

## The International Feed Industry Federation (IFIF) is Committed to Measure, Benchmark and Reduce the GHG Impact of Livestock Production Globally



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IFIF is working with its members from around the world, as well as international organisations, such as the United Nations Food and Agriculture Organization (FAO), agri-food chain partners, and other key stakeholders to measure, benchmark and reduce the greenhouse gases (GHG) impact of livestock production globally. Through innovation and efficiency, animal feed has proven to be an essential part of the solution to make the livestock production chain more sustainable.

### I. Introduction

The International Feed Industry Federation (IFIF) represents over 80% of total compound animal feed production worldwide and is committed to continue to support and encourage the sustainable development of animal production. IFIF is working with its members from around the world, as well as international organisations, such as the United Nations Food and Agriculture Organization (FAO), agri-food chain partners, including the animal health industry which is a vital component and partner along the chain, and other key stakeholders to measure, benchmark and reduce the greenhouse gases (GHG) impact of livestock production globally. Through innovation and efficiency, animal feed has proven to be an essential part of the solution to make the livestock production chain more sustainable.

Livestock-raising and the consumption of animal products make a crucial contribution to the economic and nutritional wellbeing of millions of people around the world – particularly in developing countries. Yet the need to improve environmental performance of the livestock sector will continue as the FAO estimates that demand for livestock products will continue to intensify over the decades to come. Meat consumption is projected to rise nearly 58 per-cent by 2050; dairy consumption will grow 55 per cent over current levels and overall demand for food will grow by 60 per cent.

The central challenge facing the agricultural chain, and also societies around the globe, is how to meet this demand safely and sustainably, keeping in mind environmental, economic and social factors. IFIF believes that only by working together with all stakeholders in the feed and food chain, including governments, the private sector and non-

governmental groups, can we meet these demands of more food, including for animal proteins like beef, poultry, fish and dairy products, in the future. Given the diversity of livestock production systems around the world, it is important to find solutions that work locally, while ensuring food safety and quality from farm to fork.

Following the UN conference on Climate Change (COP21/ CMP11) in Paris, stakeholders on the agri-food chain continue to collaborate and strengthen sustainable food production to help contribute to dietary quality and nutrient adequacy around the world through the provision of safe, affordable, nutritious and sustainable feed and food. As we work together, IFIF will continue to champion science-based decisions, the need for continued innovation and better technologies, as well as regulatory convergence and free and fair trade as a basis for sustainable production in the future.

### II. Towards sustainable livestock production

The global feed industry has a longstanding commitment to improve feed efficiency by reducing the feed conversion rates for all major livestock and farmed fish species. In fact, the feed industry is an 'efficiency champion' and is committed to the FAO objective of a sustainable livestock sector by actively developing and promoting 'best practice' feeding systems and technologies, whose main contribution is improved resource efficiency of livestock production. As such, feed by virtue of continued innovation and efficiency gains, is a significant part of the solution to reduce the GHG impacts of livestock production.

Notably, the feed industry continues to develop better animal nutrition to avoid carbon or nitrogen losses into the atmosphere or water, through better use of forages, feed additives and diversifying protein sources such as canola meal and sunflower meal in feed rations, or legumes in pastures for ruminants.

In addition, key improvements in feed technology, such as balanced feeding and precision feeding the optimal addition of amino-acids and micro-nutrients, as well as significant advances in feed processing technology, a key contributor to improving feed efficiency, are driving improvements in the environmental performance of the livestock production chain.

Finally, the feed sector's capacity to give value to the sharply rising volume of food industry co-products and surplus foods, which can be safely used in feed production, thereby creating nutrient-rich human foods and reducing disposal waste, is another significant element to increase sustainability of livestock production. For example, in the US, co-products account for between 30 and 50 per cent of ingredients in animal diets, while in the EU, co-products make up 60 per cent of the feed industry raw material usage.

### III. Global feed industry initiatives to support sustainable production

At the international level, sustainability is one of IFIF's key strategic pillars: 'produce more, using less at an affordable cost to the consumer'. In order to support this, IFIF is working with its members and other stakeholders, including the agri-food chain partners and international organisations, such as the FAO, on a number of important projects.

IFIF provides leadership and expert input to multi-stakeholder FAO-led sustainability initiatives, including the Global Agenda for Sustainable Livestock and the Partnership on Livestock Environmental Assessment and Performance (LEAP).

Furthermore, IFIF has developed a number of strategic initiatives to measure and benchmark the environmental performance of the livestock production chain. IFIF is a founding member of the Global Feed LCA Institute (GFLI), which will use the FAO LEAP methodology to develop a golden global standard for assessing and benchmarking feed industry impact and improvement in LCA calculation, in order to support the reduction of the environmental footprint of livestock products.

IFIF has also, together with the EU Association of Specialty Feed Ingredients and their Mixtures (FEFANA) and a consortium of international companies and associations, launched the Specialty Feed Ingredients Sustainability Project (SFIS), which measured and established the role of specialty feed ingredients (SFIs) on the environmental impact of livestock production.

#### Global Agenda for Sustainable Livestock

IFIF is a founding member of the Global Agenda for Sustainable Livestock, which is a partnership committed to sustainable development of the livestock sector. As a member of the Global Agenda Guiding Group, IFIF has signed the Global Agenda Consensus and actively inputs into the work of the Agenda, supporting the development of the initiative since its start in 2010.

The agenda partners work together on three priority areas where improving practices should bring large environmental, economic and social benefits: production efficiency, grassland management and manure management.

IFIF is particularly engaged in the work on 'closing the efficiency gap'. This aims to stimulate the application of existing but not widely used technologies by the bulk of the world's producers, whose use of natural resources is often greatly inefficient. Agenda partners aim to develop public-private and other forms of partnership to transfer and adapt resource-use efficient technologies.

#### Partnership on Livestock Environmental Assessment and Performance (LEAP)

Environmental footprinting of livestock products is a challenging but essential task to improve the accuracy of

reporting on the real impacts of livestock products. This includes both understanding where the livestock chain stands in terms of impact and encouraging the benchmarking and measurement of both individual and collective reduction efforts.

IFIF together with the American Feed Industry Association (AFIA) and the European Compound Feed Manufacturers' Federation (FEFAC) is a founding member of the FAO-led Partnership on Livestock Environmental Assessment and Performance (LEAP), which aims to improve how the environmental impacts of the livestock industry are measured and assessed, an important step to reduce the impact of livestock products on the environment.

The LEAP partners have developed globally recognised sector-specific guidelines and methods for the life cycle assessment of GHG emissions from livestock food chains, including for feed, poultry, and small and large ruminants, which will become the golden global standards for measuring environmental efficiency in these supply chains.

In 2015 LEAP finalised the development of a groundbreaking methodology that introduces a harmonised, science-based, practical and international approach to the assessment of the environmental performance of feed supply chains, while taking into account the specificity of the diverse production systems that exist globally.

These global LCA Guidelines, published in April 2015, are an essential step to help reduce the impact of livestock products on the environment. The LEAP/FAO Feed LCA Guidelines represent a significant milestone for the global feed industry and will enable consistent and credible environmental assessments with a view to reduce the environmental footprint of livestock products. The guidelines also form the basis of the Global Feed LCA Institute (GFLI).

#### Global Feed LCA Institute (GFLI)

Feed is an important part of the agri-food chain and it is essential that feed operators are able to understand their impact, not only from a business efficiency perspective but also to meet the expectations of our customers and public bodies, both at national and international levels.

Following the official publication of the LEAP Global Feed LCA Guidelines methodology in April 2015, IFIF, together with AFIA and FEFAC, set up the Global Feed LCA Institute (GFLI). Over the next three years, the GFLI will work to implement the internationally recognised FAO/LEAP methodology by developing a high quality globally recognised, region-specific and harmonised public database to support meaningful LCAs of livestock products.

Supported by the FAO and LEAP, the GFLI is working to bring the major feed-producing regions to the initiative with the aim of becoming the golden global standard for assessing and benchmarking feed industry impact and improvement in LCA calculations. This will result in harmonized, region-

specific environmental assessments for livestock and poultry production, allowing the adoption of best practices for mitigation, while measuring continuous improvement.

The GFLI partners aim to develop and build a feed-specific publicly-available LCA tool to facilitate environmental assessments and the measurement of continuous improvement, which is both comparable and measurable across world regions.

The database and the tool would be public and freely accessible. The Global Feed LCA Institute has established a formal partnership with FAO and LEAP, to ensure that the deliverables of the GFLI are compliant with the LEAP methodological requirements.

#### **The Specialty Feed Ingredients Sustainability Project (SFIS)**

IFIF, together with the EU Association of Specialty Feed Ingredients and their Mixtures (FEFANA) and a consortium of international companies and associations, launched the Specialty Feed Ingredients Sustainability Project (SFIS) to measure and establish the role of specialty feed ingredients (SFIs) on the environmental impact of livestock production.

The study undertook a life cycle assessment (LCA) in conformity with the ISO 14040/44 standards in order to analyse the cradle-to-farm gate environmental performance of pig and broiler production, with and without specialty feed ingredients supplementation and to provide credible scientific evidence for informed decision-making in areas related to the environmental impact of specialty feed ingredients.

The SFIS analysis examined the use of low protein diets (nitrogen) and phytase (P) in pigs and poultry. The overall results of the study demonstrate that the use of SFIs in animal diets reduces the consumption of basic feed ingredients. Furthermore, the study demonstrates that the use of SFIs, such as amino acids and phytase, results in clear reductions of the Global Warming Potential (GWP), as well as the eutrophication and acidification potential during livestock production.

It became clear that the use of these SFIs in animal nutrition provides concrete benefits to the environmental impact of animal production, for example reducing the excretion of certain nutrients, such as nitrogen and phosphorus, improving the performance of the animals, and reducing the feed consumption or allowing the use of locally-based or unusual feed materials.

In 2015, the results of the study were validated by an independent scientific council, made up of global experts in the fields of LCA methodology and animal nutrition to ensure scientifically robust inputs in the analysis, and prepare the ground for a peer-reviewed publication of the project, which will be published in late 2015.

This study should have a direct positive impact on the

future environmental footprint of the feed and food chain. In addition to the positive results, the study also points towards future developments, such as improved feed conversion driven by advancing technologies in animal feeding through using SFIs.

#### **IV. Conclusion**

The International Feed Industry Federation is committed to measure, benchmark and reduce the GHG impact of livestock production globally and will continue to support and encourage the sustainable development of animal production. Through innovation and efficiency, animal feed has proven to be an essential part of the solution to make the livestock production chain more sustainable.

To learn more about IFIF's GHG-related initiatives, please visit our website [www.ifif.org](http://www.ifif.org) and we look forward to working with many of you in the vital animal health sector in the next years. Together we can contribute to the sustainable supply of safe, healthy feed and, therefore, food of animal origin.



**Alexandra de Athayde** is Executive Director of the International Feed Industry Federation (IFIF), a post she has held since her appointment in April 2011.

Ms de Athayde has extensive agriculture and international experience, representing the industry with governments and businesses. She previously held positions within the Monsanto Company Corporate Affairs Department in Brazil, the US and Europe. She has also worked for the Brazilian Government as Adviser to the Deputy Minister of Agriculture and as Adviser to the Foreign Trade Secretary.

Ms de Athayde holds an International Executive M.B.A. from the University of Pittsburgh, USA and a B.A. degree in International Relations from York University in Canada. She is based in Wiehl, Germany.

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