Health approach can also be successfully applied, with veterinary involvement, to improving sustainability in land-based and [aquatic livestock systems](#).

Food safety & security

Veterinarians play pivotal roles in all parts of food supply networks; namely safe production, processing, transport and distribution of products of animal origin ([Codex Alimentarius - OIE](#)). In 2000, the European Union launched its [White Paper on Food Safety](#) as a start for a new legal basis for appropriate food and animal feed production and food safety control. Twenty years later, acknowledging that European legislation provides a global standard for food, the European Commission issued the [Farm to Fork Strategy](#), aiming to accelerate the transition to “*fair, healthy and environmentally friendly food systems*”.

FVE has been committed to such an approach since the start. The role of veterinarians from farm to fork, ensuring food safety & food security is also recognized and promoted by the World Animal Health Organization ([OIE](#)).

The expertise of veterinarians in regulatory matters such as sanitary and phytosanitary arrangements, international trade, health certification and food safety standards, makes veterinarians key stakeholders in the sustainability of food systems.

Animal health & welfare

Veterinarians recognize the inextricable link between livestock health & welfare on farm. By preserving the health of animals and ensuring that all animals experience a life worth living or, ideally, a good life, animal welfare is enhanced.

Livestock welfare embraces a wealth of components, including breeding management, routine husbandry, nutritional management, manipulations & mutilations, transport and welfare at slaughter and there is considerable variation across systems, even when the overall aim is improved welfare. Improved animal health & welfare, in turn, leads to:

- Reduction of antimicrobials and medicines usage;
- Timesaving and more efficient [livestock transport](#);
- Humane slaughtering conditions;
- Enhanced food production (and productivity);
- reduced environmental footprint per unit of product;

- streamlined and effective collaboration between farmers, veterinarians, nutritionists and breeders to ensure best practice.

Antimicrobial resistance (including responsible antimicrobial use)

In line with the EU ban of the use of antibiotics for growth-promoting purposes in 2006, veterinarians, farmers and the wider livestock sector have been working hard to REDUCE the levels of antibiotics administered to food-producing animals (10th ESVAC report [2018](#)).

Veterinarians work with farmers to REFINE the usage of antimicrobials, particularly focussing on reducing the relative use of colistin, fluoroquinolones and 3rd & 4th generation cephalosporins. Veterinary scientists are at the forefront of the REPLACEMENT of antimicrobials through preventative approaches involving improved biosecurity, improved husbandry and strategic use of vaccines. There is also a lot of interest in improving livestock health and reducing antimicrobial use through manipulation of the microbiome using feed additives such as pre-, pro- and probiotics.

Veterinary scientists are also working hard on the environmental impact of the use of antimicrobials in animal production, in animal products (e.g., meat, milk, honey) and through the disposal of animal by-products (e.g., manure). New technologies are also being developed for well-boats used in aquaculture (e.g., [CleanTreat](#) - Benchmark) to remove animal medicines from the water before releasing them to the environment.

Since 2011, FVE is an active member of the [European Platform for the Responsible Use of Medicines in Animals \(EPRUMA\)](#), which aims to promote the responsible use of antibiotics amongst its members. FVE, through the [AMR stakeholders' network](#) – a civil society-led pan-European network – promotes campaigns and good practices integrating human - animal – environment perspectives.

Environment protection & mitigation of greenhouse gas emissions (GHGs)

Agriculture, food production and food security depend on the conservation of ecosystems. By comprehensively understanding the bigger picture, veterinarians play an important role in environmental management, at land and sea by helping farmers to adapt to changing environmental factors such as climate change.

For example, veterinary surgeons assist livestock owners in facing up to the increasing significance of vector-borne diseases in Northern Europe (e.g., Bluetongue, Schmallenberg viruses). Veterinarians also assist and support fish & shellfish farmers to adapt to challenges associated with climate change (e.g., amoebic gill disease & sea-lice in Atlantic salmon, OsHV- μ var in oysters).

Greenhouse gas emissions (GHGs) decreased by 4% in 2019 in the EU-27, compared to the previous year and by 24% compared to 1990. Since 2014, the European GHGs always remained below the 20% 2020 target (EEA- [click](#)). Acknowledging this, and considering that one-quarter of the world's GHG emissions come from agriculture, forestry, and land-use change⁴, a range of innovations are being applied at the farm level and it is important that as part of the sector's commitment to mitigating GHG emissions and reducing waste that veterinarians understand and are engaged in the uptake of the GHG-efficient farming new technologies and practices (e.g., [anaerobic digestion](#) converting animal waste into methane biogas as a renewable source of energy and manure bio-refineries for bio-fertilizer production).

⁴ McKinsey & Company - Agriculture and climate change, reducing emissions through improved farming practices. 2020 ([click](#))

It is relatively easy to measure GHG emissions from livestock while it is much more difficult to understand carbon sequestration on pasture/grassland systems; veterinarians understand and actively contribute to the debate about the contribution of the livestock to the overall GHG emissions (e.g. demonstrating GWP*: a means of reporting warming-equivalent emissions that captures the contrasting impacts of short- and long-lived climate pollutants ([click](#)).

- [Life+Forage4Climate](#) – Forage systems that result in reduced GHG emissions and improved soil carbon sequestration in continental and Mediterranean agricultural areas
- [The Systemic Project](#) – The contribution of anaerobic digestion to the European circular economy by the production of biogas combined with the recycling and recovery of soil nutrients
- [iSAGE](#) – Innovation for sustainable sheep and goat production in Europe;
- [SUWANU](#) – Reuse of treated wastewaters in European Agriculture
- [Water2Return](#) - Circular economy approach to wastewater through the conversion of treatment facilities in slaughterhouses into bio-refineries
- [European Sustainable Phosphorus Platform \(ESPP\)](#) – European forum for commercial companies, research groups, government regulators and NGOs to exchange information on addressing the ‘phosphorus challenge’ and develop opportunities

Circular economy

Veterinary medicine contributes to European economic health by reducing and containing disease outbreaks and their direct, indirect and induced effects.

- Economic costs of the foot and mouth disease outbreak in the United Kingdom in 2001 ([click](#))
- The economic impact of avian influenza ([click](#))

By promoting food value chains and biomass production, veterinarians add value and play a leadership role in their communities; the reduction of waste in areas and the recovery of feed and energy from animal by-products are also fundamental tasks (e.g. recycling and donation of food, rearing insects as novel protein sources).

- Risk assessment about fungal and/or mycotoxins ([click](#))
- Systems using black soldier fly larvae, crickets, grasshoppers or mealworms (beetle larvae), raised in temperature and humidity-controlled environments ([click](#))
- Insect-based feed ingredients currently be used in poultry and aquaculture production ([click](#))
- Insect protein potential use in companion animal nutrition ([click](#))

The [manufacture of pet food](#) already contributes to the circular economy through the use of offal / ‘fifth quarter’ / mechanically-recovered meat to deliver improved ‘carcase balance’ and reduced waste as by-products.

Way forward

The sustainability goals of the veterinary profession are therefore here summarized and aligned with the [UN Sustainable Development Goals](#):

- Biodiversity & wildlife preservation
- Net-zero warming
- A no-waste society

- A good life for animals
- Health and wealthy people
- Enough clean water and safe food for all

In the eyes of the public, veterinarians across Europe are generally held up as trusted professionals, with many ‘touchpoints’ with allied professionals as well as with the general public.

As such, veterinarians are central to advancing sustainability⁵ in the agri-food sector by communicating the real science behind safe food and animal production.

Veterinarians across Europe look forward to work and collaborate with EU Institutions and all the relevant stakeholders to:

1. Acknowledge the efforts and outcomes achieved so far by the agri-food sector to further improve the sustainability of the EU food systems;
2. Further set up and align to common metrics when it comes to GHG emissions, agricultural and farming practices, circular economy and animal health & welfare standards;
3. Further set up common and measurable targets to help and assist the agricultural sectors in the transition towards the F2F objectives;
4. Further set up subsidies/taxation policies to move towards a balanced approach assisting farmers, fishermen and aquaculture producers.
5. Support policymakers to raise awareness and communicate to consumers the value of products from sustainable food systems.

Further readings

- [Infectious diseases & the role of veterinarians in wider society](#)
- [Livestock diseases information sheet](#)
- [Veterinarians continue to look after animals and public health during the pandemic: they also need protection](#)
- [The Official Veterinarian’s role in food hygiene: an essential public good](#)
- [Veterinarians – vital for animals, vital for people](#)

Notes to Editors

The Federation of Veterinarians of Europe (FVE) is an umbrella organisation of veterinary organisations from 39 European countries, representing a total of around 300 000 veterinarians.

The Federation of Veterinarians of Europe (FVE) strives to promote animal health, animal welfare and public health across Europe. For further information, consult the FVE website www.fve.org. FVE Secretariat on Tel +32 2 533 70 20 or by e-mail to info@fve.org

⁵ [Vet Sustain](#)