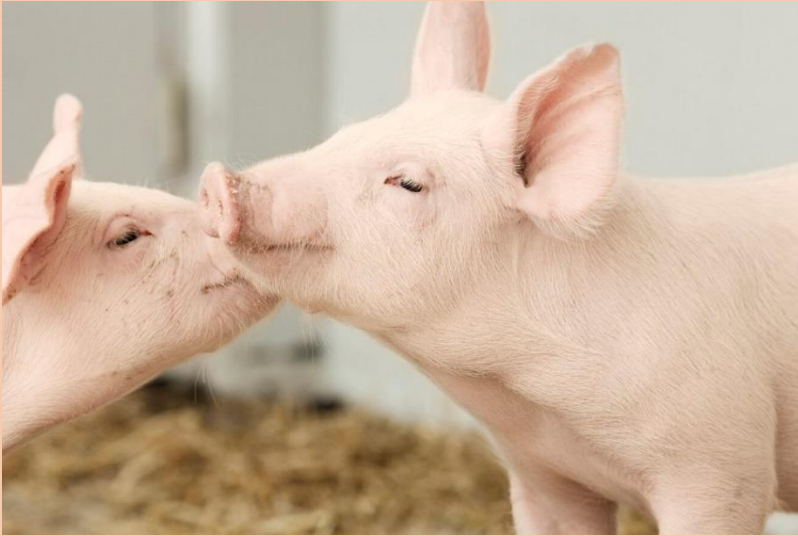


HEPARIN, AN OVERLOOKED EXAMPLE OF LIVESTOCK'S CONTRIBUTION BEYOND FOOD PRODUCTION



The **livestock sector** is not only producing **high-quality proteins** for human consumption. An often-overlooked aspect of livestock production is the supply of **important raw materials** for sectors and products outside of food production. An example is **mucosa from pigs**, which is used to produce **heparin for medical use**. On the WHO's Model List of Essential Medicines, heparin is an **anticoagulant** in treating and preventing thrombosis. Due to growing global demand for this medicine and a **reduction of livestock production** in some regions, for instance, within Europe, regional **shortages** of raw material for

producing heparin may become challenging.

Livestock production's contribution beyond food production

Livestock production is mostly viewed in a **food production** context. However, the importance and contribution of the livestock sector go far beyond providing affordable, high-quality proteins and **food security**. In fact, **parts of a pig** and various residues are used in **more than 180 very diverse products**, including medicines, cosmetics, batteries, biogas, isolation material, cement, soap, and so on...

Heparin

Heparin has for many decades been used as an **anticoagulant in treating and preventing thrombosis**, for instance, during a surgical operation, for artery, chronic and diabetic diseases, and within the older population. Heparin is on the [WHO's Model List of Essential Medicines](#) and is, therefore, a part of the [population's priority health care needs](#).

Using **animal parts to produce heparin** dates back more than 100 years. **Porcine mucosa** is the main source of the global production of heparin, and **90% of it came from porcine-based heparin** in 2022. Porcine mucosa is currently the preferred source material as it was found to be a much 'cleaner' source requiring **less degradation** compared with other sources, for instance, **bovine and synthetic**.



Looking to the future

The global population is growing and is expected to continue to do so in the future. Consequently, medical expenditures and **demand for medical products like heparin will also increase**. Although an uptake of other sources for heparin can be expected, **the porcine source will remain the backbone for this product [for the foreseeable future](#)**.

While the **global production of porcine mucosa** may grow in the future, regional differences in the **price and availability** of this raw material may occur. In this context, it is worth remembering that the **African Swine Fever** outbreak, [especially in China](#) (2019-2020), led to [supply concerns for heparin in the US](#). **A declining European porcine production will likely see the EU become a net importer of raw materials for heparin production.**

It's worth noting **the wider importance of the livestock sector**, not only as the source of our food production but also in **providing raw materials for essential life-saving products**. This is an important point which tends to be forgotten in the wider debates about livestock production.

