



# Working with you for livestock sustainability







# Together we're building a better future

Sustainability is at the core of our business. As a world leader in livestock health, nutrition and biosecurity solutions, we know that everything we do has an impact on not only the global food chain, but on people, the environment and our future.

We are committed to supporting the supply of safe food for today's global population, and for generations to come.

By investing in renewable energy and implementing processes which protect the planet's precious resources, we're on track to be carbon neutral in our production sites for Scope 1 and Scope 2 by 2030. And through our innovative products and expert solutions, we're also helping livestock producers to achieve higher levels of performance in the most sustainable ways possible.

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As a global organisation, we must ensure that only healthy animals feed the world. While we develop the animal feed innovation required to meet exploding demand, we know that business, government, philanthropy and NGOs have a role to play in helping future generations have a better chance at meaningful, sustainable lives. We believe safe and nourishing food, and a healthy environment are central to those goals. ”

**Kiril Domuschiev**  
Huvepharma President



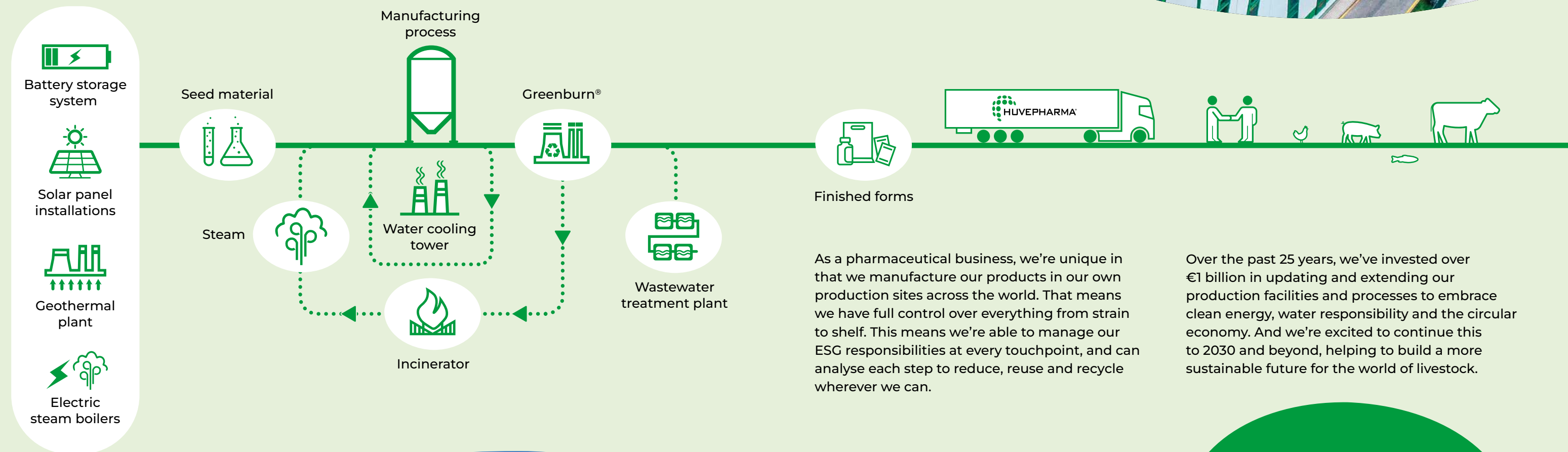
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# We're committed to being carbon neutral by 2030

At Huvepharma we're on a mission to minimise our environmental impact by 2030. In fact, our investments towards carbon neutrality have already reduced our overall carbon emissions by 30% since 2020.\*



# 30%

reduction in our overall carbon emissions since 2020.

\*We have reduced our Scope 1 and Scope 2 emissions in our production plants in Bulgaria.



# We're investing in renewable energy

To reduce our reliance on fossil fuels, we're investing €300 million in converting our production processes to renewable energy including solar energy, battery energy storage systems, Greenburn® and electrifying our natural gas steam boilers.

# 43%

of our steam production is already produced via Greenburn® plants.

All of our sustainability efforts are 100% self-financed. This means we retain full strategic and operational control over our renewable energy, for today and for the future.

By 2030, we will increase our solar capacity to 190 MW and our battery storage capacity to 317 MWh – enough to meet the current and future energy demands of our Bulgarian production plants.

## Solar energy

We're heavily investing in solar panels to power our manufacturing plant. We currently already generate 90 MW from our solar panels and by 2030 we will increase this capacity to around 200 MW.

## Battery energy storage

Starting in 2025 and finishing in 2026, we are investing in 172 MWh of battery storage capacity. This will help us to increase our use of renewable electricity to 50%.

Towards 2030, we will further increase this capacity to around 320 MWh.

On a group level, we also heavily engage in the production of renewable electricity. We already operate a solar panel installation of 106 MW in the town of Lozeh. In addition, with a capacity of 500 MWh, we introduced the biggest privately owned battery energy storage system (BESS) in Europe.

This is in line with the Bulgarian initiative to increase the country's consumption of solar energy. Our BESS also draws excess renewable power from the national grid to store and release back at times of high demand.

## Greenburn® installation

Steam is used to ensure sterile conditions in our production process. Our Greenburn® installation converts waste into heat which is used to produce steam. So far, over 40% of the steam we use is produced by renewable sources. And we estimate we can increase this to 50%.

By simultaneously producing electricity and steam in our co-generation plants, we boost energy efficiency as high as 90%. This decreases the electricity purchased from the grid and helps to decarbonise our production facilities.

## Geothermal plant

We are currently investigating the feasibility of a geothermal plant which would use heat from the earth to produce electricity.

## How clean energy is already making a difference

Our fermentation plant in Peshtera is now operating with 15% greater energy efficiency compared to a traditional facility. This improvement comes from a combination of the latest fermentation technologies, advanced energy monitoring systems, and innovative ways of reusing energy throughout the plant.

A key part of this efficiency is the integration of energy recuperation systems, including a Greenburn® system. The Greenburn® process incinerates manufacturing waste (biomass, hazardous materials and non-recyclable waste from our production process) and the residual heat is used to produce the steam used in our manufacturing cycle, replacing the need for natural gas.

Together, these technologies ensure that our Peshtera plant not only has efficient production processes, but is able to lower energy use, cut down on waste and reduce its overall environmental footprint.

Around

# 30%

of our electricity is already produced by our solar panels.



# Our production processes use water responsibly

At Huvepharma we don't just reduce water use – we rethink how water flows through our entire operation.

We have reduced our total water usage by

15%

## Reducing our reliance on freshwater

To limit our impact on the freshwater ecosystem, we've installed closed-loop recycling systems in facilities such as our cooling towers. This helps to reduce our reliance on external water sources in our production process.

Around

76%

of all the water we use is recycled or reused.

# We reuse and recycle where possible

At every step of our manufacturing process, we analyse ways we can reduce, reuse and recycle, in line with the circular economy model.

## Harnessing waste to make energy

Via our partnership with Greenburn®, we recover biomass and non-recyclable waste from our production process and convert it into energy which is then circled back into our production process to produce steam.

This helps us to safely dispose of hazardous waste, reduce landfill, and decrease greenhouse gas emissions. Around 40% of our steam production is already produced via this waste-to-energy principle.

As a community service, our Greenburn® plants also process around 4200 tons of municipality waste from the cities our plants operate in. In this way, we also help the community to reduce the amount of waste that goes to landfill.

## Cleaner ecosystems

Water that comes into direct contact with our production processes (for example, during fermentation) is treated in our on-site wastewater treatment plants. Here it's cleaned to meet strict EU standards, before being safely discharged back into the environment.

## Reducing the use of packaging materials

We engage with our suppliers to receive as many goods as possible in bulk, reducing packaging. For this purpose, we've invested in silos for bulk storage.

4,200

tons of municipality waste saved from going to landfill each year.



# We have full control with in-house production

Since we manufacture all our products at our own production sites, we are in the unique position of having complete control over everything from strain to shelf. This means we can produce high-quality life cycle assessments (LCAs) for our products.

We adhere to the highest quality and safety standards right along the supply chain, engaging with each partner and supplier to ensure everything is sustainable and resilient.

We do this through local sourcing and building long-term relationships. We also use tools such as ECOVADIS to monitor and evaluate our progress.



## Technology that reduces customers' transportation footprint

7 fold reduction in the carbon footprint of liquid enzyme usage

Our advanced Huvematic machine is one of the ways we're using technological innovation to reduce producers' impact on the environment.

The Huvematic enables customers to create liquid enzymes on-site, so there's no need for bulky IBC shipping and storing. That means a lower transport impact, better waste management and more sustainability all round. This reduces the carbon footprint of liquid enzymes used 7 fold. It also significantly improves waste management.

Sustainable solutions need to offer economic sustainability to livestock producers.

## Helping our customers achieve sustainability

As a global force in the livestock sector, we continuously drive technology, innovation and knowledge to create value and benefit for our customers.

We know that ensuring a truly sustainable and secure food supply is a global challenge. But we also understand that any sustainable solutions also need to offer economic sustainability to livestock producers.

At Huvepharma we're here to help, with products, technology and solutions to reduce livestock emissions and transport impact, plus in-depth expertise that empowers producers to ensure the health and welfare of their animals.



# Products that reduce the environmental impact of livestock

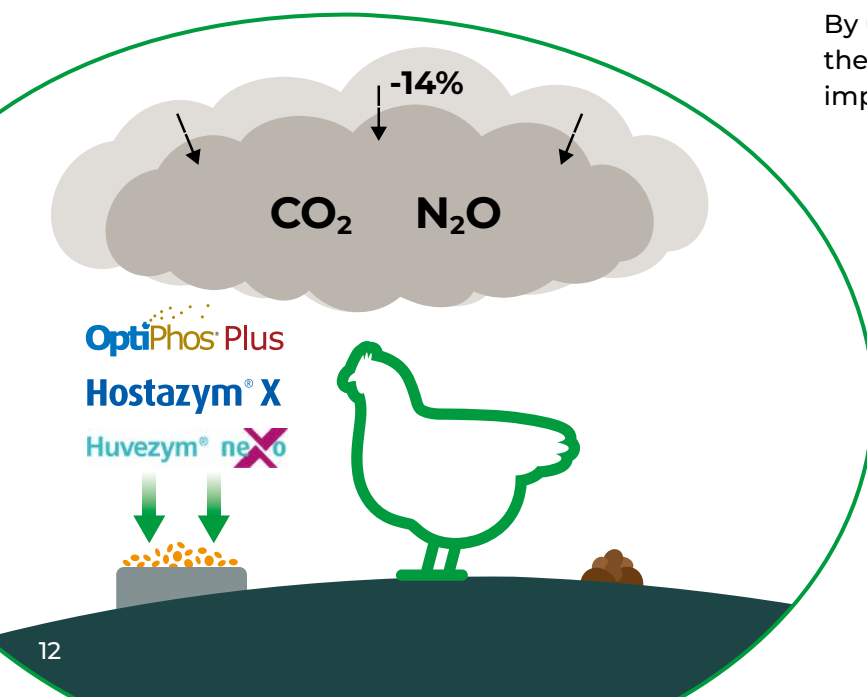
The livestock industry is responsible for around 12% of all greenhouse gas emissions and livestock feed production is a huge contributor to this. Our products and solutions are designed to help reduce that impact, by optimising feed efficiency in a sustainable way without compromising the health or welfare of the animals.

## Lower greenhouse gas emissions

Our enzyme products play a direct role in reducing greenhouse gas emissions from livestock production.

By including an enzyme which promotes nutrient absorption and efficient use, less feed is needed to achieve optimum growth and productivity. This helps lower the environmental footprint of farming by reducing the resources required to raise healthy animals.

Including enzymes in animal feeds also makes it possible to reformulate diets using low-carbon ingredients. For example, supplementing a diet with OptiPhos Plus allows the removal of monocalcium phosphate (MCP) which reduces the carbon footprint of the feed.



## Less pollution of the ecosystem

Our portfolio of enzyme products includes phytase products which are included in diets to help release essential nutrients from the feed, increasing their availability for absorption.

This reduces the amount of undigested phosphorous in animal waste by as much as 70%, lowering the risk of environmental pollution.

## Reduced land and water use in feed production

Because our feed additives reduce the quantity of feed required to produce the same quantity of eggs or meat, fewer environmental resources are needed to create that feed.

By using our products, our customers can play their part in reducing the overall environmental impact of the livestock industry.

## Advancing the circular economy in animal nutrition

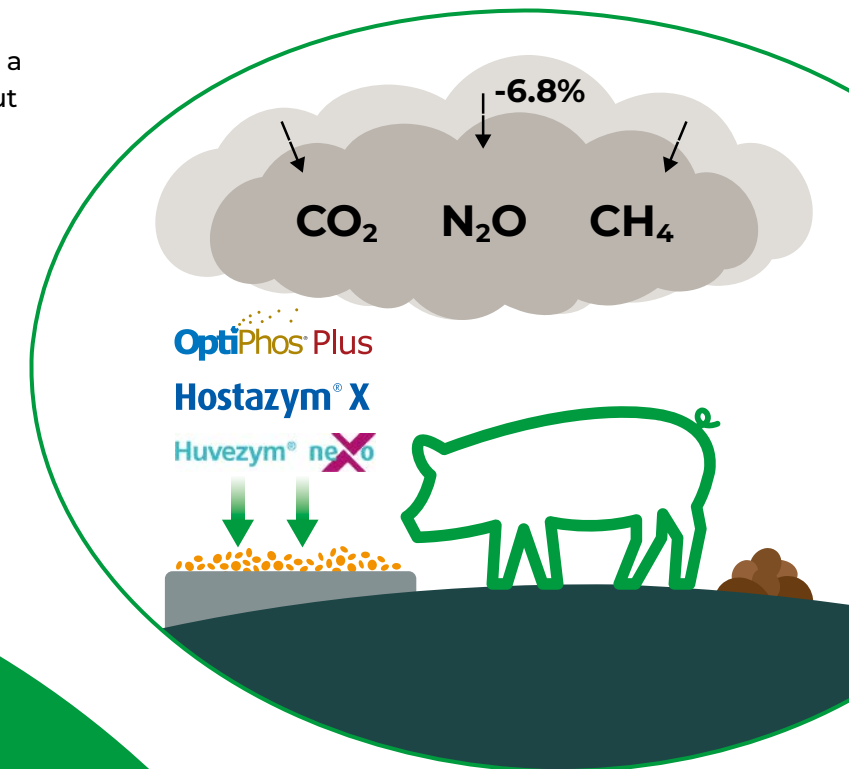
Our nutritional solutions help livestock producers get more value from by-products. With the concept of upscaling, we help livestock producers turn low-value food ingredients into high-quality proteins, contributing significantly to the circular economy.

By improving digestibility, our enzymes make current by-products more efficient for animals so a larger share can be included in their diets, without compromising nutrition or performance.

At the same time, our products also open the door to new by-products that were previously too difficult or uneconomical to use in feed. This expands the range of sustainable raw materials available to farmers, reducing reliance on traditional resources, and reinforcing the circular economy in livestock production.

## Our feed efficiency products in action

For pigs, feed contributes up to 70% of the environmental impact of the final meat. In poultry this figure can be as much as 80%. Our products help reduce this, by reformulating the feed with lower-carbon ingredients and by improving feed efficiency.



The carbon footprint of production can be reduced using Huvepharma enzymes due to:

- enhanced feed efficiency
- reduced carbon footprint due to diet reformulation



# Expertise that helps ensure animal health and welfare

An important part of livestock sustainability lies in ensuring the health and welfare of the animals. With our wide-ranging portfolio of biosecurity products, feed additives and veterinary products – plus our unrivalled in-depth expertise – we can help producers meet their responsibilities.

## Products and technology that prevent disease

We have a wide range of products and solutions that help keep livestock healthy, and we're always innovating to deliver the best solutions on the market.

### Biosecurity safety

Our biosecurity range helps producers against the introduction and spread of diseases.

### Gut health support

Our portfolio of gut health solutions – including probiotics and phytogenic products, promote a balanced microbiome.

By strengthening resilience against challenges like disease, environmental stress or variable feed ingredients, these solutions help safeguard animal health, feed efficiency, growth and welfare, while reducing economic losses for producers.



## Our innovative technology helps with health management too

We have a range of technology solutions specifically designed to help producers manage health and performance in a sustainable way.

- **Aviapp** enables producers to structurally follow-up and improve the health status, welfare and performance of their poultry flocks.
- Our **Biosecurity app** helps producers build the most cost-effective biosecurity programme possible.



As an animal health company we see it as our commitment to keep livestock animals healthy with the minimum use of antibiotics. We also recognise that whatever preventive strategy is applied, animals are still going to get sick. And when they do, it is our duty to provide the appropriate treatment.

It is our objective to minimise the use of antimicrobials in livestock production to safeguard their effectiveness now and in the future.

## Expert solutions for intelligent antibiotic use

Trained veterinarians are best placed to define what treatment is most appropriate and any antimicrobial treatment should always be under the supervision of a qualified professional.

We have a range of solutions and tools to help veterinarians and producers practice the intelligent application of antibiotics.

### Diagnostic tools for targeted treatment

With Huvecheck, farmers and veterinarians can quickly and effectively test calves and pigs for pathogens, ensuring the right diagnosis is made.

### Achieving the best treatment method

Our nanonization and microgranulation technology allows us to offer a wide product portfolio of administration possibilities, enabling veterinarians to select the most appropriate treatment method.

### Getting the dose right

Via the Huvepharma Dose Calculator app, we help producers ensure precise, practical, and compliant dosing of veterinary medicines.

### High bioavailability

Through pharmacokinetics and dynamic characteristics of molecules we develop products that ensure a very high bioavailability in the animal, resulting in effective treatments.



## Education and training

We invest continuously in the training of animal health professionals to ensure a wider understanding of livestock welfare and nutrition.

### Animal health training

We arrange and host global seminars for veterinarians to share our knowledge on gut health in poultry, and respiratory health in pigs.

### Accessing and distributing knowledge

Via conferences and practical training sessions, we offer livestock producers access to the newest information and trends in the field of nutrition and livestock production.

### Promoting and training responsible use

We provide guidance and training to veterinarians and livestock producers, helping them adopt best practices in animal health and welfare.

This includes promoting the responsible use of antimicrobials to ensure treatments are effective, targeted, and safe for animals and the environment.

## Monitoring of antimicrobial susceptibility

As an animal health company, we ensure that our products are as safe and effective as possible. We actively monitor antimicrobial susceptibility through a combination of internal programs and external partnerships across multiple sectors.

Huvepharma will initiate a *Mycoplasma gallisepticum* and *Mycoplasma synoviae* specific project to isolate and identify pathogens in poultry farms worldwide and use them for antimicrobial sensitivity testing. The project will be conducted in cooperation with local poultry customers in the most important poultry-production countries of Asia, Africa and Europe.

The project will help with pathogen identification on farms, resistance determination for antibiotics and promote antibiotic use according to Global Prudent Use Policies (EMA, WOA, WHO).



# And we're empowering people across the world



As well as looking after the planet, we're working hard to create a better future for people. We ensure that as a business, we actively invest in delivering opportunity and advancement, both for our own teams, and in communities across the world.

## Investing in our own people

By making learning and development opportunities as accessible as possible, we actively help our employees achieve their maximum potential and career goals.

We also run a worldwide programme of internships and scholarships, for young people entering the pharmaceuticals industry.

## Social and community initiatives across the world

Our global initiatives are designed to make a positive impact on the communities we work alongside.

From sports days for young people with learning difficulties in South Africa, to donating nourishing food to vulnerable people in India and helping underprivileged children learn business skills in Thailand, we're committed to helping make lives better.





- Affiliates / representative offices
- Manufacturing facility



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If you'd like to find out more about our carbon neutral strategy, and how we're helping customers be more sustainable, please contact us by emailing [sustainability@huvepharma.com](mailto:sustainability@huvepharma.com)

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