
FEFAC VISION ON ANIMAL FEED INDUSTRY

A knowledge driven, reliable partner of a competitive livestock¹ sector

The overall objective of the EU feed industry is the sustainable competitiveness of the EU livestock sector through the supply of safe, nutritionally optimised, competitive and environmentally friendly feed.

The EU feed manufacturers have the ambition to remain beside farmers to help them face the challenges of the EU livestock sector and make them make their own vision happen in providing innovative solutions and services for an optimised farm management.

FEFAC vision on animal feed industry:
A knowledge driven, reliable partner of a competitive livestock sector

FEFAC vision on feed safety management:
Sharing responsibility for feed safety along the chain

FEFAC vision on animal nutrition:
A multifunctional science, delivering solutions to a sustainable livestock sector

FEFAC vision on sustainability:
A responsible and resource-efficient feed industry

¹ Livestock is meant here for food producing land & aquatic animals

FEFAC VISION ON ANIMAL FEED INDUSTRY

The feed industry asked its experts to explore the future of animal feeding. The result is a vision that explores the potential benefits and contributions animal feeding can make to meet societal challenges, with three main angles as focal points: sustainability, animal nutrition and feed safety. This paper aims to provide the overarching view of how the feed industry can make the animal feed industry vision happen.

The Feed Industry: a pillar of the EU livestock economy

The nutritional requirements of livestock animals depends on many different factors. The feed composition takes into account the animal species, the stage of development and the genetic production potential, for example milk yield and daily live weight gain. The feed industry applies its vast knowledge of nutrition to determine the appropriate combination of feed ingredients to achieve the optimal nutrient balance meeting animal's needs. In addition, this compound feed also has to be cost-effective, and sustainable in the long run. Next to the scientific knowledge on nutrition, the feed industry has the technological processing capacities to provide large-scale solutions on efficiency, digestibility and microbiological safety.

Livestock production in the EU contributes significantly to the overall agricultural output, namely 40%. In 2015, 5 million farmers raised livestock with a total value of 161 billion € (figure 1).

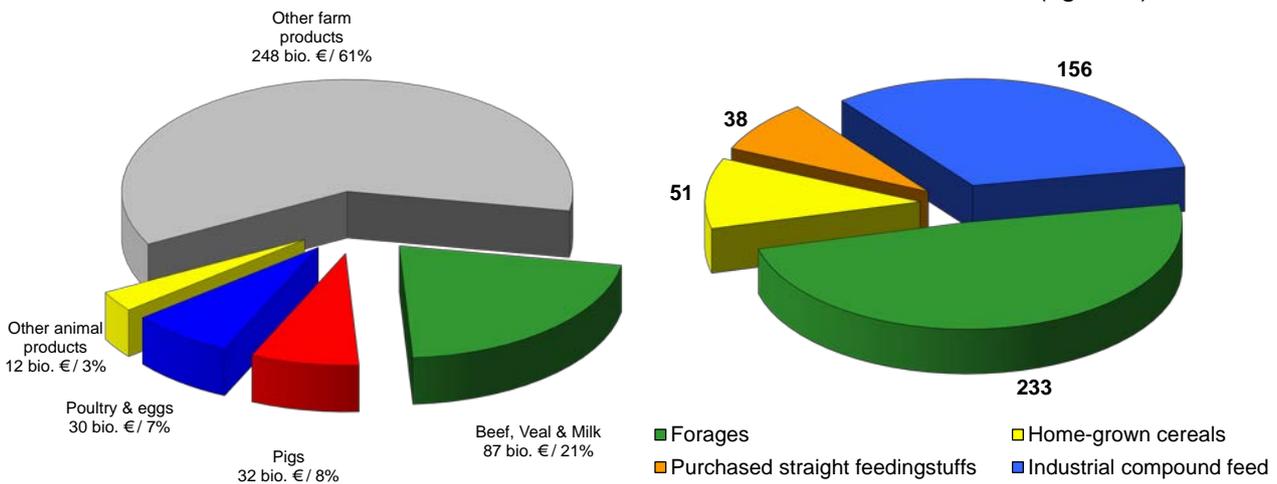


Figure 1: Value of farm production in 2015 in the EU-28 (source: EUROSTAT)

Figure 2: Origin of feed (in mio T) in the EU-28 in 2015 (source: FEFAC)

The European feed sector is an essential supply partner to the livestock industry and thereby the most important agricultural input industry in Europe. Farm animals in the EU-28 consume an estimated 478 million tons of feed a year (figure 2), of which 156 million tons are produced by the compound feed manufacturers.

The European feed sector is a pivotal link between farmers of arable crops and farmers of livestock as it connects both worlds by being a customer to the one and a supplier to the other. In addition, the European feed industry also converts a very significant amount of co-products that result from the primary processing segments of the food & drink and biofuel industries, thereby significantly contributing to their economic viability. A typical compound feed formula consists up to 40 % of co-products coming from these industries, as well as cakes and meals (see figure 3).

The European feed industry is a growing industry, with current turnover estimated at 50 billion € (excluding pet food and not accounting for the feed ingredient supply businesses). It offers direct employment to approximately 110,000 people in 4,000 plants. Many of these plants are situated in rural areas, which offer few employment opportunities. Most (85%) of the (compound) feed plants are SMEs, with an average annual production volume of 40,000 tons of compound feed per plant.

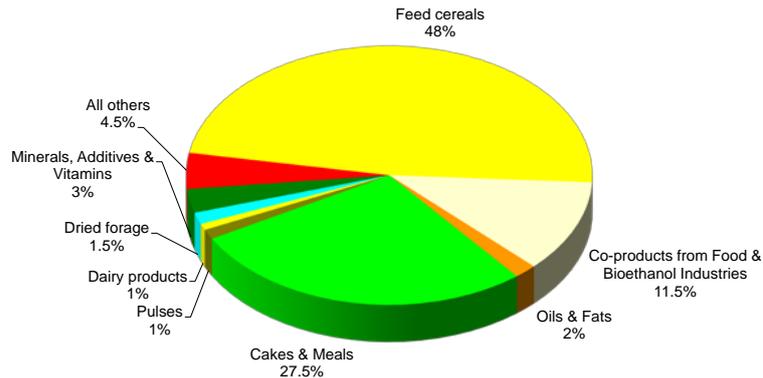


Figure 3: Use of feed materials by the EU-28 feed industry in 2014 (source: FEFAC)

The feed industry holds the key to allow farmers to adapt and anticipate market demands

By permanently exploring new feed resources, improving animal feed knowledge, investing in quality & safety management systems and stimulating innovation in more resource efficient feeding systems, the feed industry was among the key drivers of the evolution of livestock farming over the past 40 years. The feed conversion rate has been reduced, as well as emissions of nitrogen and phosphorous into the environment (for example through the use of phytase or protease and the use of amino acids to balance the diets), while the safety of feed and animal products increased.

Livestock farming is a very demanding business activity, requiring excellent technical and managerial skills, making of livestock farmers real entrepreneurs. EU livestock farmers face the challenges of sustainability and resilience, especially vis-à-vis third country competitors, while needing to meet consumers' expectations for safe, nutritious and high quality products of animal origin. They are also expected to address societal challenges such as reducing the use of antibiotics.

Livestock farmers themselves also have a number of expectations and demands:

- An activity providing a decent revenue: this means that any individual livestock farmer, whatever the species he rears and whatever the production system, should be able to obtain correct gross margins, which does not only depend on market prices but also on the production cost and a level playing field vis-à-vis third country competitors both on the EU and on the global market;
- Continuously improving working conditions: livestock farmers must benefit from technological innovation that minimise physical labour part ; this entails improvement in housing, feeding equipment and also occupational health, e.g. when handling veterinary medicinal products or certain feed additives;
- A good social image: the image of the livestock farming sector has suffered from a succession of sanitary crises, including feed-borne safety incidents, and also a civilian disconnect between the reality of modern livestock farming and the romanticism of small-scale agriculture; restoration of the image of the livestock sector requires a better control of feed safety, improvement of livestock management practices (biosecurity, animal welfare) and more transparency on for example feeding systems and environmental impact.

A number of economic actors and public authorities have a role to play to help farmers face these challenges. Feed manufacturers are among those who can deliver these services and meet the demands of farmers, citizens and consumers. Feed manufacturers can for example help to improve the feed efficiency by matching the needs of individual animals (precision feeding) or develop GHG mitigation strategies or feed safety management systems. However, this may only be achieved if the feed industry itself improves its resilience while remaining profitable to attract investors.

The EU feed industry: the partner of the EU livestock sector

The feed industry also adapts to the needs of individual farmers, bringing the most appropriate product or service. The feed manufacturer delivers the right feed for the right purpose. This can be a complete feed, a complementary feed if the farmer also produces feed on the farm (e.g. cereals, pulses, forages) or even dietetic feed to address specific needs of animals at specific physiological stages. With the delivery of feed comes professional advice on how to optimise the use of feed and implement livestock management strategies that respect animal health and welfare.

The feed industry has a long experience in anticipating market demand. It is the backbone of many livestock production systems and has always developed and supplied products meeting customers' specifications, including "organic" feed, "green" feed, "GM-free" feed, etc. In certain cases, the feed industry has even taken a leading role.

A highly skilled and regulated sector

Animal science is complex and involves a number of elements, making livestock farming business an exciting but know-how intensive activity. Over the years, the EU feed manufacturers have developed skills that are essential in modern livestock production, which are practically very difficult for farmers to develop by themselves:

- Excellent know-how on animal physiology, enhanced by private and private/public research programmes;
- Ability to reduce pressure on edible resources by giving value to co-products thanks to permanently increasing know-how and investigate new feed resources while ensuring their safety;
- Ability to safely handle ingredients / substances to secure compliance with legal requirements for their safe incorporation in feed (homogeneity of mixture, compliance with maximum dosage requirements): this capacity is acknowledged by public authorities via the delivery of official approval of feed establishments (Regulation (EC) No 183/2005) or of medicated feed establishments (Directive 90/167/EEC);
- Ability to improve worker safety by using innovative formulation of certain ingredients to reduce e.g. the dusting potential and thereby the exposure of workers, including farmers, to fine particles;
- Implementation of HACCP-based feed safety management systems, allowing the compound feed industry to control its own risks and verify that suppliers of feed ingredients have put in place adequate risk management procedures to guarantee the safety of feed additives / feed materials; in certain cases, the compound feed industry plays the role of gate keeper, i.e. taking charge of the responsibility to secure the safety of feed ingredients on behalf of the suppliers;
- Technological skills: manufacturing high quality, safe compound feed requires adequate equipment and technologies working accurately to exploit the full potential of feed and their ingredients, whether nutritionally or for other specific functions.

The feed industry in 2030

FEFAC analysed the present feed-related **drivers of change in the livestock sector and the feed industry in 3 vision papers on feed safety, sustainability and animal nutrition**. In short, the drivers for the livestock sector are:

- An increasing demand for animal products with potentially less resources available, i.e. the need to produce more with less;
- A permanent demand for safe, nutritious food, on the top of which comes the requirement to mitigate the livestock impact on the environment, to meet social expectations as regards transparency in the way animals are reared and to improve hygienic practices;
- A trend to alleviate trade barriers, both on exports and imports, making EU farmers more exposed to competition from third countries suppliers, which also provides opportunities on the global market.

EU livestock farmers will have to adapt and implement innovative solutions to meet these challenges and improve their resilience. The Feed industry will clearly play its role in this (r)evolution. Accelerated Research and Technology Development – based on an innovative approach – will be crucial in order to develop feed solutions addressing these diverse challenges, while allowing livestock farmers to remain competitive both on the EU and export markets.

The compound feed manufacturer in 2030 will be able to manage the complexity of natural variability using modern IT technology. This will basically translate into major orientations for a smart feed mill, which:

- Will establish closer links to suppliers to optimise the information system on the safety, sustainability and nutritional value of feed ingredients;
- Will be able to integrate sustainability parameters in formulation;
- Will adapt techniques to check the integrity of deliveries;
- Will be able to adapt more instantly the composition of the diet taking into account the variability of composition of the feed material used (variability intra and inter lots);
- Will establish an interface for data communication with farms on different parameters measured on the farm (health status, temperatures, breed, technical performance, etc.) in order to develop customised feeding strategies based for example on animal health status and optimise the delivery of nutrients to animals.

This last point will be crucial: collecting data via fast indicators and sensors at farm level will make it possible to develop techniques based on “precision feeding” so as to deliver the appropriate nutrients (and no less or more) at the right moment to the right animals depending on the animal’s physiological characteristics, stage of development and production and health status while taking into account its genetic potential.

This orientation will depend to a large extent on the ability of the livestock sector to invest in technologies, something which is out of reach for the EU feed industry and depends on the EU policy and the support of the financial partners. It will in particular depend on the EU Common Agricultural Policy and its ability to support the integration of the new sustainability parameters and challenges by the EU livestock sector.

What is FEFAC doing?

FEFAC is the spokesman of the EU compound feed and premixtures industry vis-à-vis EU Institutions, medias and other chain partners. The FEFAC mission is to:

- **represent, defend and promote** the interests of the European compound feed industry to the European Institutions;
- lobby for a legislative framework and its implementation, **without discrimination** in EU Member States so as to maximise market opportunities for EU compound feed companies;
- safeguard conditions of **free access to raw materials**, the proper functioning of their markets and the definition of their quality;
- **develop professional rules and good manufacturing practices including the sourcing of feed materials** that ensure the quality and the safety of compound feed;
- **encourage the sustainable development of livestock production** responding to the market requirements, so as to maximise market opportunities for EU compound feed companies;
- **encourage the development of precompetitive European feed-related Research & Development projects** seeking to enhance the EU feed & livestock sectors competitiveness and capacity to innovate in and/or transfer science and technology based solutions to **improve the sustainability of resource efficient livestock production systems.**