EFFAB Contribution to the Call for Evidence on the EU Livestock Strategy

1. Introduction

The European Forum of Farm Animal Breeders (EFFAB) welcomes the initiative to establish a comprehensive European Livestock Strategy. From our point of view, for this strategy to be effective, it must recognise **animal breeding as a fundamental part of the livestock value chain and as the starting point for livestock production, across conventional and organic systems.** Animal breeding is a highly innovative, high-added-value sector, where Europe currently holds a global leadership position in Research and in several market segments.

The genetic progress achieved through breeding is permanent, cumulative, and offers a high return on investment. By integrating breeding at the core of the strategy and combining it with other parts of the livestock value chain, the EU can address systemic challenges – such as animal health, welfare, and environmental footprint – both at the source and during the management/production phase.

A strong, innovative European breeding sector is therefore essential not only for food security and sustainability, but also for retaining value creation within the EU. The Strategy must ensure that the European livestock sector in general, and breeding in particular, remains attractive to investment.

Breeding is an essential factor in maintaining a good balance between market demands and production constraints. This is especially important given current societal expectations for more sustainable livestock production and higher animal welfare standards, and the need to improve EU farmers' competitiveness.

2. Genetics & Breeding

Balanced breeding approaches are central to improving livestock systems. This is achieved by reducing the environmental impact of livestock production, improving traits such as feed efficiency, disease resistance, robustness, longevity, and resilience. Genetic improvement is cumulative and permanent, making it a cost-effective, long-term lever to reduce emissions and resource use.

To ensure a balanced approach, the Strategy must differentiate between **Genetic Preservation** and **Genetic Improvement**, two complementary but distinctive objectives, and as such, the Strategy should provide targeted frameworks for both. In general terms, preservation requires conservation subsidies, while improvement needs a pro-innovation regulatory framework.

This links directly to the need to protect genetic diversity. As already recognised in the Common Agricultural Policy, safeguarding Europe's rich heritage of local and endangered breeds is vital for maintaining the broad genetic pool needed for future adaptation, while supporting rural landscapes and cultural heritage. Investments in conservation, characterisation, and responsible use of genetic diversity should be seen as an integral part of future-proof breeding strategies.

On the other hand, continuous selection supported by genomic selection tools, for traits that enhance efficiency, is at the heart of competitiveness in the agri-food chain, delivering tailored solutions for Europe's highly diverse production models. Modern breeding is no longer solely about production output; it centres on "Responsible and Balanced Breeding", as defined in Code EFABAR, selecting for product quality, improved animal health and welfare, and reduced environmental impact, among other objectives.

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For the EU breeding sector to remain globally competitive, the regulatory framework for New Genomic Techniques (NGTs) must be updated to make it science-based, proportionate, and supporting innovation. Without a clear and supportive regulatory pathway, there is a real risk that R&D investment and expertise will migrate to third countries where these technologies are already being developed and applied. In order to future-proof the EU breeding sector, the Strategy should therefore provide a pathway for the Commission to begin the work on NGTs in animals.

3. Alignment with Legislation

In order for the EU Livestock Strategy to deliver, it must be coherent with the broader legislative landscape. The livestock sector, particularly breeding and genetics, is directly affected by a range of EU policies, and the Strategy offers an opportunity to ensure alignment and to avoid conflicting signals across regulatory frameworks.

a. Animal Welfare

The welfare of farm animals at all stages of their lives is one of the core values guiding the work of animal breeders. EFFAB supports legislative revisions that effectively improve animal welfare, grounded in sound scientific evidence and practical knowledge from the field, within a framework that strives for more sustainable farming systems in Europe and globally.

Individual Housing at the breeding level

In several livestock species, particularly poultry, pigs, rabbits, and calves, individual housing or pens at the breeding level, are essential for the collection of individual data, controlled mating, and the preservation of genetic diversity.

At the pure-line level, birds are housed separately to capture reliable individual data, essential for conducting balanced breeding programmes, controlling mating, and maintaining genetic diversity, especially in smaller populations. Poultry breeders have been collaborating with scientists for many years on finding alternatives to separate housing. As stated by EFSA in its scientific opinions on the welfare of broilers and layers, "Individual data acquisition is essential to improve genetic lines with the objective of a continuous improvement of health and performance."

Therefore, banning separate housing without sustainable alternatives would significantly slow genetic improvement in essential sustainability traits and negatively impact the poultry sector in both meat and egg production. For minor species such as quails, or breeds where breeding is currently impossible without separate pens — including small populations and backyard breeds — it could mean the end of the production system entirely.

Transport of breeding animals and genetic material

The transport of animals for the purpose of disseminating genetic improvement is an essential part of the animal breeding process. Distribution of genetics (genetic material or breeding animals) locally, within Europe, and globally brings further sustainability to animal farming across all types of production, including conventional and organic systems.

We see some of the proposed requirements to restrain the transport of breeding animals as a limiting factor. These restrictions will severely compromise the health and welfare of breeding animals and impede trade within the EU and between the EU and third countries. Consequently, it will slow down

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the dissemination of genetic progress, as the distance between trading countries, in many cases, exceeds the proposed limits.

The genetic progress driven by genetics should be of equal access to all farmers. This progress translates into further sustainability, including improved animal welfare of the farm animal populations. Hence, it must be disseminated within the EU, regardless of the geographical situation, whereas the current proposal would significantly hinder this.

This situation is the same in relation to third countries; the restrictions would not allow EU breeders to continue contributing to the global sustainability of animal farming. Those restrictions will weaken the primary breeding operations based in Europe; large breeding companies will be pushed to move out of Europe, and small breeding companies, as they will not have the means to do so, will disappear. European farmers would become highly dependent on third countries, with crucial decisions on the breeding objectives to be taken abroad and with possible negative consequences on food safety and the welfare of animals.

b. Animal Health

Animal health legislation must account for the specific nature of germinal products, which are distinct from live animals in both biological and operational terms. A clear example of this gap can be found in Regulation (EU) 2023/361. Annex IX, Part 3, point 3.3(a) requires that donor animals be vaccinated against Lumpy Skin Disease (LSD) at least 28 days prior to the "date of dispatch." This follows the logic for live animal movements, but for germinal products, the relevant date should be the date of collection, since it is at that point that the health status of the donor and the safety of the product are determined. The current wording creates an unnecessary practical difficulty for breeding operators.

This example illustrates a broader need: the Strategy should ensure that animal health provisions systematically distinguish between the movement of live animals and germinal products and encourage the European Commission to correct such inconsistencies.

c. Bioeconomy

The animal breeding sector is uniquely positioned to bridge the gap between primary production and high-efficiency bioeconomy. Its contribution extends far beyond protein production; it is about resource valorisation and system circularity. The Strategy should promote efficient bio-based systems to support the transition to a more circular bioeconomy.

Breeding plays a central role in developing animals capable of valorising non-edible and alternative protein sources (grass, insect meal, algae, and industrial by-products) and in upcycling nutrients by converting low-value cellulose and agricultural residues into high-value proteins and essential fats. By improving feed conversion efficiency, nutrient use efficiency, and robustness, breeding reduces resource use per unit of output.

Breeding also contributes to a zero-waste approach by improving feed conversion ratios, enhancing longevity and robustness, and improving the quality and consistency of co-products used in other bio-based industries (e.g., wool, hide, or feather characteristics that support the European textile and materials sectors).

As the bioeconomy moves toward carbon neutrality, the breeding sector provides the most cost-effective biological mitigation tool: breeding and selecting for lower-methane-emitting lineages in ruminants and for higher land-use efficiency through approaches that better integrate plant-animal interactions.

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4. On-farm Sustainability Benchmarking (Code EFABAR)

The breeding sector has long recognised the need for voluntary sustainability benchmarking. Code EFABAR is the European sector's common tool for responsible and balanced animal breeding (Annex I). It was developed for and by EFFAB, with the first version published in 2005, and is reviewed every 3 years. Code EFABAR is signed by breeding associations and companies to showcase transparency in their breeding programs, whilst details on the individual responses remain confidential.

Code EFABAR covers key dimensions of sustainability, including animal welfare, genetic diversity, environmental impact, and better use of resources. It is a voluntary, sector-led initiative that demonstrates European breeders' commitment to continuous improvement and to aligning breeding practices with evolving societal expectations.

The EU Livestock Strategy should recognise and support initiatives such as Code EFABAR as part of the initiatives on benchmarking, complementary tools to regulatory measures, promoting good practice and self-governance within the sector. The Strategy could further encourage the uptake and visibility of such frameworks by referencing them in relevant policy instruments and supporting their alignment with EU sustainability reporting standards.

5. Strong link to Research & Innovation

The strategic integration of science and innovation in livestock breeding and genetics is key to a resilient, competitive, and sustainable EU food system. This includes improving resource use at all levels, from animal breeding and feeding strategies to circular farming and diversified production systems.

Europe’s livestock sector spans diverse farming systems and species - ruminants, pigs, poultry and small ruminants —requiring breeding, genetics and reproduction to be tailored to local conditions (housing, resources availability, climate, biosecurity), management and societal expectations.

By securing R&I funding, distinguishing between preservation and improvement, and building a robust data infrastructure, the EU can ensure a livestock sector that is not only competitive and bio-based but also adapted to diverse farming needs and realities, laying the foundations for a cost-effective, long-term positive impact.

Evidence (Annex II) from EU-funded research highlights both the strategic importance of animal breeding and a growing imbalance in its support. Between 2007 and 2025 (FP7 to Horizon Europe), 208 projects received approximately €551 million in EU funding, spanning both aquatic and terrestrial production systems. Yet despite this breadth, funding for animal breeding declined by 47% over the same period — even as the overall EU Framework Programme budget grew by 43%. In the agri-food domain, the gap is starker still: animal breeding funding fell by 56% while the total cluster budget increased by 277%.

6. Data Management: The Infrastructure of Balanced Breeding

To unlock the full potential of genetic improvement and preservation, the European Livestock Strategy must address the digital architecture of the livestock sector. Data is the foundation of genomic selection and the monitoring of sustainability-related traits. Therefore, the Strategy should support the collection and exchange of pre-competitive data (e.g., genomic, phenotypic, environmental data, health indicators, and biodiversity environmental data, health indicators, and biodiversity metrics) and, including emerging data types, like microbiome and welfare indicators) while respecting ownership and intellectual property protection. Recent Horizon Europe projects like RUMIGEN and

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GEroNIMO also demonstrate why this is critical. Their results relied on combining large-scale phenotypic, pedigree, genomic, epigenomic and environmental datasets, and the projects developed statistical methods to integrate these data layers into phenotype prediction. Without an enabling EU data framework, these advances will remain underused in practice.

The management of data should be based on the principle of FAIR principles (Findable, Accessible, Interoperable, Reusable "fair and smart data sharing")[1], where the primary producers of data (breeders and farmers) retain control over who accesses their information and for what purpose, ensuring a balanced distribution of value across the chain.

7. Other Potential Actions to Support Animal Breeding

Given that the Livestock Workstream is scheduled to continue meeting after the publication of the Livestock Strategy, we see a need to establish dedicated technical subgroups composed of experts from across the livestock value chain, civil society, and the responsible Commission Directorates-General. In particular, a subgroup on pre-farm gate activities requires urgent attention. The resilience and competitiveness of livestock farmers, and of the entire supply chain, depend heavily on the availability of feeding, breeding, genetics, reproduction, and animal health activities and products within the EU. As the starting point of all livestock production, breeding and genetics underpin long-term progress in productivity, sustainability, and welfare; ensuring their development and competitiveness is key to reducing farmers' dependence on imports and securing Europe's strategic autonomy in food production.

[1]PIGWEB FAIR Principles, https://github.com/PIGWEB-EU/FAIR-guidelines

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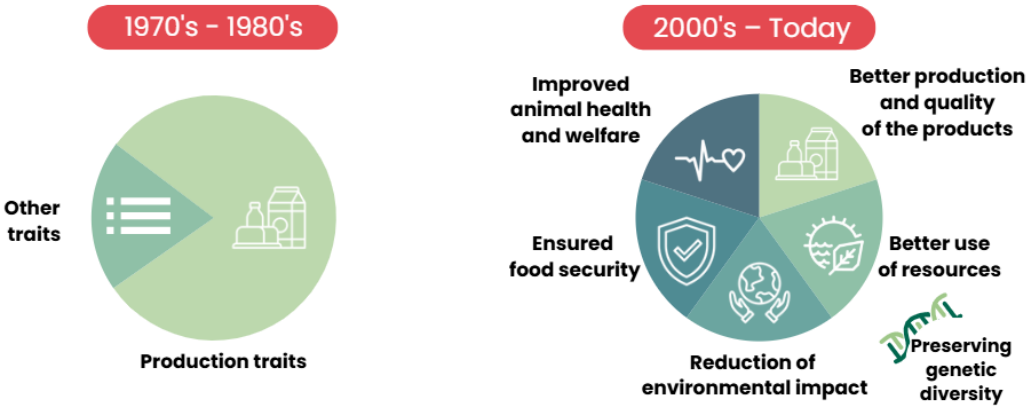
ANNEX I

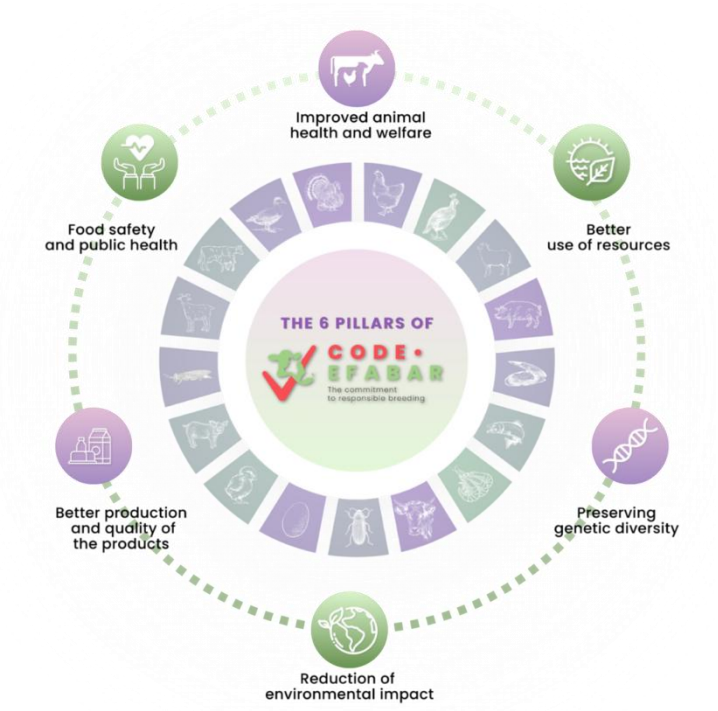
Code EFABAR

The code of good practices for Responsible and Balanced Animal Breeding

In the realm of animal breeding, the focus has traditionally been on productive traits. However, the last three decades have seen a significant shift towards sustainable practices. This evolution signifies a growing recognition of the importance of responsible and balanced breeding.



Code EFABAR embodies this shift. It is built on six pillars that form the foundation of modern, responsible, and balanced breeding:



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ANNEX II

Executive Summary – Rebalancing Investment in Animal Breeding and Genetics for the EU Livestock Strategy

Animal breeding and genetics are a cornerstone of the European livestock sector and a key enabler of its transition toward sustainability, resilience, and competitiveness. Through cumulative and permanent genetic improvement, animal breeding delivers long-term gains in productivity, resource efficiency, climate performance, and animal welfare, making them one of the most effective and scalable tools available to support the objectives of the EU Livestock Strategy.

Evidence from EU-funded research and innovation (R&I) highlights both the strategic importance of this domain and a growing imbalance in its support. Between FP7 and Horizon Europe (2007–2025), 208 projects received approximately €551 million in EU funding, involving partners from 58 countries. Animal breeding R&I supports the full diversity of European livestock systems, spanning both aquatic and terrestrial production: aquaculture accounts for approximately 50–60% of projects, while terrestrial systems—particularly cattle—represent a consistent and significant share.

Despite this breadth and relevance, funding trends reveal a structural misalignment. While the overall EU Framework Programme budget increased by 43%, funding dedicated to animal breeding declined by 47% over the same period. In the agri-food domain, the reduction is even more pronounced, with animal breeding funding decreasing by 56% while the total cluster budget increased by 277%. Current projections indicate that Horizon Europe will deliver substantially lower investment than previous programmes, despite increasing policy expectations.

At the same time, EU-funded projects demonstrate strong alignment with EU priorities and sectoral commitments such as Code EFABAR[1]. Research increasingly integrates sustainability dimensions: functional traits increased from 30% in FP7 to 57% in Horizon Europe, welfare traits from 17% to 26%, while production traits remain central (39–44%), and environmental traits are consistently addressed. This confirms that animal breeding is already contributing to a balanced approach across production, resource efficiency, animal welfare, environmental impact, and genetic diversity. Thus, supporting EU livestock farmers' competitiveness and more sustainable production.

Given the biological and systemic nature of animal breeding, progress depends on long-term data, multi-actor collaboration, and validation under real production conditions. Ensuring continuity and coherence in investment is therefore essential to fully realise impact.

Key Messages for the EU Livestock Strategy

- Animal breeding is a high-impact investment area delivering cumulative, permanent, and system-wide improvements in sustainability, productivity, and resilience.
- Current funding trends are not aligned with EU ambitions with a 47% decline in investment despite increasing policy expectations.
- The sector already delivers on EU priorities as demonstrated by increasing focus on functional, welfare, and environmental traits.
- Animal breeding supports all livestock systems across both aquaculture and terrestrial production, reinforcing its cross-sector relevance.
- A more balanced and strategic investment approach is needed to ensure continuity from research to application and maximise long-term impact.

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Conclusion

Animal breeding and genetics represent a strategic asset for the European Union. Aligning future investment and policy frameworks with their cross-cutting role will be essential to deliver a sustainable, competitive, and resilient livestock sector.

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