

# We are helping to feed the world more sustainably

## Efficient technology

SENSEHUB® monitoring brand that monitors Livestock by collecting information on cow states to early detect the potential for illness and provide insights

## Efficient use of resources

Since 1977 U.S. Beef industry produced 33 percent more protein with same size heads of cattle using natural resources more efficiently<sup>1</sup>

## Large Vaccines production

One of the world's largest producers of animal vaccines with over 102 billion doses per year

## Detection of diseases

WHISPER® ON ARRIVAL - precision tool using a multitude of factors to predict which cattle may be at higher risk of potential sicknesses, in conjunction with the consultation of a veterinarian. This allows medicines to be administered in a more targeted, judicious manner, thus promoting more responsible antibiotic use

## Broad protection

Vaccines and medicines protect dogs, cats and rabbits against many diseases, preventing transmission of vector-borne and zoonotic diseases

## Broad portfolio

Veterinary medicines and vaccines that improve animal health



## Optimized consumption

Reduction of water by optimizing the production schedules to limit the number of cleaning cycles needed



## Waste management

>45 percent of manufacturing sites are zero waste to landfill; many are close to becoming zero<sup>2</sup>



## Waste destination

From biopharma, <20 percent of operational waste is sent to landfill or incinerated without energy recovery<sup>2</sup>



## Regulatory requirements

Meet and exceed local regulatory requirements for wastewater globally<sup>2</sup>



## Water flow management

Aqua portfolio helps manage water flow and its impact on aquatic species

## Waste and Water

## Animal Health and Welfare



## Energy and Emissions

## Products and Packaging

## Reduction of GHG emissions

Reduced overall GHG emissions by 12% since 2015. We continue to work towards the corporate goal to reduce operational GHG emissions by 46 percent by 2030 from a 2019 baseline<sup>2</sup>



## Renewable energy

30-40 percent of sites use renewable energy\* for some operations<sup>2</sup>



## Environmental team

50 percent of sites have an environmental sustainability team that tracks consumption of energy & water<sup>2</sup>



## Carbon footprint reduction

All manufacturing sites use Low Carbon Transition Playbook to reduce carbon footprint<sup>2</sup>



## Zero emissions and hybrid vehicles

40 percent of fleet vehicles are partial zero emission vehicles (PZEV), in Japan > 50 percent are hybrids



## Energy management certification

Most European manufacturing sites are ISO 50001 certified about Energy management<sup>2</sup>



## Recycled materials

15 percent Increased use of recycled packaging materials from 0 percent to 15 percent; to be completed by 2022



## Packaging updates

20 percent decreased packaging for BRAVECTO® chews by 20 percent and leaflet weight by 40 percent



## Innovative technology

SPHEREON® vaccines are produced and shipped in freeze-dried pellets saving packaging and energy in shipping



## Polystyrene elimination

New Zealand working to eliminate polystyrene from cold chain by using biodegradable wool



## Returnable boxes

Germany and Austria use returnable deliverable boxes that reduce CO<sub>2</sub> emissions, eliminate cardboard waste and lower breakage rate. Use of grass paper to print materials and bio air cushion films for packaging

<sup>1</sup> <https://onlinelibrary.wiley.com/doi/full/10.1111/jiec.12333>

<sup>2</sup> Manufacturing \*solar, wind, bio-gas or hydro