

HEALTHY ANIMALS: KEY TO A SUSTAINABLE FOOD PRODUCTION

The animal health industry plays a significant role in ensuring a sustainable food production by contributing to all three pillars of sustainability:

- **Society:** Food safety and security through animal health and welfare
- **Economy:** Less animal mortality and production losses
- **Environment:** Reduced environmental impact through a better use of natural resources

Societal contribution

Healthy animals: ensuring safe food and increased animal welfare

■ Food safety

Healthy animals are a prerequisite for farmers to supply safe products, such as meat, dairy and eggs, to the food market. An example illustrating this is salmonella. The use of vaccines against salmonella in **poultry** is considered a major contributor to the observed reduction in the incidence of **human** salmonellosis by almost 50% in the European Union since 2004.

■ Food security

Keeping animals healthy will become increasingly important in the future as the demand for **milk, meat and eggs** is expected double by 2050. 70% of this additional food supply will have to come from modern technologies¹, including veterinary medicines.

■ Animal welfare

Veterinary medicines and vaccines are critical to help maintain the health and welfare of animals by helping identify, prevent and treat animal diseases, as well as by reducing pain and discomfort. The following examples illustrate the impact of disease on animal welfare and the knock-on effects:

- **Parasite infections:** They have a direct impact on animal welfare and animal health, as infections lead to disease. In **chickens** and, less frequently, in **turkeys**, death rates can go up to 12-15% and disease levels can go up to 100% during severe outbreaks of coccidiosis.²
Sheep and other grazing animals are very susceptible to internal parasites. Treatment with anthelmintics helps kill worms, avoid suffering and death due to disease, and help alleviate production losses. i.e. 22% decreased milk yield in sheep and other grazing animals, 15% slower growth, and 10% less wool.³
- **Respiratory disease:** Pneumonia is a very painful disease in **beef cattle** and if untreated, can be fatal. It is also the most common and costly disease in **bovine** affecting millions of animals in the EU every year; e.g. in the UK alone it is estimated to affect 1.9 million animals at a cost of £60 million a year. Both effective prevention (vaccines) and treatment (e.g. analgesics/anti-inflammatories or antibiotics) enable veterinarians to improve animal health and welfare, and prevent mortality.⁴

¹ Food and Agriculture Organisation of the United Nations (FAO)

² Collective. (2004). Coccidiosis, Animals. Encyclopaedic reference of Parasitology, Second edition. In H. Mehlhorn (ed.). Springer-Verlag Heidelberg.

Lunden, A., et al. (2000). Eimeria infections in litter-based, high stocking density systems for loose-housed laying hens in Sweden. Br Poult Sci 41:440-447.

³Williams, R. (1999). A compartmentalised model for the estimation of the cost of coccidiosis to the world's chicken production industry. Int J Parasitol 29:1209-1229.

Mavrot et al (2015) Parasites & Vectors.

⁴ Statham, J. (2012) Investigating bovine respiratory disease and associated farm level risk factors: A pilot study. RAFT Solutions Ltd.

Economic impact

Healthy animals: Less animal mortality and productivity losses

■ Animal mortality

Europe recalls the devastating consequences of major animal disease outbreaks in the past⁵. By researching and producing veterinary medicines and vaccines, the animal health industry helps reduce the mortality of farm animals. It ensures farmers' economic sustainability allowing them to produce enough milk, meat and eggs to meet consumers' demand.

■ Healthy animals = 20% resource waste reduction⁶

Veterinary medicines and vaccines help mitigate productivity and weight loss in animals due to disease. The following examples substantiate the economic impact of animal health:

- **Mastitis infection:** Treatment and vaccination of **dairy cows** against mastitis help improve health and welfare, reduce a loss of 375kg in milk yield⁷, and mitigate economic losses due to disease, which can be up to €182 per cow and year.⁸
- **Porcine circovirus disease (PCVD)**⁹: It is recognised as one of the world's most economically damaging **pig** diseases and the economic impact in Europe was estimated at about €5.76 million¹⁰ in the 1990s, a high burden for a market producing 240 million pigs a year. The introduction of PCV2 vaccines in 2006 and vaccination have led to a dramatic reduction in pig mortality, back to levels before the PCV2 epidemic started.

Environmental protection

Healthy animals: Less environmental impact through a better use of natural resources

Because they help keep animals healthy, veterinary medicines and vaccines enable farmers to produce more food with less natural resource input and less waste output, which supports the environment.

- **Grasslands:** Animals make use of grasslands that cannot or is hard to use for other high quality protein production. Grasslands are important carbon traps and animal production has a key role in a sustainable bioeconomy and in tackling climate change.¹¹
- **Resource savings:** Healthy animals mean meat, milk and eggs are produced with less feed, water, energy and soil (inputs), and reduced manure and CO₂ emissions (these can be reduced by 40%¹²). For example, 1,570,180 km² of farmland (1/3 of EU's surface¹³) and 2.34 million km³ of water (0.18 of the world oceans' volume¹⁴) can be saved annually worldwide thanks to innovation in dairy production.

Useful link: See IFAH-Europe infographic '[Healthy animals: key to a sustainable food production](#)'

IFAH-Europe is the representative body of manufacturers of veterinary medicines, vaccines and other animal health products in Europe. It represents innovators and generics alike, as well as large, medium-sized and small companies. IFAH-Europe promotes a single market in veterinary medicines across the EU ensuring the availability of medicines to protect the health and welfare of animals.

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⁵ EU conference on the material and immaterial costs of animal diseases (2004)

⁶ World Organisation for Animal Health (OIE)

⁷ Seegers, H, Fourichon, Ch. And Beaudeau, F. (2003) Production effects related to mastitis and mastitis economics in dairy cattle herds.

⁸ Huijps, K., Hogeveen, H., Lam, T.J.G.M., Huirne, R.B.M. Preferences of cost factors for mastitis management among Dutch dairy farmers using adaptive conjoint analysis. *Prev. Vet. Med.* (2009).

⁹ For further details see [IFAH-Europe's circovirus fact sheet](#).

¹⁰ Based on epidemic mortality figures in the United Kingdom over a 10-year period. This figure does not consider the loss due to reduced weight gain. See further details in [IFAH-Europe's circovirus fact sheet](#).

¹¹ Gerber, P.J., et al. 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. FAO, Rome.

¹² Knowledge for Innovation policy paper '[Sustainable livestock production in Europe: A question of food security, climate and innovation](#)' (2015).

¹³ World Bank [data on agricultural land](#)

¹⁴ US National Centers for Environmental Information (NOAA) [data on the volumes of the world's oceans](#)