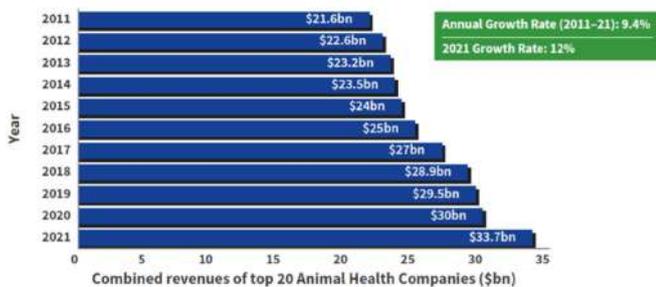


Global Trends in the Animal Health Sector

The last few years was one of growth for the animal health sector. Global changes like population growth, public health, pet adoption, and sustainable societies have made good animal health more essential than ever before.

The sector's growth has been resilient over the past decade as industry fundamentals evolve. The value of the global animal health sector increased by 12% to \$38.3 billion in 2021 with sales increasing across all geographies.

Animal Health Sector Revenue Growth¹⁸



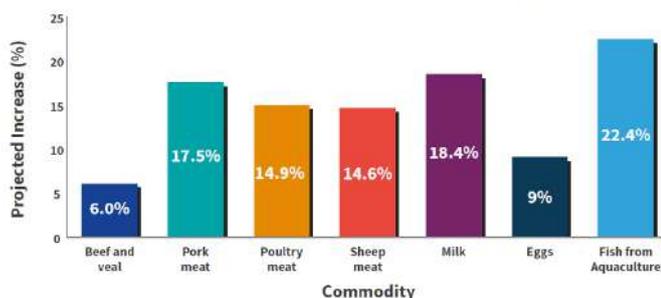
Looking ahead into 2023 and beyond, this article analyses major trends and expectations related to the animal health sector. Many of these trends will further accelerate in the coming years.

Growing Demand for Animal Protein

More people with more spending power are demanding more animal protein. Demand for all types of animal protein skyrocketing. The OECD and United Nations Food and Agriculture Organisation (FAO) estimate that livestock and fish production will increase 14% from 2020–2030. In richer countries, milk, egg, fish and white meat consumption is growing and in most of the emerging world there are strong consumption increases in all categories.

Sustainably meeting this demand will require better on-farm health to reduce livestock losses and improve efficiency. For some regions, this starts with greater uptake of vaccination, while in others better use of diagnostics and emerging digital tools can offer precision health.

Projected Increase in Livestock Commodity Production (2020-30)²



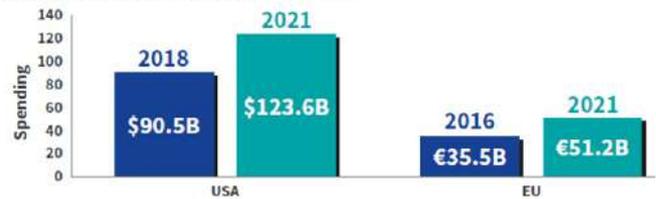
Growing Pet Populations and Growing Spend

Global pet populations are also rising, while owners are

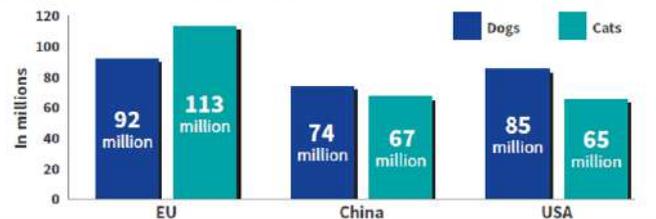
investing more in pet care. This is the case in large developed markets but also in emerging markets where growth in middle class populations is making pet ownership more common.

Foundational tools like vaccination, parasiticides and diagnostics are essential to protect pets and safeguard the surrounding household against the fleas, ticks, illnesses and other hazards that animals can bring home. Emerging technologies in areas like immunotherapies and digital technologies are allowing for pets to share longer, healthier lives with their owners.

Growing Consumer Spending on Pets^{4,5,6}



Pet Populations in Major Markets³



Growing Disease Pressure

Recent years have seen a marked increase in the threat of deadly animal diseases. Illnesses like African Swine Fever continue to spread across Asia, while Avian Influenza is leading to the culling of hundreds of millions of birds across the globe. Incidence of animal disease creates significant economic and societal costs, which is spurring greater investment in and public support for animal health.

The likelihood of pathogen spread is also increasing with significantly more trade, travel and transport of humans and animals. More food is also traded, for example, poultry trade was up by 520% over the last 20 years.

There is also a significant relationship between animal disease and human disease with 13 zoonoses being the source of 2.4b cases of human illness and 2.2m deaths a year. Healthier animals lead to healthier humans and there are dramatic improvements in both to be made with a OneHealth mindset.



Economic & Social Costs of Disease Examples



African Swine Fever
(2019 outbreak)¹¹
US\$112.5 billion



Foot and Mouth Disease
(annually)¹²
US\$21 billion



Salmonella (annually)¹³
80.3 million
food-borne cases



Zoonotic Disease
(annually)¹⁴
2.2 million human deaths

The Environment and sustainable Livestock Production

The livestock sector continues to grow worldwide to meet the demands of an ever-increasing global population. Supporting greater efficiency, productivity and sustainability is a core goal in all markets.

In emerging countries there is scaling-up, professionalization and significant investment in more efficient livestock products. Governments, the private sector, civil society and others are also investing, implementing practice changes and supporting research and innovation, to implement and incentivise more sustainable food production. This is the right thing to do.

Changing temperatures mean that vectors survive longer at higher latitudes – malaria, dengue and tick-borne encephalitis are now appearing in places they never did. Likewise, climate change is leading to more challenging production conditions with droughts and floods.

Urbanisation coupled with the increasing pressure on natural resources and competition for land, water, and feed means livestock must continually improve its sustainability. Livestock is an emitter of greenhouse gas emissions. The need for more sustainable production means the animal health sector has tremendous opportunities to provide solutions. These include more and better vaccination, better parasite management and other techniques that enable better overall animal health – less disease, less morbidity, less death and healthier more productive animals.

Evolution in the Animal Health Sector Company Offerings

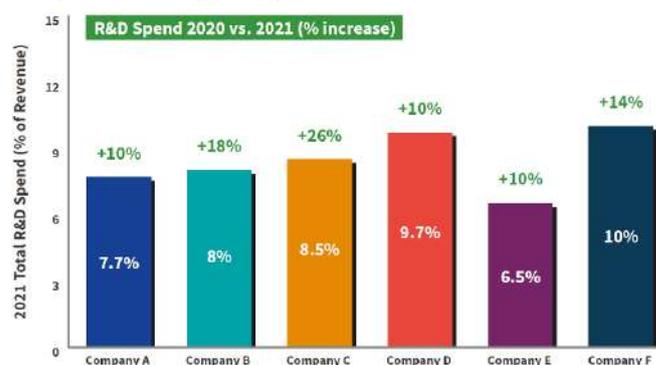
There has been, and will continue to be, an evolution in the offerings of the animal health sector. Where traditional markets such as the United States and the European Union will remain essential, revenues in the emerging markets are increasing as food production and pet ownership increase.

The animal health sector has seen consolidation through mergers and acquisitions, but also through bolt-on acquisitions in areas such as vaccination, digital technology, diagnostics and so on. There are many successful vibrant smaller companies and funding for acquisitions is easily accessible.

One of the major changes which will continue is the application of integrated animal health solutions, including a much wider range of tools that integrate diagnostics, genetics, treatment, prevention, nutrition, prediction and so on. There is significant cross-over of techniques and approaches from other sectors such as the biotech human health and IT sectors.

The animal health sector understands that innovation is needed to meet the emerging challenges, which is why companies are increasing R&D spending across the sector. These investments will be crucial to meeting global objectives like the Sustainable Development Goals (SDGs) and strengthening defenses against potential future zoonotic pandemics.

R&D spend of the six largest companies²⁰



Scientific and technical innovations are moving beyond the R&D phase with multiple areas of innovation including: new vaccine technologies, biotech based approaches, new enzymes, genomics, nutraceuticals – and also new offerings in herd management, data surveillance, epidemiology, etc. The increasing costs and requirements related to regulatory approvals favour larger companies with more resources.

Other technological solutions are mainstreaming. Think about the use of 'big data', satellite data, smart tags, wearable devices, remote monitoring, video-enabled engagement, predictive Approaches to disease outbreaks, telemedicine apps for veterinarians, e-prescription and so on. Many companies are investing in these areas.

Investments in Prevention

Disease prevention is the cornerstone of veterinary care. When illness is avoided, animals are spared from the devastating effects of disease while people are protected against zoonotic transfer. Animal health companies are supplying more disease prevention products than ever before, from vaccines to diagnostics to emerging digital tools, to help support these efforts.

As a result, since 2013, vaccines and parasiticides have grown from 56.7% to 62.6% of the product portfolio, while antimicrobials fell from 20.9% to 15.2% (a relative reduction

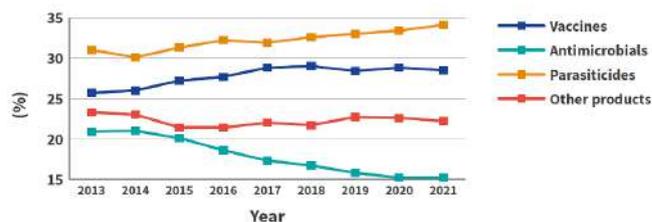
of 28%). This is also a reflection of responsible antibiotic use strategies, built on a foundation of prevention, that have been applied in most markets.

The Evolution of Attitudes Toward Animals

People are increasingly more aware of what they eat, and they know more about food safety and balanced diets.



Sales per product category (%) (2013–2021)



Consumers want more information about their food, and they want more choice. When it comes to animal protein more people care about how animals are raised and about their overall welfare.

Anti-farming, anti-meat, anti-technology campaigners challenge animal production. Commercial plant-based meat companies see this as an opportunity. Significant media attention for vegan and vegetarian lifestyles has not led to overall decreases in animal protein consumption. The cost-of-living crisis has also seen a sharp decline in the consumption of plant-based meats and most analysts expect that this will remain a small niche market.

Pet ownership is increasing rapidly in countries like Brazil, India, China and elsewhere. Another trend is the increasing medicalisation of pets. Life expectancy is increasing, and pet owners are interested in 'quality of life' products to be able to treat conditions like skin problems, diabetes and arthritis. Obesity and related diseases are also increasing in pets. People are bringing their pets in for more regular checkups and adopting health management plans.

One of the most dramatic changes over the last few decades has been the further humanisation of pets. Pets have shifted from living outdoors to sharing the house, bedroom and – for some – the bed itself. People expect their pets not to have diseases, bugs, rashes, or smells. Pets are companions, whether we are very young or old. They improve our physical health and help many with loneliness or depression.

Conclusion

All of the underlying trends are positive for the animal health sector, but the spread of zoonotic disease presents significant challenges. The animal health sector is well-positioned to help provide for the health needs of billions of animals. Success will mean more sustainable food systems, improved public health, continued companionship from our pets and more.



Carel du Marchie Sarvaas

Carel du Marchie Sarvaas is Executive Director of HealthforAnimals, the global animal health association. HealthforAnimals represents the top 10 global companies (Boehringer Ingelheim, Ceva, Elanco, IDEXX Merck/MSD, Phibro, Vétquinol, Virbac, Zenoaq, Zoetis) and 29 national associations. Carel joined HealthforAnimals after holding the position of Director at EuropaBio, the Biotechnology Association. Prior to EuropaBio, Carel worked at international consultancies and think tanks in Brussels and Washington DC. He is Dutch national, married, has four children, and holds degrees from the University of Leiden and the Johns Hopkins University.