In 2050 there will be over 9 billion people in the world... and the need for food will be 60% higher than today.

It is vital that the feed sector, as well as the wider agricultural chain, can meet future demands in a sustainable, safe and affordable manner, while maintaining consumer trust and confidence in the food supply chain.
In the last two years the International Feed Industry Federation (IFIF) has grown from strength to strength thanks to the engagement of our members from around the world and a sharp focus on our vision and mission as the one voice for the global feed industry.

We invite you to explore the 2020/21 IFIF Annual Report and see for yourself.
Welcome Letters

DR. DANIEL BERCOVICI
Chairman IFIF 2020/21

The feed industry is at the center of one of the most significant challenges facing our societies in the next decades: how to feed a growing world population and do so safely, sustainably and affordably. Looking ahead, as many of you know well, demand for livestock products will continue to increase over the decades to come.

+ READ MORE

ALEXANDRA DE ATHAYDE
Executive Director IFIF

Despite the challenges the global Pandemic has imposed on all of us, in 2020 and 2021 our Federation initiated and participated in a number of important activities, while strengthening our relationship with key stakeholders across the livestock chain, and solidifying IFIF’s position as the voice for our industry globally.

+ READ MORE
Dear IFIF Members, dear friends and colleagues,

The feed industry is at the center of one of the most significant challenges facing our societies in the next decades: how to feed a growing, urbanizing, world population expected to reach over 9 billion by 2050 and do so safely, sustainably and affordably. Looking ahead, as many of you know well, demand for livestock products will continue to increase over the decades to come.

In meeting these future demands, I believe sustainability – produce more with using less high-quality and safe livestock products at an affordable cost under efficient production systems – is not optional.

In the last two years, the global Pandemic has upended the way we do business and has highlighted to the world that the feed industry is an essential participant in the food chain. Around the world, the feed industry stepped up to meet the challenges of the Pandemic and ensure a continued supply of feed and therefore food. Never before was it as clear that our industry essential workers are vital to the global feed and food system, ensuring people can continue to eat, even in these challenging times.

Animal nutrition has a role to play to develop even better livestock farming for the human population, the planet environment, animal health and welfare under diverse production systems around the world. I believe that science-based standards must be further constructed and implemented to raise up and acknowledge the quality of production systems, food products and their contribution to a better animal health and welfare as well as the solutions to mitigate the environmental impact of livestock farming. Consumers want healthy nutritious and affordable food products, with an increasing consideration of the respect of the planet.

At the same time, we have to invest in the development of innovation and technology through a dynamic private sector and public research, in conjunction with an adequate regulatory frame and fair-trade rules. Together, we can tackle the challenges of animal nutrition to support the production of nutritious, safe and healthy foods.

I am pleased to report that the International Feed Industry Federation (IFIF) is fully
engaged in meeting these challenges and providing a unified leadership for our industry in the food chain that provides sustainable, safe, nutritious and affordable food for a growing world population. And through all of this do our part to ‘feed the world’ now and in the future.

As you will see in this IFIF Annual Report 2020/21, our Federation continues to work on a number of strategic projects, which will positively impact the environmental footprint, the international regulatory framework, as well as the efficiency of our sector, while supporting capacity development for feed safety in key world regions.

Despite the challenges imposed by the Pandemic, in 2020 and 2021 our Federation has been able to continue its important work on behalf of our global industry.

In January 2020, many of you joined us for what proved to be our last face-to-face meeting at the International Feed Regulators Meetings (IFRM) in Atlanta. It was a very successful event and I am pleased that the IFRM, organized by IFIF together with Food and Agriculture Organization of the United Nations (FAO), continues to grow and attract government officials and IFIF members from around the world.

In 2021 we were able to hold the IFRM as a virtual event, and despite not seeing each other face to face, we broke attendance records and reached feed regulators and IFIF members from around the world, who traditionally have not been able to travel to Atlanta. I am confident that the IFRM will continue to be the essential meeting where the public and private sector can collaborate on essential topics for the feed and food sector, such as food safety and nutritional innovation.

The success of our joint IFRM, as well as our long-standing partnership on capacity development in feed safety and spreading of good feed manufacturing practices, are just two highlights of the strong collaborative relationship between IFIF and FAO dating back many years.

In 2010 FAO and IFIF published the "Manual of Good Practices for the Feed Industry", which has been released in English, Chinese, Arabic, French and Spanish and distributed widely to the feed sector professionals and operators. In 2020, IFIF and FAO fully updated and revised this important manual to address the recent developments in feed production and benefit from latest scientific and technical knowledge. This new manual is already being translated into Chinese and Vietnamese.

IFIF is also an active participant in the FAO-led Global Agenda for Sustainable Livestock, and an official stakeholder in the Livestock Environmental Assessment and Performance (LEAP) Partnership. IFIF will continue to be strongly engaged in these efforts and I am very pleased that LEAP in 2020 finished an important guidance document on feed additives, which our IFIF experts contributed to.

IFIF also strengthened its long-standing relationships with the Codex Alimentarius Commission, the World Health Organization (WHO) and the World Organization for Animal Health (OIE).

Over the last two years, we launched a number of important new initiatives, which will benefit not only IFIF members, but also the wider feed chain.

Since January 2020, when I led a delegation of the IFIF Sustainability Steering Group members to Davos for a UN Food Systems Summit (UN FSS) kick-off dialogue, IFIF has been engaged with our livestock chain partners as we follow the developments and preparations for the UN FSS to be held on 23 September 2021.
As part of these efforts, we have strengthened and widened our collaboration with our Livestock Chain partners, including IMS, IPC, IDF, World Farmers Organization, HealthforAnimals, RTSB and Global Dairy Platform, coordinating input with them into the UN FSS, including via the Global Agenda and the Private Sector Mechanism of the Committee on Food Security (CFS).

In 2021, we updated the IFIF e-learning course on ‘Good Production Practices in the Feed Industry’, an online training programme based on the IFIF FAO Feed Manual of Good Practices for the Feed Industry, which focuses on increasing safety and feed quality at the production level. We are now translating the course into other languages, including Spanish.

I am also pleased that the important IFIF work on Nutritional Innovation continues. Many IFIF Members are engaged in this and the work has already highlighted how the feed sector plays a critical role in supporting animals’ optimal health with high resilience capabilities to stressors through safe and high-quality feed (feed formulation and processing) and access to nutritional innovation.

Each of these initiatives and our successes would not be possible without our IFIF members’ engagement in our expert committees, as well as the support of the IFIF Board of Directors and the IFIF Executive Committee. I want to thank all of you for your involvement and your continued support of our Federation.

Finally, over the last two years, our Federation continued to increase its membership and geographical reach and I want to again welcome all our new Members to the IFIF family!

I want to thank Alexandra de Athayde, IFIF’s Executive Director, for her leadership and together with Sebastian Csaki, for their continued excellent work and dedication to IFIF.

It has been an honor and a pleasure to serve as your Chairman over the last four years and to lead the organization in such exciting and also tumultuous times. Thank you for the trust you have placed in me and it is my pleasure to report that I leave you with IFIF on a strong footing for the future. I know that together we will continue to work towards meeting future challenges and advance our industry for the benefit of people all around the world.

Yours sincerely,

Daniel Bercovici
Chairman 2018 – 2021
International Feed Industry Federation
Dear Members, dear Colleagues,

The last two years IFIF has grown even stronger and I am pleased to report that despite the challenges the global Pandemic has imposed on all of us, in 2020 and 2021 our Federation initiated and participated in a number of important activities, while strengthening our relationship with key stakeholders across the livestock chain, and solidifying IFIF’s position as the voice for our industry globally.

In the last two years, the global Pandemic has upended the way we do business and has highlighted to the world that the feed industry is an essential participant in the food chain. Within this context, IFIF has continued to focus strongly on our vision and mission with our work centered on three strategic pillars, which reflect the key priorities of IFIF to support our industry on the road to the future.

This 2020-2021 IFIF Annual Report highlights the work we have undertaken and details our accomplishments and how we have managed to positively impact our industry by working together with our members and stakeholders.

This report also includes updates from all our national and regional association members, including feed and livestock production statistics, and I want to thank all of them for their contributions.

The IFIF family continues to grow and I want to recognize our new IFIF members, which joined in the last two years. These organizations all are contributing to IFIF’s mission and vision and we thank them for supporting IFIF’s work: Chr. Hansen, Pilemico and Laboratoires Phodé.

I want to thank our dedicated 2020-2021 standing Committee Chairs Leah Wilkinson (Regulatory), David Bray (Sustainability), and our Nutritional Innovation Working Group Chair Karine Tanan, as well as all the Members of our expert Committees and Working Groups for their support and expertise, which underpin IFIF’s accomplishments.

Finally, this report provides an accounting of our organization’s structure, our membership, as well as our Board of Directors and Executive Committee.
I want to thank our outgoing Treasurer, Reinder Sijtsma, for his diligent and continued oversight of the Federation’s finances and his outstanding service to IFIF as Treasurer since 2014.

I want to thank our outgoing Chairman for 2018-2021, Daniel Bercovici, for his outstanding leadership of IFIF over the last four years and his dedication, value and expertise which he has brought to IFIF as Chairman, but also as a Board member of IFIF since over a decade. It has been a pleasure and honour to work with him and please join me in wishing him much success and all the best for his next adventures.

Last but not least, I want to thank our dedicated Executive Committee and our entire Board of Directors for their continued and strong support of IFIF’s mission and work.

Pillar I: Sustainability

One of the key parts of IFIF’s mission is to continue to support and encourage the sustainable development of animal production. To this end, IFIF has developed a number of strategic initiatives to measure and benchmark the environmental performance of the livestock production chain.

Our IFIF Sustainability Projects Steering Group composed of high-level experts drawn from our membership, continued its works over the last two years to closely align and cross-leverage our existing sustainability initiatives, while providing thought leadership for IFIF in this critical area.

One key issue the last year has been the United Nations Food Systems Summit (UN FSS), to be held on 23 September 2021 (see https://www.un.org/en/food-systems-summit). IFIF has been engaged with our livestock chain partners as we follow the developments and preparations for the summit to ensure the voice of the livestock sector is also heard.

IFIF continues to provide leadership and expert input to the multi-stakeholder FAO-led sustainability initiatives, including the Global Agenda for Sustainable Livestock and the Partnership on Livestock Environmental Assessment and Performance (LEAP). In 2020 and 2021 IFIF worked to support LEAP+, both through our work in the Steering Committee, as well as by providing IFIF experts to the LEAP Technical Advisory Groups (TAG) on methane in 2021 and feed additives in 2020. We will continue to support this important initiative in 2022 as Leap Phase 4 kicks off.

IFIF is a founding member of the Global Feed LCA Institute (GFLI), which is working to use the LEAP methodology to develop a global standard for assessing and benchmarking feed industry impact and improvement in LCA calculation and we remain committed to support the broadening of this initiative to other world regions.

Following the launch of the LEAP guidelines on the environmental performance of feed additives in livestock supply chains, IFIF as part of its commitment to support the practical implementation of LEAP guidelines, has worked in 2021 with FEFANA and the Global Feed LCA Institute (GFLI) to develop a project to facilitate the implementation of these guidelines within the GFLI. The project will be implemented via a new joint GFLI /
The last two years we also continued to support the Specialty Feed Ingredients Sustainability Project (SFIS), which has now completed Phase 3. The aim was to achieve a harmonized approach for the assessment of the use of SFIs in animal feeding on a cradle to farm gate approach and I am very pleased that SFIS was able to provide a helpful base for the development of the LEAP feed additive guidance.

**Pillar II: Regulatory & International Standards**

Another key part of IFIF’s mission is to support worldwide trade and ensure that future demands for feed and food can be met efficiently. IFIF works to promote a balanced regulatory framework to support a fair global playing field to facilitate market access and support the competitiveness of the feed and livestock industries.

The 13th International Feed Regulators Meeting (IFRM) held in Atlanta in January 2020 and organized by IFIF in cooperation with the Food and Agriculture Organization of the United Nations (FAO) once again brought together record numbers of feed industry representatives and government officials from around the world to discuss critical issues facing the feed sector with IFIF and the FAO. This also was proved to be the last time many of us saw each other face-to-face.

In 2021 we held the 14th IFRM as a virtual event, and despite not seeing each other face-to-face, we broke attendance records and reached feed regulators and IFIF members from around the world, who traditionally have not been able to travel to Atlanta.

IFIF is a founding member of the International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF) and I am happy to report this important international cooperation has continued to grow and produce important and well-received guidance documents.


IFIF also joined global regulators at the annual Sessions of the Codex Alimentarius Commission (CAC) in 2020 and 2021, where together with the FAO, we kept feed safety on the agenda. IFIF was also actively involved in a number of important Codex electronic Working Groups, as well as active in the Codex Committee on Contaminants in Foods (CCCF), the Codex Committee on Residues of Veterinary Drugs in Foods (CCV/RDF) and the Task Force on AMR. We will continue to provide expert input into the various Codex WGs and Committees in the year ahead.

IFIF joined the World Organisation for Animal Health (OIE) 88th and 89th General Session, highlighting our on-going support in the development, updating and implementation of OIE standards and guidelines to contribute to improved animal health and productivity.

In 2020 and 2021 the important work by the IFIF working group on Nutritional Innovation continued at pace, and among other things the work has already highlighted how the feed sector plays a critical role in supporting animals’ optimal health with high resilience capabilities to stressors through safe and high-quality feed (feed formulation and processing) and access to nutritional innovation.
In July 2020, the Regulatory Committee held a workshop to evaluate the level of acceptance of nutrition to support animal health and well-being in the different jurisdictions. As a result of this workshop, further work has been developed to collect good practices for reaching out to jurisdictions on the role of adequate nutrition in animal health and well-being (mitigation options).

**Pillar III: Education & sharing of Best Practices**

A third key element of IFIF’s mission is to support sharing of good practice and to promote science-based solutions for the feed industry and facilitate dialogue among key stakeholders.

I am very pleased that in 2020 IFIF FAO launched the fully updated “Manual of Good Practices for the Feed Sector”. As you may know, this Manual was first published in 2010 and has been a valuable tool to increase knowledge and improve feed safety at the production level, and it is widely recognized and used in many countries around the world. This second publication is a fully revised, updated and expanded version of that Manual and addresses recent developments in feed production and benefits from the latest scientific and technical knowledge. It has been very well received and the new manual is already being translated into Chinese and Vietnamese.

In 2021, we updated the IFIF e-learning course ‘Good Production Practices in the Feed Industry’, an online training programme based on the updated IFIF FAO Feed Manual of Good Practices for the Feed Sector, which focuses on increasing safety and feed quality at the production level and which has reached over 500 participants in over 60 countries. IFIF partnered with the e-learning training platform Anpro Campus to develop this e-learning course to further expand the scope of the successful IFIF Global Animal Nutrition feed safety training programme ‘Train the Trainer’.

IFIF is a founding partner of the FAO-led Feed Safety Multi-Stakeholder Partnership, which was formally launched in April 2018 and aims at improving the safety of feed, and thus enhancing food safety, animal health and welfare and food security.

**Looking ahead 2022**

With the global Pandemic still affecting us, 2022 still promises to be an important and exciting year for our Federation under the leadership of our new IFIF Chairman for 2022-2023 Ruud Tiissens.

We will kick-off with our 15th International Feed Regulators Meeting (IFRM), which promises to be another excellent meeting, albeit virtual.

At the IFRM we will also continue to drive our feed safety capacity development efforts for 2022 and reach out to potential partners as we plan new virtual trainings together with the FAO in Africa and Asia.

In 2022 we will continue our efforts to reach out to potential new members and support the building of national and regional feed associations, particularly in Africa and the Asia-Pacific region, in part as we start to prepare for the organization of the next 7th Global Feed & Food Congress.

I look forward to working with all of you to drive IFIF forward in the next years to ensure we can provide a unified leadership role for our industry in order to contribute to the sustainable, safe, nutritious and affordable food for a growing world population.
Thank you all for your continued support of IFIF.

Alexandra de Athayde
Executive Director
International Feed Industry Federation
Our Vision

IFIF’s vision is to provide a unified voice and leadership to represent and promote the global feed industry as an essential participant in the food chain that provides sustainable, safe, nutritious and affordable food for a growing world population.
The International Feed Industry Federation (IFIF) provides a unified voice and leadership to represent and promote the global feed industry as an essential participant in the food chain that provides sustainable, safe, nutritious and affordable food for a growing world population.

Despite the challenges the global Pandemic has imposed on all of us, in 2020 and 2021 IFIF initiated and participated in a number of important activities, while strengthening our relationship with key stakeholders across the livestock chain, and solidifying IFIF’s position as the voice for our industry globally.

In 2020-2021, IFIF undertook a number of projects to meet this challenge and continued to develop stronger relationships with international stakeholders, while welcoming a range of new Members to IFIF.

Over the last two years, IFIF continued its sharp focus on our strategic work plan. To support our industry on the road to the future, IFIF’s work with its Members and stakeholders is centred on three strategic pillars:

- Sustainability
- Regulatory & International Standards
- Education & sharing of best practices.

IFIF is made up of national and regional feed associations from Africa, Asia Pacific, Europe, North and South America and the Middle East, as well feed related organizations and corporate members from around the globe.

“IFIF members represent over 80% of total compound animal feed production worldwide.”
IFIF believes that only by working together with all stakeholders in the feed and food chain, including governments, the private sector and nongovernmental groups, can we meet the demands of 60% more food, including animal proteins like beef, poultry, fish and dairy products in the future.

Given the anticipated growth of the world’s population to around 9 billion people by 2050, and the associated higher demand for animal proteins like beef, poultry and fish, it is vital that we can meet this challenge in a sustainable and safe way.

IFIF helps to ensure high standards of health and welfare for animals and people, by collaborating with the United Nations Food and Agriculture Organization (FAO), the World Organisation for Animal Health (OIE), the Codex Alimentarius Commission and other international bodies to help set international regulatory standards for the whole feed chain and support fair trade.

In addition, IFIF works with governmental, private sector, and nongovernmental partners on a number of fronts to measure, benchmark and improve the sustainability of the livestock production chain.

IFIF also aims to play a proactive role to promote science-based solutions and information sharing for feed manufacturers, consumers and regulatory authorities worldwide on a variety of issues that affect the supply of safe and affordable animal proteins such as beef, poultry, fish and dairy products.
What we do

Given the anticipated growth of the world’s population to around 9 billion people by 2050, and the associated higher demand for animal proteins like beef, poultry and fish, it is vital that we can meet this challenge in a sustainable and safe way.

In 2020-2021, IFIF continued to focus on its strategy and the following five-point mission to fully support our vision:

- Represent the global feed industry with international governmental organizations and agencies, including the FAO, WTO, WHO, OIE and CODEX Aliment Arius, on crucial global feed and food issues.

- Promote science-based solutions and information sharing for the feed industry by facilitating global forums, such as the Global Feed & Food Congress (GFFC) and the International Feed Regulators Meeting (IFRM).

- Promote a balanced regulatory framework to support a fair global playing field, facilitate market access and support the competitiveness of the feed and livestock industries.

- Expand the global network of national and regional feed associations and promote the adoption of international standards and global equivalency.

- Continue to support and encourage the sustainable development of animal production.

Who we are
In 2020 world compound feed exceeded an estimated one billion tonnes annually. Global commercial feed manufacturing generates an estimated annual turnover in excess of US $400 billion.

- In 2020 global feed tonnage increased by 1%, to ca. 1.2 billion MT
- China: Driven by pig production’s continuous recovery, the high level of poultry inventory and the booming production and sales of ruminants, Chinese animal feed production achieved 10% growth for a total 252 MMT.
- Brazilian feed industry ends 2020 with a total production of 81.5 million metric tons of complete feed and mineral supplements, while forecast growth may achieve 2.3% in 2021.
- In Brazil only 11 million beef cattle heads use compound feed (complete balanced and concentrates). With overall herd of 250 million heads on grass/pastures, this is 4.5%.
- US increased ca. 1% to 215.9 MMT.
- EU compound feed production (EU 27+UK) in 2020 is estimated at 164.9 MMT, an incremental increase of 0.1% compared to 2019

The last years have continued to see an increase in the demand for animal protein worldwide, including for livestock, dairy and fish. Generally we have seen a growth of production particularly in the developing world, with the developed world remaining more or less stable.

**2020 GLOBAL ANIMAL FEED PRODUCTION (1171.1 MT.)**

**GLOBAL COMPOUND FEED PRODUCTION 2020 (MIO. T)**

Middle East & Africa: 67.2  
Other America: 61  
Canada: 21.4  
EU*: 152.6
2020 GLOBAL ANIMAL FEED PRODUCTION (1171.1 MT.)

GLOBAL COMPOUND FEED PRODUCTION 2020 (MIO. T)

- Middle East & Africa 67.2
- Other America 61
- Canada 21.4
- Other Europe 93
- USA 215.9
- Mexico 37.9
- Brazil 77.6
- China 240
- Japan 25.2
- Other Asia 179.4
- EU* 152.6

* the UK is not part of the EU
Source: FEFAC

EVOLUTION OF GLOBAL COMPOUND FEED PRODUCTION (INDEX 100 = 1999)

Source: FEFAC

MARKET SHARE CHANGE 2011/2020
The United Nations Food and Agriculture Organization (FAO) estimates that by 2050 the demand for food will grow by 60% and that between 2010 and 2050 production of animal proteins is expected to grow by around 1.7% per year, with meat production projected to rise by nearly 70%, aquaculture by 90% and dairy by 55%.

This should be good news for the feed industry and our partners along the agri-food chain. However such growth comes with significant challenges and it is vital that our sector, as well as the wider agricultural chain, can meet these demands in a sustainable, safe and affordable manner, while maintaining consumer trust and confidence in the food supply chain.

This challenge is a global one and IFIF is a global organization. Our members are made up of national and regional feed associations, feed related organizations, and corporations, which represent over 80% of worldwide animal compound feed production.

IFIF’s vision is to provide a unified voice and leadership to represent and promote the global feed industry as an essential participant in the food chain that provides sustainable, safe, nutritious and affordable food for a growing world population.

“In 2050 there will be over 9 billion people in the world... and the need for food will be 60% higher than today. How do we feed this population?”

To support our industry on the road to the future, IFIF’s work with its Members and stakeholders is focussed on three strategic pillars, including (i)
sustainability, (ii) regulatory matters and international standards, and (iii) supporting education and sharing of best practices.

Under these pillars IFIF has undertaken a number of strategic projects, which are outlined in this annual report.

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<th>WORLD PROTEIN PRODUCTION 2020 / 2021</th>
<th>Million metric tons</th>
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<tr>
<td>PROTEIN TYPE</td>
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<td>POULTRY</td>
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<td>PIGS</td>
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<td>AQUA</td>
<td>84.1</td>
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<td>MILK</td>
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Source: FAO Global Food Outlook June 2021 / *2021 FAO forecast

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<th>FAO OUTLOOK UNTIL 2050: TIMES 1.6!</th>
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<td>PROTEIN TYPE</td>
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<td>-------------</td>
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<td>BOVINE</td>
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Members

IFIF is made up of national and regional feed associations from Africa, Asia Pacific, Europe, North and South America and the Middle East, as well feed related organizations and corporate members from around the globe.

IFIF is a membership driven organization and we want to thank all IFIF Members for their strong support of IFIF’s work, projects and mission to ensure the feed industry continues to be seen as an essential participant in the food chain that provides sustainable, safe and nutritious food.

“IFIF members represent over 80% of total compound animal feed production worldwide.

IFIF is very pleased to welcome those new members to the IFIF family who joined the Federation in 2020 and 2021. They are all key players in their field and IFIF is extremely pleased to have them on board contributing their time and expertise to support IFIF’s vision and mission: Chr. Hansen, Pilmico and
These organisations are critical players in the feed production chain and we are very pleased to be able to draw on their expertise and support as members and benefit from their global reach and regional expertise.

“
We want to thank all IFIF Members for their strong support of IFIF’s work, projects and mission.

IFIF is a membership driven organization and together with our Members we work to ensure the feed industry continues to be seen as an essential participant in the food chain that provides sustainable, safe, nutritious and affordable food for a growing world population.

IFIF Members

National and Regional Associations

[Logos of various national and regional associations]
In 2020/21 IFIF strengthened its work with key international organisations along the feed and food chain, to support feed and food safety and fair trade, while meeting the increased demands of food sustainably.

Click links for more info

- Food and Agriculture Organization of the UN (FAO)
- International Organization for Standardization (ISO)
- Codex Alimentarius
- World Organization for Animal Health (OIE)
- Partners across the Agri-Food chain
In 2020 and 2021 IFIF and the Food and Agriculture Organization of the United Nations (FAO) continued to strengthen their collaborative relationship with a number of key strategic initiatives, including IFRM and Capacity Development for feed safety.

The IFIF FAO collaboration has become a prominent example of how the public and private sector can work together in a number of key areas, which positively impact the feed and food chain.

Already in 2005 the FAO and IFIF, recognising their common interest in promoting the safe supply of animal feed throughout the world, signed a formal Memorandum of Understanding (MOU), which continues to form the basis of collaboration between the two organisations.

One highlight of the IFIF and the FAO Animal Production and Health Division, are efforts to facilitate dialogue between the private and public sector on key issues affecting the feed and food chain. This includes the annual International Feed Regulators Meeting (IFRM), which brings together feed regulators and industry from around the world, as well as the tri-annual Global Feed and Food Congress series, which includes representatives from the whole feed and food chain, as well as government, academia, other intergovernmental organizations and NGOs.
In 2020 IFIF FAO launched the fully updated “Manual of Good Practices for the Feed Sector”. This Manual was first published in 2010 and has been a valuable tool to increase knowledge and improve feed safety at the production level, and it is widely recognized and used in many countries around the world. This second publication is a fully revised, updated and expanded version of that Manual and addresses recent developments in feed production and benefits from the latest scientific and technical knowledge. It has been very well received and the new manual is already being translated into Chinese and Vietnamese.

A second key area of collaboration is capacity development in feed safety and spreading of good feed manufacturing practices. IFIF is a founding partner of the FAO-led Feed Safety Multi-Stakeholder Partnership, which was formally launched in April 2016 and aims at improving the safety of feed, and thus enhancing food safety, animal health and welfare and food security.

The Feed Safety Multi-Stakeholder Partnership is undertaking a number of initiatives to support feed safety:
As global compound feed production continues to expand, especially in the developing world, IFIF continues to work with the FAO on Capacity Development for Feed Safety, an important effort that will continue on in the next years.

The 2010 FAO/IFIF “Manual of Good Practices for the Feed Industry” has been published in English, Chinese, Arabic, French and Spanish and distributed widely to regulators and industry. IFIF is also engaged in the recent efforts by the FAO to develop the capacities of relevant stakeholders globally to ensure the production and supply of safe feed based on latest Codex standards and good practices.

The IFIF FAO collaboration has become a prominent example of how the public and private sector can work together in a number of key areas, which positively impact the feed and food chain. IFIF’s relationship with the FAO continues to strengthen with IFIF’s participation in the Global Agenda for Sustainable Livestock, as an official stakeholder in the Livestock Environmental Assessment and Performance (LEAP) Partnership and the FAO’s Private Sector Initiative. IFIF will continue to be strongly engaged in these efforts.
IFIF official liaison status with the International Organization for Standardization (ISO)

In 2020 and 2021 IFIF has official liaison status with the International Organization for Standardization (ISO) Technical Committee ISO/TC34/SC10 to work on animal feeding stuffs.

The scope of this Technical Committee (TC) is ‘Standardization in the field of animal feeding stuffs including: terminology, sampling, methods of test and analysis in quality control, specifications of raw material & finished product, guidelines and requirements for packaging, storage and transportation’.


You can find more details about this Committee here https://www.iso.org/committee/47924.html and about ISO here: https://www.iso.org.

IFIF engaged and supported the work of ISO/TC34/SC10 to ensure that it is aligned with other international initiatives related to animal feed terminology.

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IFIF’s partnership with the Food and Agriculture Organization of the United Nations (FAO)  >

IFIF collaboration with Codex Alimentarius as a Codex-recognized NGO  >

IFIF Cooperation Agreement World Organisation for Animal Health (OIE)  >
IFIF collaboration with Codex Alimentarius as a Codex-recognized NGO

As a Codex recognized NGO, IFIF follows and inputs into in the work of the relevant Codex Committees and participates in Codex Side Events addressing feed safety for safe food.

In 2020 and 2021 IFIF joined global regulators at the annual Sessions of the Codex Alimentarius Commission, where together with the FAO, we held a number of side meetings related to feed safety. Feed safety is relevant to Codex Alimentarius Commission work as it impacts on the safety of food.

IFIF has been actively involved in the development of the Codex Code of Practice of Good Animal Feeding and was an active member of the ad hoc Codex Intergovernmental Task Force on Animal Feeding (TF AF).

"As a Codex recognized NGO, IFIF follows and inputs into in the work of the relevant Committees and participates in Codex Side Events addressing feed safety for safe food.

In 2020 and 2021 IFIF joined global regulators at the annual Sessions of the Codex Alimentarius Commission (CAC) in 2020 and 2021, where together with the FAO, we kept feed safety on the agenda. IFIF was also actively involved in a number of important Codex electronic Working Groups, as well as active in the Codex Committee on Contaminants in Foods (CCCF), the Codex Committee on Residues of Veterinary Drugs in Foods (CCVRDF) and the Task Force on AMR. We will continue to provide expert input into the various Codex WGs and Committees in the year ahead.

This work will continue into 2022 and supports IFIF’s on-going efforts to keep feed safety issues on the Codex agenda."
Working with partners across the Agri-Food chain

IFIF strongly believes all partners along the agri chain have to work together to ensure sustainable and safe feed and food in the future.

IFIF works closely with other chain partners with the objective to find a common voice to address the challenges and opportunities in the agri chain, including with the following organisations:

- HealthforAnimals
- International Dairy Federation (IDF)
- International Egg Commission (IEC)
- International Meat Secretariat (IMS)
- International Poultry Council (IPC)
- Global Dairy Platform (GDP)
- Roundtable for Sustainable Beef (RTSB)
- World Farmers Organization (WFO)
- World Renderers Organization (WRO)

In 2020 and 2021, IFIF worked on a number of strategic join initiatives with these partners, including coordinating input and efforts at the FAO-led LEAP Partnership, the Global Agenda, the UN Food Systems Summit (UN FSS) Process and the FAO Private Sector Initiative.

IFIF’s partnership with the Food and Agriculture Organization of the United Nations (FAO)
Our Pillars

To support our industry on the road to the future, in 2020/21 IFIF’s work is focussed on three strategic pillars:

Sustainability
Regulatory & International Standards
Education & Best Practices
**Our Three Pillars**

### Sustainability
IFIF supports and encourages the sustainable development of animal production.

**Projects**
- Specialty Feed Ingredients Sustainability Project (SFIP)
- Global Feed LCA Institute (GFLI)
- Partnership on Livestock Environmental Assessment and Performance (LEAP)
- Global Agenda for Sustainable Livestock
- Nutritional Innovation to promote Animal Health and Welfare

### Regulatory & International Standards
IFIF promotes a balanced regulatory framework to support a fair global playing field to facilitate market access and support the competitiveness of the feed & livestock industries.

**Projects**
- International Feed Regulators Meeting (IFRM)
- International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF)
- CODEX work relevant to animal feeding
- Implementation of the Global Harmonized System
- Guidance on international standards for contaminants in feed

### Education & Sharing of Best Practices
IFIF supports sharing of good practices, promotes science-based solutions for the feed industry and facilitates dialogue among key stakeholders.

**Projects**
- IFIF/FAO Feed Manual
- IFIF Global Animal Nutrition Programme ‘Train the Trainer’
- The Feed Safety Multi-Stakeholder Partnership for Capacity Development for Feed Safety
- Global Feed & Food Congress (GFFC): The future of Feed & Food – are we ready?
- Global Feed Statistics
The Specialty Feed Ingredients Sustainability Project (SFIS)

The Specialty Feed Ingredients Sustainability (SFIS) project brings together a consortium of international companies and associations dedicated to reducing the environmental impact of livestock through innovative specialty feed ingredients.

**SFIS Phase 3 (Ongoing)**

The SFIS project phase 3 aimed to achieve a harmonized approach for the assessment of the use of SFIs in animal feeding on a cradle to farm gate approach. This includes the production of the SFIs from cradle to factory gate as well as the use on the farm and the further recycling or application of manure. Based on this approach, future LCAs for animal products should become transparent, reliable and thus, comparable.

The SFIS Phase 3 looked at Australia, US and Europe pigs and poultry and initial results have shown an improvement, mainly due to improved feed conversion rates.

In 2020 SFIS Phase 3 results underwent an expert scientific review. The results obtained have been reviewed by a Scientific Council and no changes in the value were requested and the project has reached the objectives. In 2021 a critical review was been completed and project partners aim to publish the results of the study in a peer-reviewed journal.

**SFIS Phase 1 & 2 (Completed)**

In the SFIS project phase 1 and 2, the project partners joined together to measure and establish the role of specialty feed ingredients (SFIs), specifically amino acids and enzymes, on the environmental impact of livestock.
production and are united in their goal to contribute to the reduction of emissions in the food and feed chain.

The overall results of the study announced on 5 February 2014 show that the use of these 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, as well as the Eutrophication and Acidification Potential during livestock production.

You can download the overview and results of the study from Europe, North America and South America on the left side of this page or here. The results have also been published in the peer reviewed Journal of Animal Science under the title ‘Environmental impact of using specialty feed ingredients in swine and poultry production: A life cycle assessment’ by Kebreab et al. 2016. You can download the paper here.
Sustainability

Global Feed LCA Institute (GFLI)

IFIF is a founding members of the Global Feed LCA Institute (GFLI), a feed industry initiative with the aim to develop a freely and publicly available feed LCA database and tool.

The GFLI database and LCA tool support meaningful LCAs of livestock products using region specific data and enable our sector to benchmark feed industry environmental impacts on a level playing field.

The GFLI database and tool is based on the internationally recognized feed LCA methodology developed by the FAO-led Livestock Environmental Assessment and Performance (LEAP) Partnership.

In 2021, following the launch of the LEAP guidelines on the environmental performance of feed additives in livestock supply chains, IFIF as part of its commitment to support the practical implementation of LEAP guidelines, has worked with FEFANA and the GFLI to develop a project to facilitate the implementation of these guidelines.

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 in terms of impact and encouraging the benchmarking and measurement of both individual and collective reduction efforts.

“The GFLI aims to bring the major feed producing regions together and develop the golden global standard for assessing and benchmarking feed industry...
The GFLI aims to bring the major feed producing regions together and develop the golden global standard for assessing and benchmarking feed industry impact and improvement in LCA calculations.

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, at both at national and international level.

Supported by the FAO and LEAP, the GFLI is working to bring the major feed producing regions to the initiative with the aim to become the golden global standard for assessing and benchmarking feed industry impact and improvement in LCA calculations.

The GFLI partners are working 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 are public and freely accessible. The Global Feed LCA Institute has a partnership with FAO and LEAP, to ensure that the deliverables of the GFLI are compliant with the FAO/LEAP methodological requirements.

For more information about the GFLI please visit http://globalfeedlca.org/.

Regulatory & International Standards

Education & Sharing of Best Practices
Partnership on Livestock Environmental Assessment and Performance (LEAP)

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.

In 2020 and 2021, IFIF continued to support the FAO-led Partnership on Livestock Environmental Assessment and Performance (LEAP), which is working on comprehensive guidance and methodology for understanding the environmental performance of livestock supply chains.

LEAP aims at developing internationally agreed LCA methodologies for livestock 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.

Meat consumption is projected to rise nearly 73 percent by 2050; dairy consumption will grow 58 percent over current levels.
In September 2020, LEAP published the guidelines on the environmental performance of feed additives in livestock supply chains, which follows the publication of the Global Feed LCA Guidelines methodology in April 2015 - these guidelines represented a significant achievement and milestone. This ground-breaking methodology introduced a harmonized, 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.

In 2021, following the launch of the LEAP guidelines on the environmental performance of feed additives in livestock supply chains, IFIF as part of its commitment to support the practical implementation of LEAP guidelines, has worked with FEFANA and the Global Feed LCA Institute (GFLI) to develop a project to facilitate the implementation of these guidelines.

In February 2021, LEAP also kicked off a Technical Advisory Group (TAG) on Methane with the aim to create a report on the evaluation of methane emissions in the context of policy mitigation options. IFIF has nominated an expert for this Methane TAG to provide expertise from our sector.

History

In 2018 the LEAP Steering Committee agreed to establish a Technical Advisory Group (TAG) on Feed Additives. The TAG will developed technical guidance for the accounting of: (i) environmental impacts associated with the production of feed additives and (ii) environmental impacts of livestock systems using feed additives.

In 2018 and 2019 IFIF experts worked in the feed additives TAG of LEAP, whose important work was in large part based on the previous scientific work of the SFIS project.

The LEAP/FAO Feed LCA Guidelines reflect a common vision among partners, including the FAO, national governments, private sector organizations as well as NGOs. The Guidelines carry an international scientific consensus based on the input of twenty international experts in the drafting process and a thorough international public review, which took place ahead of their official release.

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The 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.
Based on this IFIF will continue to work with partners on the agri-feed chain to develop practical tools for feed and livestock producers to assist them in further reducing the environmental footprint of their activities.

For more information about LEAP please visit:

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[Links]

Regulatory & International Standards

Education & Sharing of Best Practices
Global Agenda for Sustainable Livestock

Throughout 2020 and 2021 IFIF has been involved as a Member of the Guiding Group in the FAO-led Global Agenda for Sustainable Livestock. IFIF has signed the Global Agenda Consensus and actively inputs in the work of the Agenda, and has supported the development of the initiative since its start in 2010.

In 2020 and 2021 IFIF continued to support the work of the FAO-led Global Agenda for Sustainable Livestock. IFIF is a Member of the Guiding Group of the Global Agenda, has signed the Global Agenda Consensus and has supported the development of the initiative since its beginnings in 2010. IFIF attended the 10th and 11th Multi-Stakeholder Partnership meetings of the Global Agenda in 2020 and 2021.

In 2021 GASL partners have been active in addressing and engaging in the UN Food Systems Summit (UN FSS) and IFIF has supported these activities to bring the multistakeholder livestock chain point of view via GASL to the UN FSS.

The Agenda is a partnership of livestock sector stakeholders supported by the FAO and committed to the sustainable development of the sector. Together the partners develop and implement an ambitious Agenda to ensure that sector growth contributes to socially desirable objectives. The partnership brings together public and private sector, producers, research and academia, civil society, NGOs, and inter-governmental organizations to focus on three areas of work:

The Agenda builds consensus on the path towards sustainability and
catalyses coherent and collective practice change through dialogue, consultation and joint analysis.

The partnership unites the forces of the public and private sectors, producers, research and academic institutions, NGOs, social movements and community-based organizations, and foundations.

The Global Agenda work to support the UN Sustainable Development Goals as part of the UN 2030 Agenda for Sustainable Development and the important contribution of livestock to the, including:

- the vital role of livestock to end poverty and hunger, and to improve food security, nutrition and health;
- the potential contribution of livestock to the sustainable use of terrestrial ecosystems, to address environmental degradation and climate change, and to improve biodiversity;
- the role of the livestock sector in promoting peaceful and inclusive societies;

It simultaneously addresses the following issues:

- **Global food security and health**: The sector is critical to human health and global food and nutritional security. The Agenda promotes an inclusive approach to managing disease threats at the animal-human-environment interface that involves all sector stakeholders at every level in the development and implementation of animal-disease and food-safety programmes.

- **Equity and growth**: Livestock is essential to the livelihoods of an estimated one billion poor. The Agenda supports a viable growth in value chains that have access to all necessary resources and services, and in which the poor can find secure livelihoods and participate in growing markets or take up other opportunities outside the sector.

- **Resources and climate**: Livestock production based mainly on materials not competing with direct use as human food, and incentives and rewards for environmental stewardship will allow the sector to transition to existing and new resource use efficient ways of production and a greater contribution to climate change mitigation.

Nutritional Innovation to promote Animal Health and Welfare

The IFIF work on nutritional innovation aims to support the industry in demonstrating how animal nutrition is an important contributor to promote animal health and welfare.

Animal Nutrition is an important part of the solution to help to contain Antimicrobial Resistance (AMR). The feed sector plays a critical role in supporting animals’ optimal health with high resilience capabilities to stressors through safe and high-quality feed (feed formulation and processing) and access to nutritional innovation. It therefore is a key factor in the wellbeing of all livestock, fish and companion animals.

Adequate animal nutrition (defined as the provision of well-balanced and well formulated feed) combined with good hygiene practices on farms and proper housing are key in promoting animal health and welfare. A balanced diet of compound feed supported by specialty feed ingredients meets the animal’s physiological requirements and maintains the balance of the gut flora. Gut health is in fact a key factor in keeping animals healthy and resilient to stressors, such as heat or pathogens.

In 2020 and 2021 the IFIF Nutritional Innovation work covered the following three pillars:

- **Scientific pillar**: Development of scientific standards to ensure that nutritional innovations are assessed using science-based criteria.
- **Communication pillar**: Awareness raising to explain and clarify the role of adequate nutrition in sustainable livestock production system, by maintaining animals in good health and well-being.
- Regulatory pillar: Regulatory approaches to properly consider the role of adequate nutrition, improving market access and acceptance.

After developing the paper on "Definitions in the context of adequate nutrition to support resilience of animal to stressors", adopted by the IFIF Board of Directors in July 2020, the Working Group appointed a Scientific Expert Panel (experts in the field of nutrition, microbiology, and microbiome) to develop the scientific basis for evaluating the effectiveness of nutritional solutions for animal health and well-being. During its first phase of work, the Scientific Expert Panel has supported the working group in prioritizing relevant endpoints, supported by literature, with the objective to develop guidelines for the evaluation of the effectiveness of nutritional solutions, to be shared and discussed with authorities, for facilitating marketing of nutritional solutions (substantiation of claims).

In July 2020, the IFIF Regulatory Committee held a workshop to evaluate the level of acceptance of nutrition to support animal health and well-being in the different jurisdictions. As a result of this workshop, further work has been developed to collect good practices for convincing jurisdictions of the role of adequate nutrition in animal health and well-being (mitigation options).

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Regulatory & International Standards

Education & Sharing of Best Practices
Regulatory & International Standards

International Feed Regulators Meeting (IFRM)

The annual International Feed Regulators Meeting (IFRM) organized by IFIF in cooperation with the FAO provides an opportunity for regulators and feed industry professionals from across the globe to exchange their thoughts and discuss concrete ideas for providing safe feed and food in a sustainable manner around the world.

In January 2020, 13th International Feed Regulators Meeting (IFRM) held in Atlanta and organized by IFIF in cooperation with the Food and Agriculture Organization of the United Nations (FAO) once again brought together record numbers of feed industry representatives and government officials from around the world to discuss critical issues facing the feed sector with IFIF and the FAO.
This meeting, yet again, proved to be an important opportunity for the global feed industry and feed regulators to discuss key issues for the feed and food chain, including key feed regulatory updates and changes, an update on Codex Alimentarius work with relevance to feed, as well as a session on the implementation of Biosecurity measures at feed mill level in different regions.

Other topics discussed at the 13th IFRM included updates on the revision of the IFIF FAO Feed Manual “Good practices for the Feed Industry” and the FAO/WHO report on Hazards associated with animal feed, as well as a session on the work of the International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF), which aims towards convergence of technical requirements specific to feed additive/ingredient authorization across regions.

In 2021, the 14th annual International Feed Regulators Meeting (IFRM) brought together feed industry representatives and government officials from around the world in a virtual exchange to discuss critical issues facing the feed sector with IFIF and the FAO.

This meeting, yet again, proved to be an important opportunity for the global feed industry and feed regulators to discuss key issues for the feed and food chain, including important work on Nutritional Innovation to improve animal health and welfare, an update on Codex Alimentarius work with relevance to feed, as well as a session on the new FAO and IFIF Manual “Good Practices for the Feed Sector: Implementing the Codex Alimentarius Code of Practice on Good Animal Feeding.

Other topics discussed at the 14th IFRM included updates on the successful work of the International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF), which aims towards convergence of technical requirements specific to feed additive/ingredient authorization across regions, as well as a presentation on the potential of insects as alternative feed sources.
For more information about the IFRM please click [here](#).

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**Sustainability**

**Education & Sharing of Best Practices**
International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF)

IFIF together with regulatory authorities and feed and feed ingredient associations from Canada, the European Union and the United States launched the International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF). This important international cooperation aims to develop and establish common guidance that covers technical requirements for the assessment of feed ingredients, including new uses of existing feed ingredients.

In 2020 and 2021, the International Cooperation for Convergence of Technical Requirements for the Assessment of Feed Ingredients (ICCF) published three more guidance documents, bringing the total to five:

1. Stability Testing of Feed Ingredients – March 2019
2. Sub-chronic Oral Toxicity Testing in Laboratory Animals – March 2019
3. Homogeneity Testing of Feed Ingredients – September 2020
5. Genotoxicity Testing of Feed Ingredients – April 2021

The founding members of the ICCF include the Canadian Food Inspection Agency (CFIA), the European Commission (DG SANTE), the U.S. Food and Drug Administration (FDA), as well as the American Feed Industry Association (AFIA), the Animal Nutrition Association of Canada (ANAC), the EU...
Association of Specialty Feed Ingredients and their Mixtures (FEFANA) and the International Feed Industry Federation (IFIF).

The ICCF is the result of a concerted effort to bring together feed regulators and industry feed associations to work together to develop common guidance documents for technical requirements needed in the assessment of feed ingredients. This will benefit not only the three regions covered, as the guidance documents will be made available for reference and use by other jurisdictions around the globe.

The ICCF should help to facilitate free and fair trade of feed ingredients as well as support the feed and food chain as it works to safely and sustainably meet the global growing demand for animal protein.

The ICCF Steering Committee, made up of representatives from the founding members of the ICCF, is responsible for defining the priorities and activities of the project and establishing and overseeing the Expert Working Groups, which will be tasked with developing specific technical guidance documents. As this initiative develops, observer countries will be invited to join the expert groups and may be invited as non-voting members to the ICCF Steering Committee on an ad-hoc basis.

The ICCF builds on the work of the 2013 IFIF “Comparison of Regulatory Management of Authorized Ingredients, Approval Processes, and Risk-Assessment Procedures for Feed Ingredients” report, which covered synergies and gaps for product approvals in Brazil, Canada, China, EU, Japan, South Africa and USA. This report was drafted based on expert input and supported by government feed regulators and feed and feed ingredients associations in the seven regions covered.

For further information about the ICCF please visit: https://icffeed.org

Sustainability ➤

Education & Sharing of Best Practices ➤
IFIF is a Codex Alimentarius recognized NGO and has been actively involved in the development of the Codex Code of Practice of Good Animal Feeding and was an active member of the ad hoc Codex Intergovernmental Task Force on Animal Feeding (TF AF).

In 2020 and 2021 IFIF joined global regulators at the annual Sessions of the Codex Alimentarius Commission (CAC) in 2020 and 2021, where together with the FAO, we kept feed safety on the agenda.

IFIF is engaged to keep feed safety issues on the Codex agenda and together with the FAO, IFIF participates and organizes side events on feed safety in conjunction with Codex meetings.

IFIF was also actively involved in a number of important Codex electronic Working Groups, as well as active in the Codex Committee on Contaminants in Foods (CCCF), the Codex Committee on Residues of Veterinary Drugs in Foods (CCVDRF) and the Task Force on AMR. We will continue to provide expert input into the various Codex WGs and Committees in the year ahead.

This work will continue into 2022 and supports IFIF’s on-going efforts to keep feed safety issues on the Codex agenda.

In the past, IFIF has been actively involved in the development of the Codex Code of Practice of Good Animal Feeding and was an active member of the ad hoc Codex Intergovernmental Task Force on Animal Feeding (TF AF).
As a Codex recognized NGO, IFIF follows and inputs into in the work of the relevant Committees and participates in Codex Side Events addressing Feed Safety.

Sustainability＞

Education & Sharing of Best Practices＞
Guidance on implementation of the Global Harmonized System

IFIF developed a Guidance on implementation of the Global Harmonized System (GHS).

Starting in 2018, IFIF developed the below guidance and tools to help operators and countries to implement GHS requirements worldwide to support a harmonized approach.

GHS is an internationally agreed-upon system and it addresses the classification of chemicals by type of hazard and proposes harmonized hazard communication elements, including labels and safety data sheets.

Currently GHS is under implementation worldwide but in some countries or regions, the implementation of GHS has resulted in questions concerning its scope for feed and has led to some uncertainty on the application of the GHS rules for feed ingredients and their mixtures. This can create inconsistencies among feed industry operators understanding on whether GHS needs to be implemented and how.

The tools and guidance documents IFIF developed to support the feed industry can be found on the IFIF website [here](#).
Guidance on International standards for contaminants in feed

In 2018 IFIF launched a database on international standards for contaminants in feed.

At international level recommended standards exist for contaminants in food additives but not for feed additives, making risk management decisions difficult. This may also impact on regulatory compliance of internationally traded specialty feed ingredients.

The objective of this expert group is to establish or identify and maintain an appropriate international list of contaminants standards for ingredients and their mixtures for safe feed manufacture reflecting a risk-based approach.

In 2018, the IFIF WG completed the first version of the IFIF Feed Contaminants Database, which provides a reference overview for Animal Feed Contaminants in Australia, Brazil, Canada, Chile, China, Colombia, Europe, South Africa, USA and Vietnam.

This database is available for download below only for IFIF members. If you are an IFIF member please login to access the database. Should you have questions please email info@ifif.org.
In 2020 FAO and IFIF published the Manual ‘Good Practices for the Feed Sector’ to increase safety and feed quality at the production level.

In 2020 FAO and IFIF published the new Manual ‘Good Practices for the Feed Sector: Implementing the Codex Alimentarius Code of Practice on Good Animal Feeding’ to increase safety and feed quality at the production level.

This Manual was first published in 2010 and has been a valuable tool to increase knowledge and improve feed safety at the production level, and it is widely recognized and used in many countries around the world. This second publication, the ‘Manual of Good Practices for the Feed Sector: Implementing the Codex Alimentarius Code of Practice on Good Animal Feeding’ is a fully revised, updated and expanded version of that Manual and addresses recent developments in feed production and benefits from the latest scientific and technical knowledge.

In February 2021, the FAO Sustainable Livestock Technical Network, the Animal Production and Health Division and IFIF held a webinar about the newly launched manual Good Practices for the Feed Sector and why feed safety is a key element in the sustainable production of food of animal origin and a necessity for food safety and animal health and welfare.

This manual provides updated comprehensive information and practical guidelines to assist producers and all stakeholders along the production and distribution chain to comply with the regulatory framework, which have or will come into force in response to the Codex Alimentarius Code of Practice on Good Animal Feeding.

The application of this Code is an important step for the expansion of
international trade in feed products as well as in products of animal origin. Both food exporting and importing countries can benefit from a more level playing field to support the trade of safe food products.

The Manual is a very relevant document to help support better standards, particular in developing economies and some results from the 2010 published Manual include:

- ‘Feed Manual of Good Practices for the Feed Industry’ shared with regulators and industry globally as a key resource to increase the safety of feed (and food) production. The Manual is available in Arabic, Chinese, English, French and Spanish.

- IFIF-led workshops and training reached feed producers and feed industries worldwide, including: over 30 trainers in Nigeria, 60 feed millers in Tanzania, and government officials from 10 countries in Latin America. Workshops have also been carried out in Nigeria, Egypt, India and Brazil.

- Setting up the Southern African Feed Manufacturers’ Association to help harmonize legislation and regulations, boosting trade among countries and creating a self-regulating regional industry.

- Catalyzing the FAO-led Feed Safety Multi-Stakeholder Partnership to promote and support global capacity development.

"The Feed Manual is meant to increase safety and feed quality at the production level both for industrial production and on farm mixing with a particular focus on the developing world.

Thanks to the project support, feed safety, and, as a result, food safety, continues to improve worldwide:

- Feed regulators and industry in developing countries regularly use the Feed Manual as a reference for updating and comparing legislation and regulations. Across Africa, Asia and Latin America governments and companies have made changes to meet the Codex Code of Practice on Good Animal Feeding.

- The Manual is being used to train industry and raise awareness among policy makers and producers. It is also being used as a teaching tool in universities, receiving positive feedback from students."
The production and publication of the Feed Manual was made possible by a grant from the Standards and Trade Development Facility (STDF), a global partnership that supports developing countries in building their capacity to implement international sanitary and phytosanitary (SPS) standards, guidelines and recommendations as a means to improve their human, animal and plant health status and ability to gain or maintain access to markets.

Sustainability

Regulatory & International Standards
IFIF Global Animal Nutrition Programme ‘Train the Trainer’

IFIF launched the Global Animal Nutrition Programme ‘Train the Trainer’ to develop and train the capacities of the relevant compound feed production stakeholders in a developing region using the FAO/IFIF Manual of Good Practices for the Feed Sector based on the Codex Code of Practice on Good Animal Feeding.

Capacity Development for feed safety is one of the key priorities of IFIF under our strategic Pillar III: Education & Best Practices and links closely to FAO initiatives in this area.

IFIF launched the Global Animal Nutrition Programme ‘Train the Trainer’ to develop and train the capacities of the relevant compound feed production stakeholders in a developing region using the FAO/IFIF Manual of Good Practices for the Feed Sector based on the Codex Code of Practice on Good Animal Feeding.

In 2021, IFIF updated the e-learning course ‘Good Production Practices in the Feed Industry’, aimed at stakeholders working in the feed chain and is available at no cost for government officials working in fields related to feed production as well as qualifying stakeholders and feed millers in emerging markets. Participants who successfully complete the 10 online modules and pass a final exam will receive a certificate, as well as have the opportunity to participate in a live virtual classroom with an IFIF expert trainer at the end. The IFIF course can be accessed at the following link: https://www.anprocampus.com/ttpages/info/?id=43.
History of IFIF Capacity Development Trainings

Ghana Feed Safety Training - July 2018
Held in Accra in July 2018 and supported by the Ghana Ministry of Food and Agriculture (MoFA), the training programme based on the IFIF FAO Feed Manual of Good Practices for the Feed Industry focussed on increasing safety and feed quality at the production level. Over 30 national and regional feed officials and feed mill representatives participated in the training and they will act as multipliers by sharing the training with colleagues throughout Ghana.

Dr. Abdul Razak Okine, Deputy Director at the Animal Production Directorate of the Ministry of Food and Agriculture (MoFA), said, “the Ghana feed industry is diverse and we are committed to continue working with stakeholders in the industry towards achieving good practice benchmarks for animal feed safety and human food safety.

Through the IFIF training programme our livestock officers/feed officials and feed millers are better able to understand the FAO/IFIF Code of Practice for Good Animal Feeding and other Codex standards, including hazards associated with animal feed, good production practices, cross contamination, and sampling and analysis. Dr. Okine expressed the country’s gratitude for the selection of Ghana as a beneficiary of the IFIF ToT programme.
Developed by IFIF in 2015, the Global Animal Nutrition Programme is designed to raise capacities for feed safety in developing regions by training key individuals who can then apply and share their new skills with colleagues on site within a country. This reflects IFIF’s mission to promote solutions and information sharing for the feed industry, as well as stimulate the adoption of international standards and global equivalency.

Already in 2010, IFIF together with the FAO published the Feed Manual of Good Practices for the Feed Industry, in order to support the spreading of good manufacturing practice and higher feed safety standards around the globe. The publication of the Feed Manual is intended to increase safety and feed quality at the production level both for industrial production and on farm mixing with a particular focus on the developing world.

The IFIF Training Programme focuses on the Implementation of IFIF/FAO Manual on Good Practices for the Feed Industry. Each training programme is tailor made to take into account local needs, and includes the following elements:

- Health hazards associated with animal feed
- Good Production Practices – Pre Requisite Programs
- HACCP
- On farm production and use of feed and feed ingredients
- Cross contamination
- Sampling and analysis

**Tanzania Feed Safety Training**

Held in Dar es Salaam in July 2017 and supported by the U.S. Grains Council and the Tanzanian Feed Industry Association (TAFMA), the IFIF training programme in Tanzania focussed on increasing safety and feed quality at the production level by training over 60 representatives from the Tanzanian feed industries. The IFIF training had real impacts for participants who can apply their new feed safety skills in feed mills across Tanzania and I congratulate all the participants for their dedication to increase feed safety and quality at the production level.
Sufian Z. Kyarua, Secretary general of TAFMA, said “the Tanzania feed industry is diverse and we are committed to continue working with our members towards achieving international benchmarks for animal feed safety and human food safety. Through the IFIF training programme our feed millers are better able to understand and implement the FAO/IFIF Code of Practice for Good Animal Feeding and other Codex standards, including hazards associated with animal feed, good production practices, cross contamination, and sampling and analysis.”

Nigeria Feed Safety Training

Held in October 2015, the IFIF training event in Lagos supported by the Nigerian Institute of Animal Science (NIAS) brought together over 30 representatives from the Nigerian feed industries, who will act as multipliers by sharing the training with colleagues throughout Nigeria.

Dr. Godwin Oyediji, Registrar and Chief Executive of the Nigerian Institute of Animal Science (NIAS), said, “current laws in Nigeria are still weak and some are without enforcement powers. But Nigeria is making steady progress on feed legislation to achieve international benchmarks for animal feed safety and human food safety.” Dr. Oyediji added “the industry is being mobilised to embrace the FAO/IFIF Code of Practice for Good Animal Feeding and other Codex standards on traceability, contaminants and HACCP.”

The objectives of the Pilot Project in Nigeria were to:

- Extend capacity building to those countries and industries that lack knowledge and feed safety tools;
- Secure feed safety growth to governments and independent companies;
- Introduce systems and structures that are required to comply with international feed safety practices;
- Increase the quality and safety of feed for domestic consumption and international trade.

Sustainability
Education & Sharing of Best Practices

**Feed Safety Multi-Stakeholder Partnership**

IFIF is a founding partner of the FAO-led **Feed Safety Multi-Stakeholder Partnership**, which aims at improving the safety of feed, and thus enhancing food safety, animal health and welfare and food security.

The Feed Safety Multi-Stakeholder Partnership continued its work in 2020 and 2021 to support feed safety:

[Video Link]
As global compound feed production continues to expand, especially in the developing world, IFIF continues to work with the FAO on Capacity Development for Feed Safety, an important effort that will continue on in the next years.

The Feed Safety Multi-Stakeholder Partnership is a FAO-led Partnership for Capacity Development for Feed Safety, with the objective to strengthen the capacity of relevant stakeholders along the feed and food value chain to produce and supply safer feed - thereby contributing to animal health and welfare and enhancing food safety and food security.

The Partnership addresses feed safety in the feed and food continuum that includes feed ingredients, feed inputs, feeding practices, feed handling, packaging, transportation, storage and manufacture. Activities of the Partnership will be relevant to all major feed and livestock products and related supply chains. Some activities will benefit stakeholders globally, while others will address more localized feed safety issues. The primary beneficiaries will be producers and policy-makers in feed and livestock producing countries. Producers will benefit through the development of capacities to address feed safety issues.

In particular the Partnerships’ purpose is to:

- strengthen and develop technical and functional capacities of producers, policy makers and other operators along the supply and production chain;
- share best practices and risk-based measures for preventing and controlling hazards in feed;
- support smallholders in reducing health risks for their animals and in reducing feed and food losses; and
- create and share scientific knowledge on new feed and technologies.
All activities implemented in the Feed Safety Multi-Stakeholder Partnership will follow a capacity development approach. Capacity development addresses different dimensions: i) individual; ii) organizational; and iii) the enabling environment. It considers social, economic and policy aspects, together with technical ones, and provides stakeholders and countries a leading role to ensure the sustainability of activities.


<table>
<thead>
<tr>
<th>Sustainability</th>
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<tbody>
<tr>
<td>Regulatory &amp; International Standards</td>
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Global Feed & Food Congress (GFFC)

The 7th GFFC will bring together leaders from the global feed & food chain in Asia – planning TBC due to the Pandemic.

The 7th Global Feed & Food Congress will bring together leaders from the global feed & food chain in Asia – planning TBC due to the Pandemic.

6th Global Feed & Food Congress

The 6th GFFC brought together leaders from the global feed & food chain in Bangkok on 11-13 March 2019 under the theme ‘The future of Feed & Food – are we ready?’

In March 2019 global feed and food leaders discussed the future of feed and food at the 6th Global Feed & Food Congress (GFFC) in Bangkok, Thailand. Organized by the International Feed Industry Federation (IFIF) with technical support provided by the Food and Agriculture Organization of the United Nations (FAO) and in collaboration with VIV worldwide, delegates at the 6th GFFC examined the global challenge to provide safe, affordable, nutritious and sustainable animal protein sources through innovative solutions to feed 9 billion people by 2050.
The Honorable Dr. Soravis Thaneto, Director-General of the Thai Ministry of Agriculture's Department of Livestock Development joined Dr. Daniel Bercovici, IFIF Chairman, Dr. Berhe Tekola, Director of FAO's Animal Production and Health Division and Mr. Pornsil Patchrintanakul, President of the Thai Feed Mill Association, to open the Congress. They welcomed 300 world-class experts and executive level delegates from Asia, Europe, Africa, the Middle East and the Americas representing feed and food chain stakeholders from over 50 countries.

The 6th GFFC was a great success and holding it in Thailand places it at the heart of a fast-growing region for the feed and food sector, while the focus on the future of the feed to food chain is timely, given the imperative of finding innovative solutions to feed a growing world population.

Over 35 world-class speakers, including CEOs, leaders, and experts from global feed and food companies, international organizations and the scientific community, provided their insights and expertise at the 6th GFFC sessions that covered key aspects of the future of the feed and food value chain, with a special focus on the digital revolution in agriculture, sustainability, feed & food safety, nutritional innovation, global regulations & policy, and trade and market developments.

The excellent plenary sessions were followed by a global leaders panel, which included Dr. Rob Koremans, CEO of Nutreco, Joe Stone, Executive Vice President and Chief Risk Officer at Cargill, Dr. Mark Lyons, CEO of Alltech and Dr. Berhe Tekola, Director of FAO's Animal Production and Health Division. The global leaders discussion with delegates touched on critical issues facing the agri-food chain, including sustainability, how to drive innovation, the importance of a balanced regulatory framework, capacity development as well as free and fair trade, and highlighting the importance of cooperation and partnership not only with industry and chain partners, but also with other stakeholders.

For more information and to view the full 6th GFFC programme please visit www.gfcc2019.com.
The Global Feed & Food Congress series was launched in 2005 by IFIF in cooperation with the FAO to provide a global platform for industry and governments to come together to discuss critical issues of food and feed safety, technology and sustainability. The tri-annual Congress has established itself as the leading global event of its kind and was last held in Bangkok, Thailand in March 2019.

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Sustainability

Regulatory & International Standards
In 2020 world compound feed production exceeded an estimated one billion tonnes annually. Global commercial feed manufacturing generates an estimated annual turnover of over US $400 billion.

The last years have continued to see an increase in the demand for animal protein worldwide, including for livestock, dairy and fish. Generally we have seen a growth of production particularly in the developing world, with the developed world remaining more or less stable.

The United Nations Food and Agriculture Organization (FAO) estimates that by 2050 the demand for food will grow by 60% and that between 2010 and 2050 production of animal proteins is expected to grow by around 1.7% per year, with meat production projected to rise by nearly 70%, aquaculture by 90% and dairy by 55%. This already marks a growth factor of almost two, however if we were to extrapolate the growth rates of the last forty years forward to 2050, this would in theory quadruple the needs.

The last years have continued to see an increase in the demand for animal protein worldwide, including for livestock, dairy and fish. Generally we have seen a growth of production particularly in the developing world, with the developed world remaining more or less stable.

- In 2020 global feed tonnage increased by 1%, to ca. 1.2 billion MT
- China: Driven by pig production’s continuous recovery, the high level of poultry inventory and the booming production and sales of ruminants, Chinese animal feed production achieved 10% growth for a total 252 MMT.
• Brazilian feed industry ends 2020 with a total production of 81.5 million metric tons of complete feed and mineral supplements, while forecast growth may achieve 2.3% in 2021.

• In Brazil only 11 million beef cattle heads use compound feed (complete balanced and concentrates). With overall herd of 250 million heads on grass/pastures, this is 4.5%.

• US increased ca. 1% to 215.9 MMT.

• EU compound feed production (EU 27+UK) in 2020 is estimated at 164.9 MMT, an incremental increase of 0.1% compared to 2019.

Below you will find a selection of data for production of feed as well as livestock globally. These are estimates only and are meant to demonstrate global trends. For specific country and regional information please see the national and regional updates section of this report.

2020 GLOBAL ANIMAL FEED PRODUCTION (1171.1 MT.)

GLOBAL COMPOUND FEED PRODUCTION 2020 (MIO. T)

- Middle East & Africa 67.2
- Other America 61
- Canada 21.4
- USA 215.9
- Mexico 37.9
- Brazil 77.6
- China 240
- Other Asia 179.4
- EU* 152.6
- Other Europe 93
- Japan 25.2

* the UK is not part of the EU
Source: FEPAF

GLOBAL FEED MARKET AS PERCENTAGE BY SPECIES - 2021 ESTIMATES

- Pig 28%
- Poultry 44%
- Ruminant 8%
- Aqua 4%
- Dairy 13%
- Other 3%
**EVOLUTION OF GLOBAL COMPOUND FEED PRODUCTION (INDEX 100 = 1999)**

Source: FEFAC

**MARKET SHARE CHANGE 2011/2020**

* the UK is not part of the EU

Source: FEFAC
### World Protein Production 2020 / 2021

<table>
<thead>
<tr>
<th>Protein Type</th>
<th>2020</th>
<th>2021</th>
<th>Var.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovine</td>
<td>71.6</td>
<td>72.4</td>
<td>1.2%</td>
</tr>
<tr>
<td>Poultry</td>
<td>133.4</td>
<td>135.2</td>
<td>1.3%</td>
</tr>
<tr>
<td>Pigs</td>
<td>109.8</td>
<td>114.4</td>
<td>4.2%</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>84.1</td>
<td>85</td>
<td>1.1%</td>
</tr>
<tr>
<td>Milk</td>
<td>906.2</td>
<td>921.1</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

*Source: FAO Global Food Outlook June 2021 / *2021 FAO forecast*

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**Sustainability**

**Regulatory & International Standards**
Regional Updates

IFIF Members include national and regional feed associations from around the globe, including from Africa, Asia Pacific, Europe, North and South America and the Middle East. Here you will find our Association Members’ 2020/21 updates on their particular region, including feed production figures.
<table>
<thead>
<tr>
<th>National &amp; Regional Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia</strong>&lt;br&gt;RAAA &amp; SFHCA</td>
</tr>
<tr>
<td><strong>Brazil</strong>&lt;br&gt;SINDIRACOES</td>
</tr>
<tr>
<td><strong>Canada</strong>&lt;br&gt;ANAC</td>
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<tr>
<td><strong>China</strong>&lt;br&gt;CFIA</td>
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<tr>
<td><strong>Colombia</strong>&lt;br&gt;ANDI</td>
</tr>
<tr>
<td><strong>Europe</strong>&lt;br&gt;FEFANA</td>
</tr>
<tr>
<td><strong>India</strong>&lt;br&gt;CLFMA</td>
</tr>
<tr>
<td><strong>Iran</strong>&lt;br&gt;IFIA</td>
</tr>
<tr>
<td><strong>Japan</strong>&lt;br&gt;JPMA</td>
</tr>
<tr>
<td><strong>Latin America &amp; Caribbean</strong>&lt;br&gt;FEEDLATINA</td>
</tr>
<tr>
<td><strong>New Zealand</strong>&lt;br&gt;NZFMA</td>
</tr>
<tr>
<td><strong>South Africa</strong>&lt;br&gt;AFMA</td>
</tr>
<tr>
<td><strong>United States</strong>&lt;br&gt;AFIA</td>
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</tbody>
</table>
Australian Market Conditions

2020/21 has seen the Australian animal feed industry (members of FIAAA and SFMCA) experience the ramifications of drought breaking rains resulting in widespread flooding, implementation of COVID-19 biosecurity measures, impacts on the purchasing of protein due to COVID, international freight disruptions and a mice plague.

On a positive note, the grains industry had a bumper year, with it being the second largest crop on record. This instantly removed any doubt that Australia had enough supply for its largest domestic user of grain (the animal feed industry), especially coming out of five years of drought. Prices have not fallen as Australia’s exports of grain have increased dramatically and domestic prices have been maintained.

The animal feed industry saw a drop of approximately 20% in production as a result of the drought breaking, which is still approximately 15% above pre-drought production. Livestock producers have maintained the focus on supplementary and confinement feeding of their stock to quickly meet market specifications.
COVID-19 has seen numerous disruptions in the market with border controls being implemented between the states and territories. In the initial stages this caused widespread problems to the supply of feed and movement of staff to access feed mills. The industry is very resilient and quickly identified ways to meet the requirements whether it be by exemptions or working together for the common good.

Australia continues to experience difficulties with the importation of feed additives due to COVID and our biosecurity protocols due to African Swine Fever. Delays in clearance in addition to the delays in shipping mean that supply is very tight for much needed products across all species. Australia is a small market, so we lose the purchasing power of many other markets.

In the last quarter of the 2020-21 year Australia has been experiencing a mice plague that has extended to the majority of the inland regions of the east coast. This has placed increased pressure on the supply of roughages and grains due to the need to ensure product is not contaminated. Farmers have been having to burn haystacks as a result of the impacts of the mice.

**Feed Ingredients and Additives Association of Australia (FIAAA)**

The Feed Ingredients and Additives Association of Australia was formed to meet the needs of our animal feed and petfood industry customers and other stakeholders so that they could be confident of the quality and integrity of feed ingredients and additives being used in Australia. Our work includes advocating and promoting the safe use of feed ingredients and the interests of our 62 members and to cooperate with other stakeholders in the interests of the broader industry.

**FAMI-QS**

The FAMI-QS Code of Practice is an important part in the stewardship endeavours of our members. It is recognised that certification to the Code gives assurance of the quality of our members’ products. The Code is based on international best practice. It succeeds through insistence on:

- Management responsibility & Compliance with AgVet regulations
- Resource management & Traceability of supply
Product and component standards
Quality document systems

Over the last 18 months FIAAA has been transitioning to the FAMI-QS system. It was a decision of the members and one that will keep them in good stead for the years to come. FAMI-QS and the FIAAA have signed a strategic agreement of cooperation for the adoption of the FAMI-QS Code in the region of Australia-New Zealand. Approximately 50% of the membership are now certified, with the next six months seeing the remaining members gaining their certification.

Import and Export Legislation Review
The FIAAA has worked closely with the Australian Government to review import and export legislation with a view to make the systems easier to use whilst maintaining the strict country protocols. This has been a never-ending task with good outcomes resulting from the discussions. We thank the Australian Government for their collaboration.

See additional work, set out below, undertaken in conjunction with the SFMCA.

For further information on the FIAAA please visit www.fiaaa.com.au

Stock Feed Manufacturers’ Council of Australia (SFMCA)
The SFMCA is the national industry association representing 246 corporate and individual manufacturers of stock feed and their supply chain associates located throughout Australia. The association operates within five state-based branches where members meet to address industry specific issues. Together, SFMCA’s membership represents 95% of commercial feed manufactured in Australia. From the association’s inception, it has played an active role in addressing national industry issues, many of these relating to raw material ingredient supply, quality standards, Federal and state government legislation and regulations.

FeedSafe
The SFMCA operates FeedSafe® as the Integrity Accreditation Program for the Australian stock feed industry. It is third party audited and works in a co-regulatory manner with the Australian governments.

All full (active manufacturer) members of the SFMCA are required to comply with FeedSafe® to retain their Association membership. The central aspect of
FeedSafe® is a Code of Good Manufacturing Practice (GMP), which has been developed in conjunction with the Chief Veterinary Officers within each State, and the final document has Primary Industries Ministerial Council endorsement.

FeedSafe® requires feed manufacturers to meet minimum standards in relation to:

- Premises and mill buildings
- Personnel training and qualifications
- Plant and equipment
- Raw material sourcing and purchasing
- Raw material quality and storage
- Feed formulation and manufacturing
- Product labelling
- Loading, transport and delivery to clients
- Product inspection, sampling and testing
- Customer complaint investigation

There are presently 120 accredited (and provisional) members located over 148 sites that produce 95% of the feed manufactured in Australia.

**Movement Controls within Australia**

2020-21 has seen the continuation of ever-changing interstate border controls as a result of COVID-19, there have been increased pressures placed on moving grain, fodder, and personnel between states. Biosecurity issues need to be negotiated for the entry, or even movement through, some regions to ensure that a new biosecurity event is not resultant. This can take a lot of effort at times and a will from Governments, the feed industry, and other agricultural sectors to ensure feed personnel can be moved. The SFMCA applauds the Australian Governments and other industry sectors for their approach to these negotiations.

**Biosecurity Manual for Feed Mills**

During 2020-21, SFMCA published its "National Biosecurity Manual for Feed Mills", which had been developed in collaboration with industry and government from across Australia. The manual has a direct fit with the Animal Health Australia 'Farm Biosecurity' Program, which produces manuals for the various livestock and plant species. The manual represents best practices, specific to the feed industry, and brings together both plant and animal biosecurity practices due to the unique nature of the feed industry bridging the gap between plants and animals. It is envisaged that the key elements of the manual will be included in the FeedSafe Program over the next 12 to 18 months.
Sustainability Framework
The SFMCA Members having endorsed the development of a Sustainability Framework for the industry continue to work towards its finalisation. Work continues to research what needs to be undertaken as well as how this industry fits into the supply chain and helps other sectors meet their goals whether they are suppliers or customers. SFMCA continues to research and consult on this important piece of work.

For further information on the SFMCA please visit www.sfmca.com.au

Combined Work of FIAAA and SFMCA
The last 12 months has seen the FIAAA and SFMCA work closely together on issues of mutual benefit. Programs of noting include:

Australasian Milling Conference (AMC)
A major activity of the industry calendar is the biennial AMC held in conjunction with the Poultry Information Exchange (PIX). Both invited international and local speakers address current issues and the outlook for the feed supply chain. AMC is known to be the major Australian conference for milling and livestock production in Australia. During 2018 we had in excess of 450 registrants (and another 640 registrants for PIX) and some 380 exhibition sites. Unfortunately, due to COVID we have had to postpone the event until May 2022.

Antimicrobial Resistance Stewardship Program
A major issue confronting the feed industry is how to deal with the minimisation of antibiotic use in livestock and human health. The development and subsequent implementation of a Stewardship program will go a long way to assisting industry take responsibility, review progress against targets, reduce use, refine and improve plans and replace antibiotics without compromising health and wellbeing. The Australian feed industry is working closely with Governments and livestock industries to ensure Australia can avoid resitency issues in Australia and maintain a commitment amongst its members.

National Feed Standards
These Standards will form the backbone of Australia’s co-regulation of the feed and additives industry. Having been drafted and reviewed over the last few years the Australian Governments and industry have started the final push to finalise and legislate for the introduction of the Standards. This will ensure consistent legislative oversight across eight jurisdictions. It will also enable to more strongly regulate the import of feedstuffs.

Collaboration along the Supply Chain
The FIAAA and SFMCA work closely together leveraging against each other to ensure a harmonised approach to the issues faced by the production chain. In addition we also work closely with Australian Association of Ruminant Nutritionists, Australian Technical Millers Association, Australian Renderers Association and Pet Food Industry Association of Australia. Without this level of collaboration major projects cannot be achieved in an effective manner. Its always a pleasure to work with these organisations and kick some goals.

In addition we also have very strong relationships with the Australian Government that has enabled such a strong ability to achieve the transparent co-regulatory system that Australia has been working on for the last seven to ten years.
Both the FIAAA and SFMCA are proud to be active members of the IFiF.
Brazilian feed industry ends 2020 with a total production of 81.5 million metric tons of complete feed and mineral supplements, while forecast growth may achieve 4.6% in 2021.

According to Dr. Ariovaldo Zani, CEO of the Brazilian Feed Industry Association/Sindirações:

“We’ve forecasted an unstable year, once uncertainties generated by the Covid-19 pandemic and the price of feedstuffs may slow down a little the pace seen last year”.

Zani estimates that the year 2020 accounted for the production of 81.5 million metric tons and a growth of almost 5% when compared to 2019. The expectation for 2021, however, is a little smaller. The macroeconomic scenario stagnated; the devaluation of the local currency/Real; the delay on both administrative and tax reforms; the prohibitive price of corn and soybeans and the dispute over grains (animal feed and human food vs. ethanol vs. biodiesel vs. exports); unemployment and reduced family income, which combined with the prevalence in the pandemic and the lack of vaccines demanded, have jeopardized the optimistic conviction of the strong economic recovery and enough to reduce the performance registered last year. Zani even does not rule out the possibility of a shift in production, as occurred in 2020, but upon more realistic growth forecast, in the order of 4.6% for 2021.
BRAZILIAN FEED (MILLION METRIC TONES)

<table>
<thead>
<tr>
<th>FEED TYPE</th>
<th>2020*</th>
<th>2021**</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td>41.4</td>
<td>43.0</td>
<td>3.9</td>
</tr>
<tr>
<td>→ Broiler</td>
<td>34.2</td>
<td>35.8</td>
<td>4.5</td>
</tr>
<tr>
<td>→ Layer</td>
<td>7.15</td>
<td>7.22</td>
<td>1.0</td>
</tr>
<tr>
<td>Swine</td>
<td>18.8</td>
<td>20.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Cattle</td>
<td>11.9</td>
<td>12.3</td>
<td>3.0</td>
</tr>
<tr>
<td>→ Dairy</td>
<td>6.4</td>
<td>6.4</td>
<td>0.0</td>
</tr>
<tr>
<td>→ Beef</td>
<td>5.48</td>
<td>5.84</td>
<td>6.5</td>
</tr>
<tr>
<td>Dogs and Cats</td>
<td>3.09</td>
<td>3.32</td>
<td>7.5</td>
</tr>
<tr>
<td>Equine</td>
<td>0.618</td>
<td>0.631</td>
<td>2.0</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>1.38</td>
<td>1.47</td>
<td>6.8</td>
</tr>
<tr>
<td>→ Fish</td>
<td>1.29</td>
<td>1.36</td>
<td>7.0</td>
</tr>
<tr>
<td>→ Shrimp</td>
<td>0.088</td>
<td>0.092</td>
<td>4.5</td>
</tr>
<tr>
<td>Others</td>
<td>0.845</td>
<td>0.858</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>TOTAL FEED</strong></td>
<td>77.9</td>
<td>81.5</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>MINERAL SUPPLEMENTS</strong></td>
<td>3.56</td>
<td>3.81</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>OVERALL</strong></td>
<td>81.5</td>
<td>85.3</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: Brazilian Feed Industry Association/Sindirações. *Estimate. **Forecast

**Broiler Feed**

Despite the stratospheric cost of the main feedstuffs (corn and soybean meal, in addition to imported additives priced in US dollars), the domestic emergency aid plan and the persistent Chinese domestic meat deficit contributed to demand for chicken, and in consequence, a 4% increase in the production of broiler feed during the year 2020. Despite the high level of prices of corn and soybean meal, the broiler feed demand forecast throughout 2021 is 4.5%.

**Layer Feed**

The growing and continuous housing of laying hens, recorded in most of last year, culminated in demand of 7.15 million metric tons of layer feed, an advance of about 5%. Over the course of 2021, moderation in housing should naturally adjust to the weaker demand and, as a consequence, the production of layer feed will increase by 1% and achieve 7.22 million metric tons along 2021.

**Swine Feed**

Chinese demand and domestic emergency aid plan, both combined, boosted the pork production chain that demanded 18.8 million metric tons of pig feed in 2020. It is likely the continuous pace still seen in shipments abroad, will make possible to estimate the production of 20 million metric tons of swine feed and 6.5% advance during 2021.
Dairy Feed
The dairy herd demanded 6.4 million metric tons during 2020, an increase of around 3.1%. The higher cost of dairy feed due to the sharp increase in the price of corn, soybean meal and imported feedstuffs with no forecast of setback, yet may limit 2021 dairy feed production to the same amount produced along the previous year.

Beef Feed
During the year 2020, the production of complete feed and concentrates for beef cattle reached 5.48 million metric tons and an increase of 6%. Considering the continuity of beef export performance, it is even likely to forecast the production of 5.84 million metric tons, or an increase of 6.5% in 2021.

Fish and Shrimp Feed
The success achieved due to the ongoing integrated production system and the motivation of the other categories of producers that populated a lot, boosted the production of fish feed that totaled 1.29 million metric tons in 2020. The effects of the pandemic (pros and cons) also influenced especially shrimp farming, whose production demanded 92 thousand metric tons of shrimp feed. The newest consumption habits imposed by the pandemic may lead to a demand of 1.47 million metric tons of aquaculture feed in 2021 and thus a 6.8% increase registered in 2020.

Pet Food
Like the pet shop sector, which sold 13% more, from January through December 2020, the demand for dog and cat food exceeded 10% and accounted for 3.1 million metric tons. The forecast for 2021 is to produce about 3.32 million metric tons and advance another 7.5%.
The Animal Nutrition Association of Canada (ANAC) is the national trade association of the Canadian feed industry. Our 171 members include feed and ingredient manufacturers and distributors, as well as suppliers of a wide range of goods and services to the feed industry. Taken together, ANAC's membership represents 90 percent of commercial feed manufactured in Canada.

ANAC acts as the voice of the feed industry in dealings with government policymakers and regulators. Our efforts are aimed at fostering a favourable regulatory and business environment for the industry, while supporting initiatives to maintain the highest standards of feed and food safety, ANAC works collaboratively with our regulators, the Canadian Food Inspection Agency (CFIA) and Health Canada (HC), to ensure industry input and experience is considered when new regulatory, policy and guidance documents are being developed or updated.

ANAC’s priorities have evolved to include increased outreach to industry stakeholders as well as the development of additional tools to help the feed industry adapt to change – be it regulatory, food safety, or customer requirements. Below is a snapshot of the activities undertaken by the Association’s team of five staff located in Ottawa, Ontario, Canada.

**Modernized regulations that benefit the industry**

**CFIA released updated Feeds Regulations that are modern and outcome-based**

After more than 10 years, 20 official consultations and hundreds of hours of work, ANAC welcomed the publication of the proposed *Feeds Regulations, 2022* by the CFIA for consultation in June 2021. This represents an important milestone in the Canadian feed regulatory modernisation process as it will
result in the most significant legislative changes in almost 40 years and will begin a new chapter for the feed industry in Canada.

**Milestone achieved through collaboration**

ANAC has worked collaboratively with the CFIA on the modernisation initiative over the past 10 years. Through 2020 and into the early part of 2021, our collaborative work continued in an ongoing effort to resolve concerns around nutrient and contaminant maximum levels which were proposed in previous modernisation consultations and published with the *Feeds Regulations*, 2022. Through these efforts, resolution on all but six of over 500 levels have been reached and the dialogue will continue to resolve the outstanding levels.

Due to the significant delays in publication of the new *Feeds Regulations*, 2022, the CFIA launched a pre-publication consultation on the proposed regulatory framework for livestock feeds in the fall of 2020 to ensure that stakeholders were still supportive of the initiative. This consultation allowed ANAC to provide further input on the proposed regulations prior to publication and re-iterate the feed industry’s support and readiness for change.

**Next steps**

By way of previous consultations, ANAC has a solid understanding of the framework for the new regulations; however, the details and implications of the legal text have yet to be examined. During the *Feeds Regulations*, 2022 consultation period, ANAC staff will analyse the proposed regulatory text and associated documents and meet with the CFIA to further discuss. The comment period for this consultation will end in October 2021.

Once comments from the consultation are considered by the CFIA and regulatory text amended accordingly, the *Feeds Regulations*, 2022 will be officially published. This is anticipated for Summer 2022, and at that time implementation of the different parts of the new legislation will be phased in over 18 months. ANAC’s focus will be to support our members, byways of guidelines, webinars and one-on-one support, in implementing the necessary changes.

**Veterinary health products (VHPs) in feed**

*New Feeds Regulations expected to permit the use of VHPs as feed ingredients*

ANAC’s collaborative relationships with the CFIA, HC and other industry associations have resulted in additional progress in the Canadian industry being able to access innovative ingredients for use in feed.

Veterinary health products (VHPs) are currently not allowed to be mixed into feed, but this will no longer be the case once the new regulations are in place.

Recently a pilot program allowing select types of VHPs to be included in feed has been launched. As a result of this program, in August 2021, twelve (12) VHPs were approved to be mixed into non-medicated feed earlier than previously anticipated and ahead of the regulatory changes. Having access to these products is a win for both the feed industry and for producers, who have long supported their use in Canada.
Updating FeedAssure® to ensure it remains a gold standard in feed safety

FeedAssure® is a comprehensive feed safety management and certification program developed by ANAC for the Canadian feed industry in 1999. It is a customised full HACCP (Hazard Analysis Critical Control Point) program of processes and controls that bring the highest safety standards to feed production. FeedAssure® was the first feed industry HACCP program developed in North America and one of the first in the world.

With the upcoming changes in Canadian regulations, scientific developments, as well as evolving customer requirements, ANAC and the FeedAssure® Steering Committee, have been hard at work updating the FeedAssure® program.

The focus in 2020 was to update the program manual which defines the requirements necessary for a robust HACCP feed safety program that meets the needs of industry and government and is, in turn, the gold standard for feed safety in Canada.

The work of the committee continues in 2021 to finalise the new manual and audit checklist. Pilot audits will also be conducted in a select number of facilities to evaluate the new requirements and audit checklist before officially launching the new program in 2022.

Canada recognized by OIE with negligible risk status for BSE

ANAC leading partner in application

In Spring 2021, it was announced that Canada has been officially recognised as having negligible risk status for bovine spongiform encephalopathy (BSE) by the World Organisation for Animal Health (OIE).

Since the discovery of BSE in Canada, ANAC and the feed industry has worked tirelessly with industry associations, the CFIA, veterinarians, and cattle producers to manage and reduce the incidence of the disease. ANAC was a leading partner in providing feed industry and science-based information for Canada’s application for negligible risk status for BSE which was submitted to the OIE in July 2020 and led to us achieving this new status.

This is an achievement for the entire beef value chain including the feed industry and is a historical moment in the Canadian BSE story. Attaining negligible risk status for classical BSE will allow industry to enhance our country’s ability to gain access into international export markets for Canadian cattle, beef, and beef products.

A new Canadian feed industry education program

ANAC is pleased to announce a new partnership with the University of Saskatchewan and the University of Guelph to develop and deliver a new Canadian tailored feed industry education program.

This program is a product of conversations with education leaders and ANAC’s board of directors, with the goal of providing education opportunities about the Canadian feed industry to a wide range of audiences. These audiences include those who are new to the industry, established stakeholders, government representatives and people in the industry wishing to deepen their understanding about the sector.

The program modules are currently under development and we look forward to launching this new Canadian educational opportunity later in 2021.
ANAC's response to COVID-19

Designating feed as an essential service

ANAC was instrumental in having the feed value chain designated as an essential service during the COVID-19 pandemic and this ensured that our industry could continue to legally work and manufacture feed during government-mandated restrictions and lockdowns. This designation, formalised on April 16, 2020, was the product of work ANAC had been engaged in since early March.

ANAC was also among the 66 signatories to an "Open Letter on the Value of Animal Agriculture" that was shared widely with media and international organisations. This letter:

• highlighted how extensive knowledge from the animal agriculture industry is crucial in safeguarding global nutrition and food security
• affirmed the high level of safety in animal agriculture
• refuted misinformation that livestock may have played a role in the spread of COVID-19

For more information on ANAC and the work of the Association, please visit: www.anacan.org.
Driven by the hog production’s continuous recovery, the high level of poultry inventory and the booming production and sales of ruminants, Chinese animal feed production achieved rapid growth in 2020.

**Gross output value of feed industry**
The gross output value of the industrial feed industry was 946.33 billion yuan (RMB), up 17.0% year on year, with the output value of feed, feed additive and feed machinery products reached 844.59, 93.29, 84.5 billion yuan, up 17.3%, 11.2% and 76.8% than 2019 respectively.

**Total industrial feed production**
The total industrial feed output was 252.761 million tons, up 10.4% than 2019, with the output of compound feed, concentrate, additive premix was 230.705 million tons, 15.148 million tons, 5.945 million tons, up 9.8%, 22.0%, 9.6% than 2019. The output of pig feed increased by 16.4 percent to reach 89.225 million tons, equal to 86% of the record high in the year 2018. The output of egg poultry feed was 33.519 million tons, up 7.5%. The output of meat poultry feed was 91.758 million tons, up 8.4%; the output of ruminant feed was 13.188 million tons, up 18.9%, both hitting record highs. The output of aquatic feed was 21.236 million tons, a year-on-year decrease of 3.6%. The output of pet feed was 963,000 tons, increased by 10.6%. In terms of sales methods, the bulk feed was 58.976 million tons, up 33.6% than 2019, accounting for 25.6% of the total output of compound feed.

**Feed additive production**
The output of feed additives was 13.908 million tons, up 16.0% than 2019, with the directly prepared feed additives 12.964 million tons and 14.7% up. The output of mixed feed additives (blenders of feed additives) was 944,000 tons, up 36.8% year on year. The output of amino acids, vitamins and mineral elements was 3.697 million tons, 1.603 million tons, 6.926 million tons, up 12.0%, 26.0% and 17.3% year on year respectively. The output of enzyme
preparation and microbial preparation reached a year-on-year growth rate of 15.1% and 22.7% respectively.

**Intensive operation**
749 feed mills’ production scale reached 100,000 tons or more, an increase of 128 over the previous year, and their output was 133.52 million tons with a 19.8% year-on-year increase, accounted for 52.8% of China’s total feed output. There are nine feed mills in China with an annual output more than 500,000 tons. There are 33 enterprise groups with an annual output of more than one million tons of feed, accounting for 54.6% of the total national feed output, among which 3 enterprise groups have an annual output of more than 10 million tons.

**Changes of regional layout**
Ten provinces with feed output exceeding 10 million tons in China, they are Shandong, Guangdong, Liaoning, Guangxi, Jiangsu, Hebei, Henan, Sichuan, Hubei and Hunan. The output of Shandong province reached 43.358 million tons, up 14.7% year on year; the output of Guangdong province was 30.102 million tons, up by 3.0%. The feed output of 26 provinces and Xinjiang Production and Construction Corps increased year on year, of which 12 provinces and the Xinjiang Corps, including Shanxi, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Henan, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang, increased by more than 20%.

*For more information please visit: www.chinafeed.org.cn.*

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**Browse other regions**
The Chamber of Feed Industry is mainly responsible for managing the representation and communications in front of different entities of the National and Regional Government, in order to make public policy recommendations that result in a better framework to carry out business activity in the country. Currently, the Chamber works hand in hand with public entities of the national order, associations and private companies to contribute to the sustainability and competitiveness of the country in the production of animal protein, improve health and nutrition of the Colombian population and the welfare of pets.

The Chamber of Feed Industry brings together the main companies in the country that produce animal feed in its different lines: poultry, swine, livestock, pets, minor species and aquaculture. The Feed Industry is the agribusiness link of the livestock sector chain that converts raw materials of agricultural origin into food for the production of meat, fish, eggs, milk, cheese and dairy products, being the primary source of animal protein. The companies affiliated to the Chamber of Feed Industry represent the 85% of the total production of manufactured commercial animal feed.

The Chamber is currently working on four strategic issues: Sustainability, Competitiveness and Internationalization, Legal Certainty and Regulatory Simplification, and Innovation and Digital Transformation.

In a year marked by the COVID-19 pandemic, the Chamber of Feed Industry achieved strategic results in favor of the industry, seeking to facilitate the management of each of its members by the modernization of a 24-year-old regulation, thus enabling international regulatory harmonization; the promotion of international standards for feed safety, best manufacturing
practices and strategies for the development of an adequate risk profiling model; the support of digital transformation processes and regulatory simplification in the feed authorities to increase competitiveness in the industry and the agribusiness sector; and by the promotion of education and specialized training in best practices for the industry.

### FEED INDUSTRY STATISTICS (TONNES)

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<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>GROWTH</th>
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<tbody>
<tr>
<td>Total Feed Production</td>
<td>9,181,550</td>
<td>9,385,472</td>
<td>2.2%</td>
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Source: Chamber of Feed Industry, ANDI estimates.

### FEED PRODUCTION IN COLOMBIA, 2013 - 2020 [MILLION TONNES]

Source: Chamber of Feed Industry, ANDI estimates.
BREAKEW OF FINISHED FEED PRODUCTION BY CATEGORY, 2020

Swine 16%
Cattle 10%
Pets 4%
Equines, rabbits and others 2%
Aquaculture 3%
Poultry 65%

Source: Chamber of Feed Industry; ANDI estimates.

Browse other regions
FEFAC, the European Compound Feed Manufacturers' Federation, represents 21 Full members in 21 European countries as well as Associations in the UK, Switzerland, Turkey, Serbia, Russia and Norway with observer/associate member status. The European Manufacturers of Feed Minerals Association (EMFEMA) as well as the European Former Foodstuffs Processors Association (EFFPA) also hold associate membership. The European compound feed industry employs over 100,000 persons at approximately 3,500 production sites often in rural areas which offer few other employment opportunities.

**Key Market Developments**

**Compound feed production estimates in 2020**

According to data provided by FEFAC members, the EU compound feed production (EU 27+UK) for farmed animals\(^2\) in 2020 is estimated at 164.9 Mio t., i.e. an incremental increase of 0.1% compared to 2019 despite the combined effect of the spread of animal diseases (ASF & AI) and the COVID-19 pandemic in 2020 with an heavy impact on key consumption sectors such as HORECA and Tourism. While cattle & poultry feed saw a decline, all other sectors experienced production growth compared to 2019.

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**EVOLUTION OF COMPOUND FEED PRODUCTION (EU27+UK) BETWEEN 2019 AND 2020 PER CATEGORY**
The decrease of 0.8% in the poultry feed production, which is the first recorded in 10 years, is a result of the combined effect of the spread of Avian Influenza (HPAI) and COVID-19 lockdown measures. In 2020, there were two seasons of the HPAI epidemic in Europe depressing the poultry sector. In earlier months of 2020, the disease was detected in PL, CZ, DE, SK, RO & HU while in autumn the disease hit the NL, DK, HR, FR, IR, SE, UK and again PL & DE. The most affected country was Hungary after the virus entered the area with a high density of ducks and geese holdings. COVID-19 lockdown measures and overall decrease in tourism had a negative effect especially in Spain where the poultry sector decreased its production substantially by almost 20% compared to 2019.
Cattle feed production slightly decreased by 0.2% mainly due to the indirect impact of COVID-19 and the closure of the HORECA chain (Hotel/Restaurant/Catering) that lead to a shift in consumer demand for products of animal origin. Still, the cattle feed tonnage did not fall as initially expected due to a drier than normal spring season and poor grass growth in several countries.

Despite the spread of African Swine Fever (ASF) in Europe and its impact on the pig sector, pig feed production increased by 1.3% in 2020. This was mainly because several countries increased their exports to China benefiting from Germany’s export ban. Furthermore, due to the COVID-19 problems with slaughterhouses capacity, many farm animals stayed on the farms longer than necessary, which led to higher feed consumption. Compared to young animals, finishing animals have a higher feed conversion ratio (more feed is needed to produce one kg of meat/maintain the weight).

Looking at the market outlook for 2021, very low profitability characterised the pig and poultry sector during the first months due to higher feed prices, linked to the global grain market rally starting in Q4 of 2020. An increasing number of Member States faces problems for EU exports of animal products due to the evolving AI & ASF situation. Overall, it is expected that market problems for animal products resulting from the combination of COVID-19, AI and ASF impacts will continue and as such impact the industrial compound feed production. Next to that, the impact of the EU Green Deal policy agenda and national authorities initiatives to tackle the environmental emissions (BE, NL – ammonia emissions) & welfare issues (DE) continue to create additional pressure on the EU livestock and feed sector.

**FEFAC Charter 2030**

FEFAC launched, at its XXIX Congress on 25 September 2020 the **FEFAC Feed Sustainability Charter 2030**, laying out the feed industry views on sustainable feed production over 5 key ambitions:

- Contribute To Climate-Neutral Livestock & Aquaculture Production Through Feed
- Foster Sustainable Food Systems Through Increased Resource & Nutrient Efficiency
- Promote Responsible Sourcing Practices
- Contribute to Improving Farm Animal Health & Welfare
- Enhance the Socio-Economic Environment and Resilience of the Livestock & Aquaculture Sectors

The Charter’s ambitions provide a key reference to FEFAC when answering the EU Commission Green Deal ambitions linked to the EU livestock and feed sector and in particular its Farm to Fork strategy on the way to more sustainable food systems as well as the UN sustainable development goals. It
provides also a platform for sustainability commitments taken by FEFAC members.

FEFAC published in June 2021 its first Feed Sustainability Charter Progress Report to follow and measure (through identified key performance indicators – KPI to each FEFAC ambition) the progress towards 2030.

**Soy Sourcing Guidelines and deforestation supply chains**

In February 2021, FEFAC delivered on its commitment to release an upgraded version of its Soy Sourcing Guidelines, first released in 2015. The FEFAC Soy Sourcing Guidelines 2021 now contain 73 criteria in total, with 54 essential and 19 desired criteria. The publication of the Guidelines followed an intensive year of development and consultation. A key new feature of the FEFAC Soy Sourcing Guidelines 2021 is the inclusion of a criterion on conversion-free soy, which is aligned with the Accountability Framework Initiative, thereby linking up with market and policy expectations.

FEFAC has been engaging in discussions on the draft legislative proposal from the European Commission on tackling embedded deforestation in supply chains, that should contain obligations to any company for performing due diligence to ensure that purchased forest-risk commodities have not contributed to deforestation.

**COVID 19/ EU contingency plan**

FEFAC established a FEFAC Task Force COVID-19 shortly after the Covid-19 outbreak in the EU as an emergency crisis management team. Valuable information on the market & logistic issues linked to the management of the disease were crucial and as such contributed among others to the swift introduction of Green Lanes and stopping intentions to set national grain export ban in certain EU Member States.

Following the Covid-19 outbreak, the European Commission, in the framework of the Farm to Fork strategy, initiated the development of a common, permanent EU food crisis response mechanism coordinated by the Commission, including the Member States and Food Chain stakeholders. FEFAC answered several public consultations while providing its sector vulnerability assessment at a meeting of the EU Commission expert group on the EU contingency plan.

**EU protein strategy & CAP**

In 2020/21, FEFAC focused on the promotion of the EU protein plan objectives in the context of the upcoming Common Agricultural Policy Reform 2021-2027. In 2020, FEFAC shared its position on European Commission Communications on Farm to Fork / Biodiversity / CAP reform and EU Green Deal in which we recommended that the EU Commission pay particular attention to support measures to the protein crop sector when evaluating National Strategic Plans (foreseen in 2022). FEFAC stressed the need to prioritise feed proteins production as one of the inclusion targets of NSP.
Environmental performance
Regarding the Environment Footprint of feed production, FEFAC organised its discussions on the PEF feed category rules and the GFNI LCA feed database in a new working group called the EU PEF&GFNI Group. This group is composed of the FEFAC Sustainability Committee members with an interest in environmental footprinting topics but also welcomes external partners that were involved in the original consortia which developed the PEFCR Feed and the GFNI database. In the course of the first half of 2021, a light review of the PEFCR Feed was started at the EU level, which is expected to be completed by the end of 2021.

FEFAC organised a webinar jointly with AFIA on the practical implementation of the PEFCR Feed and the GFNI Database on 17 March 2021. In November 2020, Nick Major was elected Chair of the GFNI.

As regards the environmental footprint of feed digestion, FEFAC has been involved also in discussions on further development of PEF, in particular as regards the modelling at farm level of air emissions following feed digestion, i.e. methane and ammonia mostly. The EU Commission recommended to accelerate efforts to reduce methane emissions up to 35-37% by 2030 compared to 2005. FEFAC’s strategic interest is to ensure the development of a modelling approach that allows it to correctly capture innovative feed and feeding strategies geared towards reducing livestock farm emissions. This takes also into account developments in the FAO LEAP Technical Advisory Group on Methane.

Corporate Sustainability (Reporting)
Developments at the EU level with a focus on regulating corporate sustainability (reporting) have intensified in the past year, for example with an horizontal legislative proposals from the European Commission on Due Diligence covering Human Rights as well as on Sustainable Finance.

In parallel, the European Commission triggered the development of a Code of Conduct on Responsible Business & Marketing Practices as part of its efforts to contribute to the UN food systems summit in September 2021. The European Commission invited sectors from the food chain to define concrete aspirational targets for a more sustainable food chain as well as listing means and initiatives how to achieve them.

Lifting of the "feed ban"
More than 20 years after the decision to stop feeding almost all food-producing animals with processed animal proteins, the process of lifting the ban on the use of porcine Processed Animal Proteins (PAPs) in poultry feed and vice-versa, is completed. The increasing importance taken by the “circular economy” thinking in the shaping of EU policies enabled an almost full consensus among the EU-27 Member States for the legislative proposal. The regulation will also authorise the use of insect PAPs in both pig and poultry feed.
Based on the input of the Animal Nutrition and the Industrial Compound Feed Committees, FEFAC provided to the European Commission its technical expertise on the topic, with a particular focus on the policy in terms of management of the carry-over risk.

**Feed additives**
The revision of the EU Feed Additives Regulation (EC) No 1831/2003 is earmarked in the EU Commission “Farm-to-Fork” strategy as an initiative contributing to support the transition to more sustainable food chains. The ambition announced by the EU Commission is, in particular, to facilitate market access to feed additives to reduce the environmental impact of livestock farming.

The most relevant options that will be assessed by the EU Commission are the reduction of the burden of proof of efficacy, the granting of some market protection to encourage producers of generic feed additives to apply for authorisation (cost-sharing) and the modernisation of labelling requirements with possibility to make claims.

FEFAC shared its key expectations from the revision of the feed additives legislation, i.e. i) the need to safeguard access to generic feed additives, ii) the stimulation of innovation in areas of strategic importance such as the reduction of the needs for antibiotics, animal welfare or the reduction of environmental impact, and iii) the reduction of dependency on third countries for the supply of feed additives.

**Mycotoxins**
At the end of 2020, the EU Commission launched a consultation on a revision of regulatory levels for mycotoxins in feed (DON, zearalenone, fumonisins and T2/HT2). The main change proposed consists of shifting from guidance values to maximum limits for these mycotoxins in the complete feed while maintaining guidance values for feed materials.

FEFAC criticized this approach, which would weaken the commercial position of the feed industry vis-à-vis its suppliers, put additional administrative burden and liability on feed manufacturers, reduce the options available for risk mitigation and this, without any perceived benefit for animal health and welfare.

**African Swine Fever**
African Swine Fever (ASF) remained during the last 12 months a hot issue in all EU countries, seeking to either control its dissemination, eradicate the disease or protect themselves against its introduction.

In parallel to the activities of dissemination of its guidance document on the development of a biosecurity plan in the feed sector, FEFAC monitored carefully the scientific developments regarding the potential role of feed as a vector of dissemination of the ASFV including scientific publication in close collaboration with AFIA.
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For more information please visit https://www.fefac.eu/

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1 Without Luxemburg, Greece and Malta

2 From 2016 on, FEFAC no longer includes dry petfood production in its statistics, considering that a large part of the production was missing in national statistics.
FEFANA is the EU Association of Specialty Feed Ingredients and their Mixtures. It acts as the united voice of the specialty feed ingredients business in Europe. Its membership comprises manufacturers and traders of feed additives, functional feed ingredients, premixes and other mixtures of specialty ingredients that enter the food chain via feed. FEFANA facilitates the dialogue between EU institutions and feed business operators while promoting feed and food safety and a fair and competitive market.

FEFANA's overall mission is to promote, safeguard and defend the common and general interests of the industry of SFIs and their Mixtures. It represents the views of its Members to the EU authorities and, via its network of national partners in key EU Member States, also to the Competent Authorities of these countries. FEFANA has gained a strong positive reputation across Europe to key decision-makers and it has built close contact with other stakeholders of the feed and food chain.

FEFANA is a well-recognized IFIF full member. Representing the supplying industry, FEFANA plays a significant role in the feed & food chain and shares a common responsibility with the compound feed industry. FEFANA views IFIF as the interface to certain key international organisations, such as FAO, Codex, OIE and ISO, and the ideal platform to meet with other actors of the feed and food chain.

1. Main current working topics
   Evaluation of Regulation 1831/2003
   FEFANA has been positioning itself very early in the process, flagging critically important items since the European Commission had initiated the Evaluation of Regulation (EC) 1831/2003 as part of the Better Regulation agenda in 2018.
The Commission has recently launched the open public consultation on the Modernisation of the EU rules on Feed Additives, an action point of the Farm to Fork Strategy published in May 2020. Such action aims at facilitating the placing on the market of innovative feed additives enabling more efficient and sustainable livestock production – a very important recognition for the sector.

FEFANA and its members recognise that there are still a number of aspects that need to be given greater emphasis and tackled in order to truly unleash the potential of the sector. This would allow not only to deliver on the ambitious goals of the European Green Deal, but also to provide much needed modern solutions to the livestock chain and society’s needs.

Examples of such aspects are:

- the recognition of feed additives’ contribution in reducing the need for the use of antibiotics, which in turn contributes to the fight against antimicrobial resistance
- more clarity and flexibility in the definition and functions of feed additives to create better grounds for innovation
- a more flexible framework and enhanced protection for innovation, through time-limited exclusive rights for applicants for authorisations that commit to applications and to placing innovative additives on the market
- the possibility of communicating innovative benefits using claims for feed additives and premixtures
- a measure providing for a specific Community Code of good labelling practice
- the revision of the current efficacy assessment undertaken by EFSA to move to a less restrictive approach allowing applicants the possibility to fully describe the effects, purpose, and intention of use of the feed additive.

FEFANA is (pro)actively involved in making sure that these and other elements be addressed in the on-going process of modernising the key regulation for our industry.

**FEFANA consortia for the authorization of feed additives in the EU**

Through an efficient cooperation system, manufacturers and importers of feed additives were offered the opportunity to participate in FEFANA Consortia and jointly prepare and submit applications for the re-authorisation of over 1000 additives. These are being evaluated by European Food Safety Authority (EFSA) prior to re-authorisation by the European Commission. The evaluation phase of some Consortia dossiers is still on-going and its completion might take a few more years.

A major milestone was achieved in early 2017 with the publication of a first set of authorisations of feed flavourings compounds including more than 150 compounds pertaining to 15 dossiers of Chemically Defined Substances. The conditions of use of these re-authorisations are significantly different from
their previous authorised use as per Directive 70/244/EEC. Whereas the previous authorisation did not provide limits for level of inclusion of the great majority of flavourings in feed, the new authorisations have in their majority a recommended use level for all species and few of them have also a maximum permitted level. Such levels are recommended on the basis of the safety assessments performed by EFSA. The finalisation of the EFSA evaluation and subsequent EU re-authorization of all botanical feed flavourings is still pending.

FEFANA is committed not only in the daily management of the dossiers, but also on the practical implications that each re-authorisation may carry.

As of 2020 FEFANA also facilitates the creation of collaborative platforms for the renewal of authorisations for non-holder specific feed additives. While not acting as the applicant, FEFANA assists in the establishment of collaboration platforms allowing interested members to work jointly for dossier submissions for non-holder specific feed additives. Where required, FEFANA also offers administrative assistance and acts as contact point with competent authorities.

2. Resources
FEFANA online classification tools
The distinction between feed materials and feed additives has critical implications for the placing of these products on the EU market. Feed business operators and competent control authorities are frequently faced with questions regarding the classification of products. EU guidelines for the distinction between feed materials, feed additives, biocidal products and veterinary medicinal products (EC Recommendation 2011/25/EU of 14th January 2011) were established to avoid inconsistencies and to provide an appropriate level of legal certainty, misclassification having potentially severe consequences. Since the guidelines remain somewhat theoretical, a need for such a useful tool was perceived by the operators. The FEFANA on-line tool does not aim to substitute for the operators’ or the authorities’ responsibility to take a decision but is expected to be an important benchmark in the decision process; [http://fefana.org/ClassTool/](http://fefana.org/ClassTool/)

FEFANA has also launched another user-friendly tool to support business operators in the categorization of the different types of mixtures as defined in the EU’s regulatory framework. The new tool is based on the definitions covered by the three reference EU Regulations for mixtures:

- Regulation (EC) No 1831/2003 on additives for use in animal nutrition (premixtures);
• Regulation (EC) No 767/2009 on the placing on the market and use of feed (compound feed);

• Regulation (EC) No 327/2015 on the requirements for the placing on the market and conditions of use of additives consisting of preparations (feed additive preparations).

This voluntary tool, alongside the one launched earlier on for the identification of single substances, will continue facilitating businesses and authorities in their efforts to ensure compliance with the relevant regulatory requirements in the EU:

http://www.fefana.com/MixtureClassificationTool/

**FEFANA’s EU Code of Practice on voluntary labelling particulars (claims) for feed additives and premixtures**

Claims on feed additives and premixtures are a common practice in the feed sector, while they are not referred to in Regulation (EC) 1831/2003 on additives for use in animal nutrition. FEFANA has decided to develop its Code in order to achieve a common approach amongst Feed Business Operators (FBOs), which can also be recognized by the authorities, to foster transparency, fair competition and predictability.

In order to ensure alignment along the European feed chain, FEFANA has taken into account other relevant codes of practice already in use; notably the "Code of good practice for the labelling of compound feed for food producing animals" developed jointly by FEFAC and Copa-Cogeca, and the "Code of good labelling practice for pet food" developed by FEDIAF. Complementarily to these documents, the FEFANA Code intends to improve the appropriateness of labelling and to bring a common understanding with regard to the rules applicable to voluntary labelling of feed additives and premixtures.

More information on the rationale and the process behind it, alongside the Code itself, is available at: http://fefana.org/eu-legislation/tools/code-of-practice-claims/

**Publications and videos**

Being the expert on Speciality Feed Ingredients and their Mixtures, FEFANA aims at providing technical and scientifically sound information on the benefits and safety of the products of its industry. In order to disseminate such knowledge, FEFANA has issued so far:

• Animated videos: FEFANA is working on a series of videos covering the benefits of specialty feed ingredients for current societal challenges, ranging from sustainability to animal welfare and the fight against antimicrobial resistance. The latter has been launched at the beginning of 2021 and the upcoming ones will soon be available on the dedicated webpage: https://fefana.org/info-centre/videos/
- Factsheets: in the last few years FEFANA has published a series of thematic Factsheets on the benefits of specialty feed ingredients and on activities carried out within FEFANA’s dedicated expert groups (e.g. revision of guidelines, organic farming, CLP-GHS)

- Booklets: FEFANA has published five booklets on different categories of products: Premixtures, Organic Acids, Carotenoids, Amino Acids, and Vitamins.

These and other publications are available on FEFANA’s virtual info center at: http://fefana.org/info-centre/publications/

For more information please visit: www.fefana.org or contact us by e-mail at: info@fefana.org

Browse other regions
CLFMA of India the apex association formed in 1967 represents dynamic livestock sector in the Country. The association has membership on PAN India basis from diverse subsectors across the animal protein value chain including feed manufacturing; poultry, dairy and aquaculture businesses; animal nutrition and health, veterinary services, machinery & equipment; and processing, distribution and retailing of meat.

CLFMA OF INDIA was broad based from the year 2002, to accommodate all the sectors of the Livestock Industry. All feed manufacturers including Non-Feed in Private, Government and Co-Operative Sectors, the Feed Additives / Feed Supplements Manufacturers and Suppliers. Animal Health products, Manufacturers’ and Suppliers and Importers located all over the country as well as some of the MNC companies as well are our members.

CLFMA OF INDIA is recognized by Livestock farmers, Central and State Governments, Government Departments, Agricultural Universities, Veterinary Colleges and National Research Institutes in the Country as well as by related Sectors outside the Country. CLFMA’s views are solicited and considered as well by the Central and State Governments while formulating policies governing not only animal feed industry but also the entire gamut of animal production.

Indian Feed Industry:
The Indian Feed Industry is going through a phase which will set the direction for the next decade of Indian protein sufficiency.

The Livestock sector provides about 4-4.5% to the GDP and total about 25% of the contribution to the Agricultural GDP. The Growth of the feed Industry is what we called as close to the Indian GDP number of 6-7% with a target to
move up to 10% PA. The reasons attributed to this growth percentage has been the rise of Middle class with disposable Income, awareness about the dietary requirements and the overall rise in Population numbers. The feed industry is getting support from consumers in terms of market size moving higher but on the other there are challenges like:

- Industry Consolidation.
- Higher cost of Feed Raw Material cost.
- Import Export Policies and procedures.
- Country Protective policies.

In spite of all these challenges India has managed to achieve fantastic results in terms of being:

1. **Number 1 in Milk Production.**
   Production of 176.3 MYN MT in 2018 versus 116 MYN MT in 2010.

2. **Number 2 in Aqua Production.**
   Production of 10.76 MYN MT in Year 2018 versus 8.1 MYN MT in 2010.

3. **Number 3 in Egg Production.**
   88.15 Billion egg production versus 54 Billion in 2010.

4. **Number 4 in Broiler Meat Production.**
   Production of 4.85 MYN MT, versus 2.65 MYN MT in 2010.

*Source: NDDB, Govt Agencies*
SHARE OF AGRICULTURE & ALLIED AND LIVESTOCK SECTOR IN GVA - (AT CURRENT PRICES IN RS. CRORE)

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<thead>
<tr>
<th>YEAR</th>
<th>GVA (TOTAL)</th>
<th>GVA (AGRICULTURE &amp; ALLIED)</th>
<th>GVA (LIVESTOCK SECTOR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>12458642</td>
<td>2175547 (17.5 %)</td>
<td>560613 (4.5 %)</td>
</tr>
</tbody>
</table>

Source: Chamber of Feed Industry, ANDI estimates.

Indian Government Focus:
The newly elected government wants to increase the farmer income by 100% by the year 2022, all measures expected for the Industry to do well likely to be undertaken. It has already started with small crop loan like MUDRA scheme, Farmer Insurance etc.

The coming Budget (July 05, 2019) will have special coverage to Agriculture and Indian Agriculture keenly awaits the policies to be made and implemented for the livestock sector for current year and provide a roadmap for the next five years. One India One market has been getting advocated and Agriculture Mandis are being connected through E-NAM. Integration and Connectivity will be the Key words for the coming times.

CLFMA has and will try to engage government as a signboard for the livestock sector for the government and through its members and association there will be for the overall growth and development of the livestock sector in India.

Browse other regions

>
Iran Feed Industry Association, IFIA, based in Tehran, is Iran’s largest organization devoted exclusively to representing the business, legislative and regulatory interests of the Iran animal feed industry and its suppliers. Founded in 2013, IFIA also is the recognized leader for international companies and provincial associations.

Members include 714 certified facilities including animal feed and feed Additive manufacturers, integrators, pharmaceutical companies, ingredient suppliers, equipment manufacturers and companies which supply other products, services and suppliers to feed manufacturers. The feed industry makes a major contribution to feed safety, nutrition and the environment, and it plays a critical role in the production of healthy, wholesome meat, milk, fish and eggs.

General services provided by IFIA:

• Consulting Services for Social Insurance
• Contract Affairs
• Legal Claims
• Tax consultancy
• Arbitration Center
• Ranking Centers

The report of the Iran Feed Industry Association was presented on Strategic Actions, Structural Measures, Major Studies, Research and Publication, and the most important International Measures. Some guild activities are informed with the aim of developing and strengthening the share of animal feed industry, employment and the national economy.
Strategic Actions

- Setting up “Statistics and Economic Information Center” of Iran Animal Feed Industry
- Establishment of the “National Fund” to support the development of Animal Feed Manufacturers
- Correction of the Export Tariffs of animal feed
- Setting up the Arbitration center for Iran Animal Feed Industry
- Prohibition of the production of animal feed in breeding units during a five-year period (more than 60% of feed production in breeding units)
- Allocation annual Use of for export of 500 thousand tons of Feed to the international customers especially 15 countries with common borders.
- Providing the scheme of reforming the distribution pattern of feed stuff in order to supply affordable financial resources in different rings of Protein supply chain in the country
- Correction of the import tariffs of Feed Stuffs
  - Decreasing the tax exemption:
    - from 6% to 5% for Feed Mills
    - from 13% to 12% for importers.
    - from 4% to 3% for Wholesalers
    - from 11% to 10% for retailers.
- Reducing investment risk in Iran Animal Feed Industry
- Setting up the National Center for Ranking and Competitiveness in Animal Feed Industry
- Launching the Arbitration Center of Animal Feed Industry

Structural Measures

- Setting up a continuous communication system with the members through SMS, and social networks like WhatsApp and Telegram
- With the aim of informing the members, quick following up and correction the disruptive business issues, the unit of the surveillance of regulations and directives has been launched.
- Standardization of processes and consolidation of ISO 9001 in the IFIA
- Official Audit of 68 Feed Production units for issuing Export Code
- Holding 14 joint webinars with Iran Veterinary Organization (IVO) In order to improve the quantity and quality of feed production in Iran with various issues such as grain sampling, standardization of feed mills, etc.
- Participate in important international specialized events and webinars in the field of animal feed (companies and organizations), prepare and publish regular reports and informing members and followers on social networks.
- Holding 12 training courses of GMP in different cities of Iran for promoting the level of Feed Safety in Feed Production with participation of IVO, Ministry of Agriculture-Jihad representatives and the directors, QC and Technical managers of Feed Mills
• In order to promote public awareness and belief in the role of animal feed in sustainable development and increase the role of animal feed industry in production, employment and national income, IFIA over the past year has published specialized reports and posters in the field of animal feed, animal health and sustainability in feed production, as well as the importance of a healthy environment and biodiversity on its social medias such as Instagram, LinkedIn, etc.

• Signing a memorandum of cooperation with the Standard Research Institute to hold operational training courses

• Signing a memorandum of cooperation with the Vice-Presidency for Science and Technology with the aim of supporting high-tech and knowledge-based companies with a focus on the production of feed additives and supplements.

Major Studies, Research and Publication

• Publishing the book of "Iran a New Era" 2019, 2020 version

• Translating and publishing Fao's book called: Good practices for the feed sector.

• Running the second national competitions for successful experiments and Benchmarking in Animal Feed industry, with the aim of encouraging feed manufacturers to share their successful experiences.

The most important International Measures

• Holding two annual meetings with the presence of members of parliament, all deputies of the Ministry of Agriculture and the Ministry of industry, mine and trade and heads of specialized organizations on animal feed.

The most important steps taken by Iran Veterinary Organization in relation to the Animal Feed Manufacturers Units

Assessment of documents for approval of importing raw materials and Ready-to Feed for livestock, poultry and aquaculture:

Aquaculture Feed: 37 facilities
Pet Feed (Dog, Cat, Birds, etc...): imports banned.
Livestock Feed (Milk Powder) 21 facilities
Feed Ingredients (Concentrate, Fat Powder, Gluten, etc...) 97 facilities

Participate in scientific-specialized working groups
Specialist working groups of Livestock, Poultry and Aquaculture Feed: 28 cases
Feed Technical Committees: 9 cases
National Standards Organization meetings: 31 cases
Working Group of Residue (for animal feed use): 18 cases

State of Iran Compound Feed in 2019, 20

In 2020, 714 feed mills manufactured 10.5 Million tons of animal feed, of which 6000 thousand tons cattle feed, 4000 thousand tons poultry feed, 400 thousand tons Aquaculture feed and 100 thousand tons other animal's feed.

According official statistics of Agriculture-Jihad Ministry, total amount of required feed ingredients is 85656 thousand tons. The highest required ingredient of wheat and barley bran is 15168 thousand tons, and the lowest required input of feed wheat is 920 thousand tons.
FEED PRODUCTION BY TYPE IN 2019 AND 2020 WITH CONSIDERING OF 5% CALCULATION ERROR (1000 MECTRIC TONS)

<table>
<thead>
<tr>
<th>Type</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Mills</td>
<td>645</td>
<td>714</td>
</tr>
<tr>
<td>Cattle &amp; Dairy Feed</td>
<td>5,645</td>
<td>6000</td>
</tr>
<tr>
<td>Poultry Feed</td>
<td>3,960</td>
<td>6,000</td>
</tr>
<tr>
<td>Aqua Feed</td>
<td>291</td>
<td>400</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9,896</strong></td>
<td><strong>10,400</strong></td>
</tr>
</tbody>
</table>

Source: Iran Feed Industry Association

REQUIRED ANIMAL FEED INGREDIENTS IN 2020 (1000 TONS) WITH CONSIDERING OF 5% CALCULATION ERROR (1000 MECTRIC TONS)

<table>
<thead>
<tr>
<th>Feed Type</th>
<th>Metric Tons (1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Corn</td>
<td>10,760</td>
</tr>
<tr>
<td>Feed Wheat</td>
<td>920</td>
</tr>
<tr>
<td>Feed Barley</td>
<td>6,618</td>
</tr>
<tr>
<td>Soybean Meal</td>
<td>4,550</td>
</tr>
<tr>
<td>All Types of Meal</td>
<td>3,655</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>7,697</td>
</tr>
<tr>
<td>Forage Corn</td>
<td>12,809</td>
</tr>
<tr>
<td>Sorghum and Millet</td>
<td>3,736</td>
</tr>
<tr>
<td>Wheat and Barley Bran</td>
<td>15,168</td>
</tr>
<tr>
<td>Rice and Barley Bran</td>
<td>2,348</td>
</tr>
<tr>
<td>Pasture Forage</td>
<td>9,450</td>
</tr>
<tr>
<td>Agricultural and Industrial Waste</td>
<td>7,945</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>85,656</strong></td>
</tr>
</tbody>
</table>

Source: Iran Feed Industry Association

Browse other regions
The Japan Feed Manufacturers Association (JFMA) was established in 1957 as a cooperative to contribute to the prosperity of Japanese feed and livestock industry.

JFMA has 43 member companies and 68 feed mills as of 01 April 2021, which produce formula and mixed feed in Japan.

JFMA’s total feed production by member companies was approx. 16.2 million tons (0.1% increase from the previous fiscal year), and Japanese total formula and mixed feed production was 24.1 million tons (no change from previous year) in 2020.

We are relying imported feed ingredients.

Japan has been relying on imports for most of feed grains such as corn, sorghum, barley, wheat totaling 13,406 thousands tons a fiscal year most of which will to be imported from United States but now are imports from diversified countries, including Brazil and Argentina become of improvement of their inland transportation and also the port facilities.

Japan’s import of corn, accounts for about 49.0% of formula and mixed feed. Second largest is soybean meal (12.9%), the third is the rapeseed meal (4.6%). Use of rice for feed has increased to 4.0%.

Fights against infectious animal diseases.

Since September 2018, a certain area of Japan has been suffering from an outbreak of classical swine fever, and the Japanese government began vaccinating pigs in October 2019. However, there are still sporadic outbreaks of classical swine fever on farms. There is no case of African swine fever reported in Japan, but it has very widely spread from China and other South-
East Asian countries to South Korea, a neighboring country of Japan although separated by the sea. Our animal hygiene authorities and the related industries are on their highest alert, and the members of JFMA have been taking tightest sanitary measures on their plants.

In the last winter season, avian flu carried by migratory birds was a source of another threat. The disease broke out on 52 farms, and about 9.74 million birds were destroyed.

Our initiatives to pursue sustainability and environmental goals.
In the past few years, the use of domestically produced rice as an ingredient in compound feed instead of imported corn has taken root under the government’s supportive measures to promote the diversification of rice production. Such development of new market for domestic rice not only contribute to land conservation and regional revitalization by preventing the abandonment of paddy fields in economically and socially depressed regions, but also curbs greenhouse gas emissions by shortening the transportation distance.

We are also making technical efforts to produce low phosphor and low nitrogen feed to lead to smaller release of these substances in the environment.

Recycling use of food by-products under appropriate sanitary control is another initiative taken by our feed industry to encourage effective use of limited resources and reduction of environmental burdens.

Number of households raising livestock
As of February 1st 2020, number of households raising dairy cattle was 14,400 (decreased by 4.0%), and number of heads for dairy cows was 1.352 million (increased by 1.5%).

Number of households raising beef cattle was 43,900 (decreased by 5.2%), and number of heads was 2.555 million (increased by 2.1%).

The overall trend in recent years has been that many small-scale households to stoped raising livestock, resulting in an increase in the number of heads per household.

PRODUCTION OF FEED IN JAPAN 2017-2020 (1,000TONNES, APRIL-MARCH)

<table>
<thead>
<tr>
<th>FEED TYPE</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicks</td>
<td>713</td>
<td>710</td>
<td>679</td>
<td>668</td>
</tr>
<tr>
<td>Layers</td>
<td>5,751</td>
<td>5,769</td>
<td>5,813</td>
<td>5,699</td>
</tr>
<tr>
<td>Broilers</td>
<td>3,853</td>
<td>3,803</td>
<td>3,859</td>
<td>3,816</td>
</tr>
<tr>
<td>Hog</td>
<td>5,579</td>
<td>5,548</td>
<td>5,641</td>
<td>5,722</td>
</tr>
<tr>
<td>Dairy Cattle</td>
<td>2,991</td>
<td>2,982</td>
<td>3,034</td>
<td>3,078</td>
</tr>
<tr>
<td>Beef Cattle</td>
<td>4,442</td>
<td>4,437</td>
<td>4,520</td>
<td>4,569</td>
</tr>
<tr>
<td>Quail</td>
<td>32</td>
<td>31</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>27</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td>Mixed Feed</td>
<td>482</td>
<td>495</td>
<td>531</td>
<td>537</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>23,868</strong></td>
<td><strong>23,802</strong></td>
<td><strong>24,138</strong></td>
<td><strong>24,149</strong></td>
</tr>
</tbody>
</table>

Source: MAFF (Ministry of Agriculture, Forestry and Fisheries)
PRODUCTION OF FEED IN JAPAN IN 2020 (1000 TONNES)

- Mixed Feed 537 / Quail 29 / Others 31
- Chicks 668
- Beef Cattle 4,569
- Layers 5,699
- Dairy Cattle 3,078
- Broilers 3,816
- Hog 5,722

Source: MAFF (Ministry of Agriculture, Forestry and Fisheries)

FEED INGREDIENTS USED IN COMPOUND & MIXED FEED APRIL 2020 TO MARCH 2021 (1000 TONNES)

<table>
<thead>
<tr>
<th>FEED INGREDIENT</th>
<th>1000 TONNES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>11,841</td>
</tr>
<tr>
<td>Sorghum</td>
<td>346</td>
</tr>
<tr>
<td>Wheat</td>
<td>367</td>
</tr>
<tr>
<td>Barley</td>
<td>852</td>
</tr>
<tr>
<td>Feed Rice</td>
<td>959</td>
</tr>
<tr>
<td>Wheat Flour</td>
<td>171</td>
</tr>
<tr>
<td>Other Grains</td>
<td>138</td>
</tr>
<tr>
<td>Soybean Meal</td>
<td>3,113</td>
</tr>
<tr>
<td>Other Oil Meals</td>
<td>1,281</td>
</tr>
<tr>
<td>Other Beans</td>
<td>10</td>
</tr>
<tr>
<td>Chaff and Brans</td>
<td>2,355</td>
</tr>
<tr>
<td>DDGS</td>
<td>410</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>111</td>
</tr>
<tr>
<td>Animal by-products</td>
<td>359</td>
</tr>
<tr>
<td>Others</td>
<td>1,863</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24,176</strong></td>
</tr>
</tbody>
</table>

Source: MAFF (Ministry of Agriculture, Forestry and Fisheries)

For more information please visit: www.jafma.or.jp.
FEEDLATINA: The Latin American and Caribbean Feed Industries Association, is based in Uruguay and aims to be the main voice and the focal point on regulatory issues in the animal nutrition sector.

Feedlatina works to promote increased dialogue between the feed industry and regulatory agencies and is based on a further sharing of responsibilities between them in order to promote compliance with technical and commercial regulations “Co Regulation”. We act as a mediator with Official Bodies to promote the development, harmonization and maintenance of the regulatory frameworks that guarantee free trade in the animal nutrition market, based on quality, safety and food security.

Feedlatina implemented its STDF/PG/345: Feed and Food Security Program, a project for regulatory harmonization and feed safety in Latin America and the Caribbean. The STDF/PG/345 program was supported by the Standards and Trade Development Facility (STDF) a global partnership that supports developing countries in building their capacity to implement international sanitary and phytosanitary (SPS) standards, guidelines and recommendations as a means to improve their human, animal, and plants health status to gain or maintain access to markets.

Finished in November 2019 STDF/PG/345 had support from FAO Office in Latin America, the OIE Americas, the Inter-American Institute for Cooperation on Agriculture (IICA), Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, México, Paraguay, Perú, Uruguay. Private Companies Members and National Association also help in the project.

By the end of the project, public agents, regulatory bodies, agricultural and the private sector related to the animal feed chain works to institutionalized and consolidated public-private cooperation strategies, which allows today in our daily work for regulatory harmonization and institutional strengthening to...
promote food safety and the sustainability of the production. We produce and promote information material and promote education and credibility of the animal feed sector in our region.

Today Feedlatina is consolidated as a permanent regional and International Space for Public and Private cooperation in the field of animal nutrition. We give support and negotiate in regulatory matters with the different regulatory agencies and support for trade facilities between countries and economics blocs. We are in constant contact with the government agencies of the Latin America and Caribbean countries through their Ministries and Services of Agriculture, Livestock and food safety, which support the association and allow it to be updated on legislation and actual information. Such as Statistical data of Latin America Market, national production and foreign trade between the countries.

The Proactivity work of our teams made up of the associated companies members and the implementation of good manufacturing practices are key elements that Feedlatina sought to strength through the proposals in agreement and equivalent among the countries in harmonized procedures or equivalent for example in Labeling and Glossary of Product Concepts for animal Feed (Additives).

Feedlatina promote a balanced regulatory frame to facilitate market access and promote the adoption of International Standards for a better Global Feed Industry.

We participate in symposiums and annually we organize several meetings between Official Regulators of the countries and private partners to foster their relationship.

We also promote and encourage professional development with specialized training and courses to share experiences in several matters in animal nutrition. Mr. José Luiz Tejon is currently leading a course for our members in animal food, human and environmental agribusiness in the new decade.

The Association seeks to strengthen the imagen of Latin America and Caribbean to the consumers and enable developing countries to join forces and strengthen their representation.

The integration between the countries of the region and the region with the world, facilitating trade of Latin America Bloc.

Feedlatina will continue working to support a robust, integrated and strong Latin America.
### FEEDLATINA - ESTIMATE OF PRODUCTION OF FINISHED FEED [1,000T] / 2020

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>TOTAL</th>
<th>POULTRY</th>
<th>PORK</th>
<th>CATTLE</th>
<th>AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>78,011</td>
<td>41,400</td>
<td>18,800</td>
<td>11,880</td>
<td>1,378</td>
</tr>
<tr>
<td>Mexico</td>
<td>37,566</td>
<td>17,924</td>
<td>6,148</td>
<td>10,117</td>
<td>435</td>
</tr>
<tr>
<td>Argentina</td>
<td>35,054</td>
<td>7,548</td>
<td>2,340</td>
<td>24,415</td>
<td>4</td>
</tr>
<tr>
<td>Colombia</td>
<td>7,514</td>
<td>5,817</td>
<td>1,346</td>
<td>—</td>
<td>351</td>
</tr>
<tr>
<td>Chile</td>
<td>7,294</td>
<td>2,563</td>
<td>1,648</td>
<td>700</td>
<td>1,573</td>
</tr>
<tr>
<td>Peru</td>
<td>5,417</td>
<td>4,997</td>
<td>420</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Ecuador</td>
<td>3,365</td>
<td>1,813</td>
<td>360</td>
<td>67</td>
<td>1,015</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1,722</td>
<td>1,482</td>
<td>240</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Guatemala</td>
<td>1,429</td>
<td>1,219</td>
<td>210</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Rep.Dominicana</td>
<td>1,428</td>
<td>1,038</td>
<td>390</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1,422</td>
<td>308</td>
<td>36</td>
<td>970</td>
<td>—</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1,414</td>
<td>1,297</td>
<td>117</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cuba</td>
<td>1,313</td>
<td>413</td>
<td>900</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Paraguay</td>
<td>1,035</td>
<td>675</td>
<td>234</td>
<td>112</td>
<td>—</td>
</tr>
<tr>
<td>Panama</td>
<td>737</td>
<td>545</td>
<td>192</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>672</td>
<td>462</td>
<td>210</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Honduras</td>
<td>566</td>
<td>518</td>
<td>48</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>El Salvador</td>
<td>412</td>
<td>352</td>
<td>60</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>340</td>
<td>304</td>
<td>36</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>186,711</strong></td>
<td><strong>90,674</strong></td>
<td><strong>33,735</strong></td>
<td><strong>48,262</strong></td>
<td><strong>4,757</strong></td>
</tr>
</tbody>
</table>

Production estimate for 2020.

FEEDLATINA estimates - in absence of official/association source. The estimates were based on information from producers of the respective countries, FAOSTAT and Feedlatina companies operating in the Latin American market.
## FEEDLATINA - Estimate of Production of Finished Feed for Poultry [1,000T] / 2020

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>TOTAL</th>
<th>BROILERS</th>
<th>LAYERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>41,400</td>
<td>34,200</td>
<td>7,200</td>
</tr>
<tr>
<td>Mexico</td>
<td>17,924</td>
<td>10,598</td>
<td>7,326</td>
</tr>
<tr>
<td>Argentina</td>
<td>7,548</td>
<td>5,500</td>
<td>2,048</td>
</tr>
<tr>
<td>Colombia</td>
<td>5,817</td>
<td>3,360</td>
<td>2,457</td>
</tr>
<tr>
<td>Chile</td>
<td>2,563</td>
<td>1,584</td>
<td>602</td>
</tr>
<tr>
<td>Peru</td>
<td>4,997</td>
<td>3,441</td>
<td>1,280</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1,813</td>
<td>1,197</td>
<td>520</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1,482</td>
<td>1,176</td>
<td>307</td>
</tr>
<tr>
<td>Guatemala</td>
<td>1,219</td>
<td>787</td>
<td>432</td>
</tr>
<tr>
<td>Rep. Dominicana</td>
<td>1,038</td>
<td>635</td>
<td>352</td>
</tr>
<tr>
<td>Uruguay</td>
<td>308</td>
<td>163</td>
<td>132</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1,297</td>
<td>817</td>
<td>480</td>
</tr>
<tr>
<td>Cuba</td>
<td>413</td>
<td>61</td>
<td>352</td>
</tr>
<tr>
<td>Paraguay</td>
<td>675</td>
<td>396</td>
<td>247</td>
</tr>
<tr>
<td>Panama</td>
<td>545</td>
<td>443</td>
<td>102</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>462</td>
<td>318</td>
<td>144</td>
</tr>
<tr>
<td>Honduras</td>
<td>518</td>
<td>384</td>
<td>134</td>
</tr>
<tr>
<td>El Salvador</td>
<td>352</td>
<td>208</td>
<td>144</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>304</td>
<td>224</td>
<td>80</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>90,674</td>
<td>65,491</td>
<td>23,340</td>
</tr>
</tbody>
</table>

Production estimate for 2020.

FEEDLATINA estimates - in absence of official/association source. The estimates were based on information from producers of the respective countries, FAOSTAT and Feedlatina companies operating in the Latin American market.
### FEEDLATINA - ESTIMATE OF PRODUCTION OF FINISHED FEED FOR CATTLE [1,000T] / 2020

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>TOTAL</th>
<th>DAIRY</th>
<th>BEEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>24,415</td>
<td>11,058</td>
<td>13,357</td>
</tr>
<tr>
<td>Brazil</td>
<td>11,880</td>
<td>6,400</td>
<td>5,480</td>
</tr>
<tr>
<td>Mexico</td>
<td>10,117</td>
<td>5,938</td>
<td>4,179</td>
</tr>
<tr>
<td>Uruguay</td>
<td>970</td>
<td>550</td>
<td>420</td>
</tr>
<tr>
<td>Chile</td>
<td>700</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Paraguay</td>
<td>112</td>
<td>99</td>
<td>13</td>
</tr>
<tr>
<td>Ecuador</td>
<td>67</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>48,262</strong></td>
<td><strong>24,045</strong></td>
<td><strong>23,449</strong></td>
</tr>
</tbody>
</table>

Production estimate for 2020.

FEEDLATINA estimates - in absence of official/association source. The estimates were based on information from producers of the respective countries, FAOSTAT and Feedlatina companies operating in the Latin American market.

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**Browse other regions »**
The New Zealand Feed Manufacturers Association (NZFMA) represents the interests of almost all the animal feed manufacturing companies in New Zealand. Manufacturers and blenders of compound feeds, premixes and dietary supplements are amongst our member companies. The majority of feed is produced for the intensive livestock industries (poultry and pig), however feed is also produced for the ruminant and equine industries. A small amount of feed is also produced for animals such as dogs, emus, rabbits and fish.

Annual Feed Production Statistics for the Year Ending December 2020
These statistics report total tonnage of manufactured animal feed and total tonnage of raw materials used in feed production. This report does not include blended feed.

These statistics now include the breakdown of species-specific data for feed production.

Please note all figures reported in the tables below in this Executive Summary are in metric tonnes (MT) unless otherwise specified.
## FEED PRODUCTION 2020 (METRIC TONNES)

<table>
<thead>
<tr>
<th></th>
<th>NORTH ISLAND</th>
<th>SOUTH ISLAND</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(718,087)</td>
<td>(362,006)</td>
<td></td>
</tr>
<tr>
<td>BULK</td>
<td>626,162</td>
<td>310,317</td>
<td>936,479</td>
</tr>
<tr>
<td>BAGGED</td>
<td>91,926</td>
<td>51,689</td>
<td>143,615</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,080,093</strong></td>
<td><strong>1,092,157</strong></td>
<td><strong>2,172,250</strong></td>
</tr>
<tr>
<td><strong>SAME PERIOD LAST YEAR</strong></td>
<td><strong>1,092,157</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% CHANGE</strong></td>
<td><strong>-1.10</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

## RAW MATERIAL USE 2020 (METRIC TONNES)

<table>
<thead>
<tr>
<th>RAW MATERIAL</th>
<th>NORTH ISLAND</th>
<th>SOUTH ISLAND</th>
<th>TOTAL</th>
<th>SAME PERIOD LAST YEAR</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAINS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>228,936</td>
<td>140,581</td>
<td>369,517</td>
<td>315,879</td>
<td>19</td>
</tr>
<tr>
<td>Maize</td>
<td>145,776</td>
<td>14,737</td>
<td>160,513</td>
<td>239,668</td>
<td>-34</td>
</tr>
<tr>
<td>Barley</td>
<td>30,622</td>
<td>54,458</td>
<td>85,080</td>
<td>76,900</td>
<td>17</td>
</tr>
<tr>
<td>GRAINS BY PRODUCTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>37,180</td>
<td>19,693</td>
<td>56,873</td>
<td>58,351</td>
<td>-3.9</td>
</tr>
<tr>
<td>ANIMAL PROTEIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat and Bone Meal (non-poultry)</td>
<td>16,145</td>
<td>13,764</td>
<td>29,909</td>
<td>24,532</td>
<td>5.3</td>
</tr>
<tr>
<td>PLANT PROTEIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soya Meal</td>
<td>112,931</td>
<td>68,208</td>
<td>181,139</td>
<td>169,778</td>
<td>-20.2</td>
</tr>
</tbody>
</table>

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

## PALM KERNEL IMPORTS 2020 (METRIC TONNES)

<table>
<thead>
<tr>
<th></th>
<th>NORTH ISLAND</th>
<th>SOUTH ISLAND</th>
<th>TOTAL</th>
<th>SAME QUARTER LAST YEAR</th>
<th>% CHANGE FROM PREVIOUS YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,417,628</td>
<td>492,630</td>
<td>1,910,258</td>
<td>1,801,418</td>
<td>0.06</td>
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</table>

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports
<table>
<thead>
<tr>
<th>Feed Type</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry - Meat &amp; Breeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry meat - Grower Feeds</td>
<td>433,122</td>
<td>450,204</td>
<td>471,646</td>
<td>467,301</td>
<td>455,746</td>
</tr>
<tr>
<td>Poultry meat - all Breeder Flocks</td>
<td>49,987</td>
<td>50,639</td>
<td>48,088</td>
<td>54,010</td>
<td>53,099</td>
</tr>
<tr>
<td>Poultry - Layer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Layer Flocks</td>
<td>167,413</td>
<td>169,162</td>
<td>169,559</td>
<td>179,944</td>
<td>167,859</td>
</tr>
<tr>
<td>Pig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grower &amp; General Feeds</td>
<td>119,588</td>
<td>127,670</td>
<td>123,226</td>
<td>120,539</td>
<td>125,717</td>
</tr>
<tr>
<td>Breeder Feeds</td>
<td>26,631</td>
<td>24,173</td>
<td>24,720</td>
<td>23,956</td>
<td>24,524</td>
</tr>
<tr>
<td>Calf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk replacers</td>
<td>1,864</td>
<td>2,507</td>
<td>2,745</td>
<td>3,061</td>
<td>2,673</td>
</tr>
<tr>
<td>Meals, Pellets, Crumbles etc</td>
<td>66,551</td>
<td>79,644</td>
<td>78,090</td>
<td>76,720</td>
<td>70,886</td>
</tr>
<tr>
<td>Textured Feeds</td>
<td>10,680</td>
<td>11,923</td>
<td>10,588</td>
<td>9,320</td>
<td>7,649</td>
</tr>
<tr>
<td>Ruminant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feed production statistics for the year end</td>
<td>120,000</td>
<td>171,774</td>
<td>156,197</td>
<td>119,614</td>
<td>123,295</td>
</tr>
<tr>
<td>Beef, Sheep, Deer, Goat</td>
<td>13,268</td>
<td>10,713</td>
<td>11,796</td>
<td>12,115</td>
<td>21,165</td>
</tr>
<tr>
<td>North vs South production - 2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meals, Pellets, Crumbles etc</td>
<td>294</td>
<td>357</td>
<td>1,365</td>
<td>1,422</td>
<td>1,891</td>
</tr>
<tr>
<td>Textured Feeds</td>
<td>6,012</td>
<td>7,892</td>
<td>8,115</td>
<td>10,951</td>
<td>11,725</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquaculture</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Dog</td>
<td>2,233</td>
<td>2,423</td>
<td>2,060</td>
<td>1,826</td>
<td>327</td>
</tr>
<tr>
<td>Rabbits, Small Animals</td>
<td>1,105</td>
<td>1,219</td>
<td>990</td>
<td>975</td>
<td>924</td>
</tr>
<tr>
<td>Emu/Ostrich</td>
<td>3</td>
<td>6</td>
<td>11</td>
<td>34</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>3,632</td>
<td>646</td>
<td>1,557</td>
<td>1,937</td>
<td>371</td>
</tr>
<tr>
<td>Raw Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain &amp; Grain Mixtures</td>
<td>9,287</td>
<td>5,685</td>
<td>9,671</td>
<td>6,024</td>
<td>8,630</td>
</tr>
<tr>
<td>All Other Raw Materials</td>
<td>13,398</td>
<td>11,166</td>
<td>6,247</td>
<td>2,395</td>
<td>3,559</td>
</tr>
<tr>
<td>Unblended Milk Powders for Sale</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,045,071</strong></td>
<td><strong>1,127,806</strong></td>
<td><strong>1,126,679</strong></td>
<td><strong>1,092,157</strong></td>
<td><strong>1,080,059</strong></td>
</tr>
</tbody>
</table>

% change on previous year: 2.53% 7.92% -0.10% -3.06% -1.11%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports
**Usage of Raw Material Categories in New Zealand 2020 (% of Total)**

- Grains: 61%
- Plant proteins: 22%
- Animal proteins: 3%
- Grain by-products: 6%
- Oils and tallow: 2%
- Others: 6%
- Roughages: less than 1%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

**Grain Usage in New Zealand 2019 (% of Total)**

- Wheat: 57%
- Maize: 24%
- Barley: 14%
- Oats: less than 1%
- Sorghum: 4%
- Triticale: 1%
- Others: less than 1%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports
GRAIN SOURCES — DOMESTIC VS IMPORTED 2019 (% OF TOTAL)

Imported 57%
Domestic 43%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

PROTEIN USAGE IN NEW ZEALAND 2020 (% OF TOTAL)

Other plant proteins 20%
Palm kernel 7%
Copra 1%
Meat and bone meal (non-poultry) 10%
Bloodmeal (non-poultry) 1%
Fishmeal 1%
Poultry by-product meal less than 1%
Milkpowders 2%
Other animal proteins less than 1%
Peas 1%
Soya meal 57%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

PROTEIN SOURCES — ANIMAL VS PLANT PROTEINS 2020 (% OF TOTAL)

Animal 13%
Plant 87%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports
ROUGHAGES USED IN NEW ZEALAND 2020 (% OF TOTAL)

- Grass Hay 49%
- Lucerne/Alfalfa H 5%
- Other 46%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

FEED PRODUCTION BY SPECIES 2020 (% OF TOTAL)

- Poultry - Meat 47%
- Pig 14%
- Calf 8%
- Dairy 11%
- Others 2%
- Raw Materials 1%
- Horse 1%

Source: New Zealand Feed Manufacturers Association Annual Feed Statistics Reports

For more information please visit: www.nzfma.org.nz.

Browse other regions
The Animal Feed Manufacturers Association of South Africa (AFMA), is the official industry representative body of the South African compound feed industry in the poultry and livestock feed sectors and larger agricultural environment, reporting on the period under review – 2020.

1. New AFMA Strategy
To remain a trend-setting and leading stakeholders in the agricultural environment, AFMA, and its members must endorse the principle of continuous improvement. Continually evaluating and benchmarking its role and impact within the value chains it is directly involved in and within the related up-or downstream industries it influences.

During July and August 2019, the AFMA Board of Directors and Management engaged in a series of Strategic Focus workshops with a specific target to focus on the vision of AFMA aligning its future role in the value chains and, in particular, the Grains Value Chain, Oilseeds Value Chain, and Livestock and Poultry Value Chains being the most prominent.

AFMA has a unique advantage within the business environment; it finds itself without competing with any of the value chain partners. It is a supplier to the majority of the end-users in the value chains, receiving quality grains and oilseeds as inputs, processing it into a safe feed and delivering it to the end-users as one of their critical inputs, by that delivering on AFMA’s slogan – “Safe Feed for Safe Food”.

Vision
The refined AFMA vision says it all – “The dynamic animal feed thought leader, influencing food security through partnerships with all stakeholders”.

AFMA greatly values its different partnerships within the relevant value chains and is continuously striving to unlock sustainable growth for all value chain
partners, with the firm belief that a healthy and prosperous value chain consists of healthy value chain links within the chain knowing the importance of the inter-dependence of each link towards the other.

Additional to its highly regarded value chain partnerships, AFMA furthermore fully acknowledges and appreciates the fact that the private sector can’t function in a vacuum or as an island, therefore the need for a compact or partnership with the Government in a Public-Private Partnership (PPP) format, with one partner creating an enabling environment and the other conducting their businesses in such a manner which results in economic growth, job creation and the necessary transformation within the different value chains, feeding into the larger agricultural sector, eventually contributing to the national economic picture, aligned with the Agriculture and Agro-Processing Master Plan (AAMP) and the outcomes of the National Development Plan (NDP).

**AFMA’s involvement in master plans**

Given AFMA’s specific position, central to several value chains related to the animal feed industry, AFMA already plays and will be playing a critical role in the following sectoral or industry master plans:

- The Agricultural and Agro-Processing Master Plan
- The South African Poultry Sector Master Plan
- The South African Soya Strategy (being developed)
- The South African Economic Recovery Master Plan

To ensure alignment throughout all AFMA structures and committees, a cascaded approach is followed with the Board of Directors, ultimately responsible for achieving the AFMA strategic goals. In support of the Board of
Directors, the respective AFMA Committees formulates their Strategic Focus Areas annually in alignment with the overarching AFMA Strategy.

Ownership is as a result of this taken by each committee, to identify its objectives to satisfy the strategic focus areas during a strategic committee session at the beginning of the year. The committee is then responsible for achieving its outcomes and action plans as formulated under the committee management’s leadership.

The achievement of each AFMA committees’ strategic goals is aligned and fed into the larger AFMA Strategic focus, ensuring the full buy-in and ownership of the new AFMA Strategy within all AFMA structures.

2. Domestic grain and the oilseeds commodity outlook

South Africa’s 2019/20 grains harvest stands set to be the second-largest on record, supported by an expansion in area planted and favourable weather conditions during the season.

About 9.1 million tons of maize expected to be harvested in the 2019/20 season is white maize, with 6.4 million tons being yellow maize, bringing the total to 15.5 million tons. The current maize harvest is up 38% from the 2018/19 crop and is the second-largest harvest on record.

The soybeans and sunflower seed 2019/20 harvests are up 8% y/y and 13% y/y, respectively (South Africa’s Summer Crop Production Estimates 2018/2019). The increase in this season’s summer crop harvest is mainly supported by an expansion in the area planted in the case of maize and favourable weather conditions, which led to improvements in yields.

\[\text{SOUTH AFRICA’S SUMMER CROP PRODUCTION ESTIMATES 2018/19}\]

Source: Crop Estimates Committee, Agbiz Research

The data implies that South Africa will remain a net exporter of at least 2.7 million tons (up 89% y/y) in the 2020/21 marketing year, which began in May 2020 and ends in 2021.

This occurs at a time when southern and East African maize import needs could outpace those of the previous year because of regional poor harvests on the back of droughts and invasions of locusts. South Africa could also export maize beyond the African continent to other deep-sea markets such as Japan, Taiwan, Vietnam and South Korea, which were not prominent importers during the 2019/20 marketing year. In the case of soybeans and
sunflower seed, South Africa will remain a net importer of their products, sunflower oil, and soybean oilcake (meal), despite the expected increase in domestic production.

Looking ahead

South Africa is about 45 days away from the start of the 2020/21 summer crop planting season. To get a sense of farmers’ potential planting decisions for the season ahead, two of the most critical indicators to be observed are commodity prices and the weather outlook. The La Niña weather event this summer signals higher rainfall, which is conducive for crops. In addition, available data suggest that precipitation could begin on time in the 2020/21 season, which means planting could begin at its traditional time, October for the eastern regions of the country.

Secondly, it is surprising that, given the underlying supply and demand conditions, that domestic grains and oilseeds prices have remained firm for so long. In the week of August 13, 2020, yellow and white maize spot prices were up by 5.3% y/y and 0.2% y/y, trading at R2 895 per ton and R2 880 per ton, respectively.

Simultaneously, sunflower seed and soybean prices were up by 22% y/y and 27% y/y, trading at R6 698 per ton and R7 317 per ton, respectively. These price levels would be expected in years when supply is low, rather than the current situation in which there is an abundant supply of grains and oilseeds.

The factors driving prices are:

- The strong demand from the southern Africa region and deep-sea markets has driven and sustained prices. In the week of August 7, 2020, about 1.1 million tons of maize, about 41% of the expected total of 2.7 million tons, had already been exported to the above markets. This is slightly faster than in a typical season where exports, specifically those to the southern Africa region, would gain momentum towards the end of the year. It also indicates strong external demand for maize needs, something that is expected to continue and involve larger markets, including Zimbabwe, Japan, Taiwan, and South Korea.

- The delay in maize deliveries, due to the late start of the season, supported maize prices.

- The weakness of the rand. The correlation between maize prices and the exchange rate over the past year is 79%. As the currency has weakened, maize prices have tended to rise. The global commodity prices, specifically Chicago maize prices, might have had a minimal influence on domestic maize prices at this point, as they have softened by 7% y/y on August 13, 2020.

- In terms of soybeans and sunflower seed prices, the interaction with the global market is different as South Africa is a net importer of these commodities and the domestic market tends to be sensitive to global developments. The Chicago soybean and EU sunflower seed prices were up by 8% y/y and 10% y/y on August 13, 2020, which, again, supports the trend towards higher rates in our domestic market. The weak rand also supports the local oilseed market. Combined, these factors have managed to overshadow the large harvest, which would typically be associated with lower commodity prices.
This environment provides a greater incentive for farmers to maintain or increase plantings in the 2020/21 production season.

Adding to expectations is the demand for maize in East Africa, which will remain robust as the La Niña weather phenomenon leads to dryness in the region.

The real remaining challenge is regulations, as imports of genetically modified maize are still prohibited. The 2019/20 season began with a ‘dry start’ for the entire southern Africa region, but Zambia and South Africa emerged with bumper harvests, while Zimbabwean outputs dropped.

If plantings improve in Zimbabwe, the maize shortfall in 2021/22 could be less than the anticipated million tons presently being projected. South African farmers may find themselves in a better position if they extend yellow maize plantings in the 2020/21 season as that would find a market in the deep-sea regions. White maize, on the other hand, depends on African demand.

In the case of oilseeds, an increase in plantings would still contribute to the local market. The critical date to diarise is October 28, 2020, when the national Crop Estimates Committee will be releasing data outlining farmers’ planting intentions.

3. Agricultural and Government Policy Issues

Introduction

The first half of 2020 has been dominated by the coronavirus (COVID-19) pandemic, whose containment measures led to widespread economic slowdowns across the world. Economic predictions signal a deep recession and higher levels of unemployment that will dampen national and global demand and have a significant negative impact on international trade.

The pandemic followed fresh outbreaks of African Swine Fever (ASF) in China, which were major obstacles in the path of the country replenishing its pork supplies. China has the largest pig herds in the world, and these declined by about 180 million animals, about 40% of the national total, due to ASF outbreaks.

Meanwhile, fears of an ongoing trade war between China and USA abated after a Phase 1 deal was implemented in the last quarter of 2019. This agreement resulted in 15.3 million tons of USA export sales to China for the 2020/21 season (USDA, June 2020).

South Africa continued its struggle with Foot and Mouth Disease (FMD) as new outbreaks occurred in early 2020. Although South Africa was able to put systems in place to ensure that the January 2019 FMD outbreak was under control, the country failed to convince the World Organization for Animal Health to reinstitute the country’s status of FMD-free zone. South Africa’s beef exports fell by 17%, from 30 000 tons in 2018 to 25 000 tons in 2019. Amid these challenges, South Africa has begun developing Agriculture and Agro-processing Master Plans (AAMPs) to guide strategic interventions that can promote inclusive transformation.

From a trade agreement perspective, the UK left the EU in January 2020 and is negotiating a new trade agreement, which, it is hoped it will be concluded
before year-end. However, a ‘no-deal’ scenario is still possible.

In Africa, the African Continental Free Trade Agreement (AfCFTA) is expected to be implemented in early 2021, after delays due to the COVID-19 pandemic and the postponement of the original July 1, 2020 target date.

Other trade agreements have been relatively quiet regarding reviews and engagements, with all falling under the radar. For instance, the SACU EFTA reviews failed to take another step forward as countries sought to broaden the product scope and deepen the value of the trade agreement.

4. South Africa’s trade performance

South Africa recorded an agricultural trade surplus of US$ 773 million, as illustrated in South Africa’s Trade Performance 2010 to 2019. This is up by 16% y/y, with exports having increased at a much higher rate than imports. The ongoing COVID-19 crisis has brought uncertainty to global trade because of disruptions in supply chains and weakening demand. As an export-oriented activity, South Africa’s agricultural sector is one of the industries negatively affected by the pandemic. However, the disruptions were comparatively minimal, given that the global agricultural and food sector has generally stayed operational.

SOUTH AFRICA’S TRADE PERFORMANCE 2010 TO 2019

Source: Agbiz Research (2020), ITC TradeMap (2020)

Exports were underpinned by grapes, maize, wine, wool, pears, apples, plums, lemons and macadamia nuts, amongst other agricultural products. These products could continue to underpin South Africa’s agricultural exports in the second quarter of 2020, which mostly corresponds with global lockdowns, but there has been a temporary decline in wine exports due to domestic lockdown regulations. Maize is set to dominate the 2019/20 season; with South Africa’s expected maize exports at 2.7 million tons, up 89% y/y because of a higher domestic harvest. This is at a time when rising demand for maize is expected in the southern Africa region, a primary market for white maize.

In terms of imports, the leading products included wheat, palm oil, rice, poultry meat, sunflower oil and sugar. For 2020, rice, wheat and palm oil will
dominate the agricultural import product list. South Africa’s 2020 rice imports could amount to 1.1 million tons, up by 10% from 2019, according to data from the International Grains Council. Meanwhile, South Africa’s 2019/20 wheat imports could increase by 29% y/y to 1.8 million tons.

From a destination point of view, the African continent and Europe continued to be the largest markets in value terms for South Africa’s agricultural exports in the first quarter of 2020. Respectively, they account for 44% and 29% of exports. Asia was the third-largest market, absorbing 19% of South Africa’s agricultural exports in the first quarter of 2020. The balance of 8% value was spread across other regions of the world.

**SOUTH AFRICA’S EXPORTS BY REGIONAL MARKET (2010 TO 2019)**

![Chart showing South Africa's exports by regional market from 2010 to 2019.](chart.png)

Source: Agbiz Research (2020), ITC TradeMap (2020)

In a nutshell, while the pandemic will result in a loss of incomes in various regions of the world, and in turn, a decline in demand for goods; the agriculture and food sector is one of the few that may not be as hard-hit as other activities. South Africa’s agricultural exports could increase from the US$9.9 billion attained in 2019. The key catalysts this year will be the increase in grains and horticultural output and the weakening domestic currency. Therefore, as in the previous year, the trade will continue to be a key driver of South Africa’s agricultural sector.

The ongoing COVID-19 crisis has brought uncertainty in global trade because of disruptions in supply chains and weakening demand. South Africa’s agricultural sector, which is export-orientated, is one of the sectors that AFMA feared would be disrupted by the pandemic.

So far, however, there have been minimal disruptions as the agricultural and food sectors continued to remain operational during the crisis. The future outlook will, in part, depend on the magnitude of the economic shock of COVID-19. If the trauma is massive and recovery is slow, as some analysts expect, demand for high-value agricultural products could be reduced in some traditional markets. This also means that South Africa should, after the pandemic, continue its efforts to develop its export market for agricultural products in China and India.
5. South Africa’s agricultural export trends

In 2019, South Africa’s agricultural exports saw a marginal decrease of 1.54% over 2018, decreasing from R144 billion in 2018 to R141.8 billion in 2019 (Trends in South Africa’s Agricultural Exports 2013-2019).

From a product perspective, edible fruits and nuts accounted for 35% of South Africa’s total agricultural exports, with beverages contributing 13%, vegetables 6%, sugars 6%, fish and crustaceans 5% and cereals 4%, amongst others.

**TRENDS IN SOUTH AFRICA’S AGRICULTURAL EXPORTS (2013-2019)**

![Graph showing trends in South Africa’s agricultural exports from 2013 to 2019.](image)

*Source: International Trade Centre, 2019*

**Asia**
The biggest contributors of South Africa’s agricultural exports to Asia were edible fruit and nuts at 54%, sugars at 10%, wines and spirits at 6%, vegetables at 4% and miscellaneous grains, seeds, and fruit at 4%.

**Africa**
Africa remains the leading market for South African agricultural products, with 41% of total exports or R58 billion in 2019 (see Figure 12). Agricultural exports that saw increases were cereals (41%), products of the milling industry (38%), miscellaneous grains, seeds, and fruit (30%) and preparations of meat, of fish or crustaceans (15%).

**Middle East**
South Africa’s agricultural exports to the Middle East increased year-on-year by 7% to R9.6 billion in 2019. Decreases were seen in flours, meals and pellets of fish or crustaceans (69%), tobacco (58%) and vegetables (22%) whilst increases were experienced in exports of live animals (260%), miscellaneous grains, seeds and fruit (31%) and edible fruits and nuts (17%).

**Europe**
South Africa’s agricultural exports to Europe (EU28) decreased by 4.84% from R39.7 billion in 2018 to R37.8 billion in 2019 (see Figure 12). Edible fruits and nuts accounted for 56% of the country’s total agricultural exports to the EU, followed by wines at 15% and crustaceans and fish at 11%. Exports of edible fruits and nuts decreased marginally from R22 billion in 2018 to R21 billion in
2019. Exports of wines and fish saw decreases of 11.8% and 7.5% respectively.

**Americas**

South Africa's agricultural exports to the Americas increased by 6% from R7.7 billion in 2018 to R8.2 billion in 2019 (see Figure 12). Edible fruits and nuts remain the major contributor to agricultural exports to the Americas at 51%. Although exports of beverages decreased marginally from 2018 to 2019 by 2.17%, it remains the second-largest product exported at 18.8% of total agricultural exports.

**REGIONAL SHARE OF SOUTH AFRICA'S AGRICULTURAL EXPORTS (2019)**

![Graph showing regional share of South Africa's agricultural exports (2019)]

*Source: International Trade Centre, 2019*

Overall, Africa remained South Africa's largest agricultural export market, accounting for 41% of total agricultural exports. The EU accounted for 27% of South Africa's agricultural exports in 2019, with Asia taking up 16% and the Middle East 7%. The Americas and the rest of the world (ROW) accounted for 6% and 4% of South Africa's agricultural exports, respectively (see Figure 13).

**South Africa's grain trade**

South Africa’s cereal exports declined by 21% from R7.4 billion in 2018 to R5.8 billion in 2019. Maize exports decreased by 32% from R6 billion in 2018 to R4.1 billion in 2019.

Wheat exports, mainly to African countries, increased from R259 million in 2018 to R650 million in 2019, an increase of 150%.

South Africa remains a net importer of wheat. Although less wheat was imported in 2019 (1.842 million tons) compared to 2018 (1.984 million tons), the value of South Africa's wheat imports increased by 6.41% from R5.35 billion in 2018 to R5.7 billion in 2019. This was mainly due to the weakening of the Rand against the US$. The bulk of imported wheat was sourced from the Russian Federation and other European Union countries.

**South Africa’s oilseed trade**

Imports of oilseeds increased from R1.57 billion in 2018 to R1.8 billion in 2019, increasing by 15%. This was mainly due to an increase in the imports of groundnuts from R196 million in 2018 to R607 million in 2019, an increase of 210%. Imports of both soybeans (R59 million) and sunflower seed (R32 million) in 2019 are well below the 5-year averages of R483 million and R194 million.
million, respectively. This is mainly due to better than average crop estimates experienced in the past five years.

South African animal feed and raw materials

The value of imported animal feed products and related raw materials remained steady at R5.5 billion in 2019 compared to 2018. Exports declined by 12% from R4.9 billion in 2018 to R4.3 billion in 2019.

Soya bean meal remained a major import component of animal feed raw materials but did see declines of 9.6% in quantity and 11% in value imported in 2019. Argentina remains the primary source of soya bean meal for South Africa. Imports of soya bean meal from Zambia and Malawi showed a decrease of 89% from 78 000 tons in 2018 to 8 400 tons in 2019.

Cotton oilcake imports decreased from 59 000 tons to 61 000 tons while the value increased by 3.26% from R184 million in 2018 to R190 million in 2019. Sunflower oilcake imports in 2019 increased by 190% and R251 million from 2018.

The total wheat bran imported saw a decrease of 14% from 2018 to 114 000 tons.

Exports of feed supplements decreased from R2.156 billion in 2018 to R1.4 billion in 2019, decreasing 14.8%. The bulk of the exports was destined for African countries.

TRENDS IN SOUTH AFRICA’S ANIMAL FODDER AND FEED RAW MATERIALS (2006-2019)

![Graph showing trends in animal fodder and feed raw materials imports, exports, and net imports from 2006 to 2019.]

Source: International Trade Centre, 2019

6. AFMA Feed Sales: 2019/20

After recovering from a -1.9% loss in sales volumes in 2017/18, feed sales remained on the road to recovery and ended with a 4.6% volume increase for 2018/19.
However, feed sales continued to reflect the drought conditions suffered in some parts of the country and ongoing challenges within the poultry industry. Despite these hardships, feed sales remained positive, recording a 1.2% growth in 2019/20 amounting to 6 723 822 tons. Measured in volumes, the further increase from 2018/19 was led by the poultry feed sales segments followed by pork and dairy (refer to Table 1).

Like the local poultry industry, the feed industry, the primary supplier to the poultry industry is anxiously awaiting the outcomes and effects of the new SA Poultry Sector Plan, which includes specific trade remedies against unfair trade and dumping of poultry in the SA market primarily by the EU, Brazil.

Additional trade remedies against specific importing countries have been applied for by SAPA. Should these applications be successful, they will support the local poultry industry’s implementation of their Poultry Sector Master Plan. The plan is aimed at growth of the local industry, transformation, expansion of production and the development of a sustainable export market.

Should these outcomes materialise, it would benefit not only the feed sector but also the entire South African grain and oilseed value chain. It would also lead to policy certainty, encourage investments, growth, and vast job creation in these sectors by achieving the primary outcomes of the National Development Plan (NDP).
<table>
<thead>
<tr>
<th>FEED TYPE</th>
<th>2015/16</th>
<th>2016/17</th>
<th>2017/18</th>
<th>2018/19</th>
<th>2019/20</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy</td>
<td>912</td>
<td>925</td>
<td>950</td>
<td>956</td>
<td>967</td>
<td>1.2</td>
</tr>
<tr>
<td>Beef &amp; Sheep</td>
<td>1,030</td>
<td>861</td>
<td>860</td>
<td>906</td>
<td>845</td>
<td>-6.7</td>
</tr>
<tr>
<td>Pigs</td>
<td>285</td>
<td>308</td>
<td>342</td>
<td>379</td>
<td>394</td>
<td>3.9</td>
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<tr>
<td>Layers</td>
<td>951</td>
<td>885</td>
<td>784</td>
<td>900</td>
<td>999</td>
<td>11</td>
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<tr>
<td>Broilers</td>
<td>2,808</td>
<td>2,652</td>
<td>2,583</td>
<td>2,617</td>
<td>2,709</td>
<td>3.5</td>
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<tr>
<td>Broiler Breeders</td>
<td>499</td>
<td>468</td>
<td>476</td>
<td>528</td>
<td>536</td>
<td>1.6</td>
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<tr>
<td>Horses</td>
<td>41</td>
<td>35</td>
<td>32</td>
<td>28</td>
<td>26</td>
<td>-6.5</td>
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<tr>
<td>Dogs (D&amp;W)</td>
<td>91</td>
<td>83</td>
<td>84</td>
<td>84</td>
<td>23</td>
<td>-</td>
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<tr>
<td>Ostriches</td>
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<td>14</td>
<td>14</td>
<td>10</td>
<td>14</td>
<td>35.2</td>
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<tr>
<td>Game Feed</td>
<td>71</td>
<td>60</td>
<td>52</td>
<td>41</td>
<td>34</td>
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<tr>
<td>Other</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>-</td>
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<tr>
<td>Aquaculture</td>
<td>5,281</td>
<td>4,357</td>
<td>4,730</td>
<td>4,847</td>
<td>4,048</td>
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**CONCENTRATES**

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>2017/18</th>
<th>2018/19</th>
<th>2019/20</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigs</td>
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<td>12</td>
<td>14</td>
<td>23</td>
<td>24</td>
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<td>Other</td>
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<td>2,287</td>
<td>2,824</td>
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<td>Beer finisher</td>
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<td>46</td>
<td>52</td>
<td>55</td>
<td>46</td>
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<tr>
<td>Dairy + urea</td>
<td>28</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>11</td>
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</tr>
<tr>
<td>Dairy - urea</td>
<td>6,810</td>
<td>5,845</td>
<td>8,118</td>
<td>9,614</td>
<td>3,863</td>
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<tr>
<td>Sheep</td>
<td>25</td>
<td>21</td>
<td>25</td>
<td>23</td>
<td>23</td>
<td>1.6</td>
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<tr>
<td>Layers</td>
<td>51</td>
<td>47</td>
<td>26</td>
<td>29</td>
<td>31</td>
<td>8.9</td>
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<tr>
<td>Broilers</td>
<td>5,846</td>
<td>3,569</td>
<td>2,425</td>
<td>2,023</td>
<td>2,174</td>
<td>7.5</td>
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<tr>
<td>Ostriches</td>
<td>0</td>
<td>109</td>
<td>0</td>
<td>162</td>
<td>39</td>
<td>-</td>
</tr>
<tr>
<td>Horses</td>
<td>9</td>
<td>57</td>
<td>45</td>
<td>47</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Ruminants - other</td>
<td>3,981</td>
<td>3,477</td>
<td>4,362</td>
<td>9,444</td>
<td>7,472</td>
<td>-</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>6,908</td>
<td>6,476</td>
<td>6,354</td>
<td>6,644</td>
<td>6,723</td>
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</tr>
<tr>
<td><strong>% GROWTH</strong></td>
<td>2.9</td>
<td>-6.2</td>
<td>-1.9</td>
<td>4.6</td>
<td>1.2</td>
<td></td>
</tr>
</tbody>
</table>

*Source: AFMA Stats – Only AFMA Members*
National Feed Sales: 2019/20
According to Table 2, national feed production showed the same trend as that of AFMA. National feed volumes for 2018/19 were calculated at 11 508 521 tons, showing an increase of 4.4% on a countrywide national production level.

<table>
<thead>
<tr>
<th>FEED TYPE</th>
<th>AFMA FEEDS PLUS FEEDS DERIVED FROM CONCENTRATES</th>
<th>NATIONAL FEED PRODUCTION **</th>
<th>AFMA AS % OF NATIONAL PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy</td>
<td>1,005,685</td>
<td>2,314,971</td>
<td>43.44</td>
</tr>
<tr>
<td>Beef &amp; Sheep</td>
<td>979,439</td>
<td>3,242,499</td>
<td>30.21</td>
</tr>
<tr>
<td>Pigs</td>
<td>454,758</td>
<td>1,030,607</td>
<td>44.13</td>
</tr>
<tr>
<td>Layers</td>
<td>1,079,248</td>
<td>1,392,551</td>
<td>77.5</td>
</tr>
<tr>
<td>Broilers</td>
<td>3,251,661</td>
<td>3,408,091</td>
<td>95.41</td>
</tr>
<tr>
<td>Dogs</td>
<td>26,219</td>
<td>352,609</td>
<td>7.44</td>
</tr>
<tr>
<td>Horses</td>
<td>23,436</td>
<td>116,154</td>
<td>20.16</td>
</tr>
<tr>
<td>Ostriches</td>
<td>14,581</td>
<td>98,445</td>
<td>14.81</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>4,048</td>
<td>4,942</td>
<td>81.91</td>
</tr>
<tr>
<td>Other</td>
<td>45,091</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

| TOTAL     | 6,884,145                                       | 11,960,870                 | 57.56                            |

Source: Dr Erhard Briedenhann – Modelling, AFMA Research & Statistics

For more information please visit: www.afma.co.za.

Browse other regions >
Founded in 1909, the American Feed Industry Association (AFIA) is the world’s largest organization devoted exclusively to representing the business, legislative and regulatory interests of the U.S. animal food industry and its suppliers. With over 650 domestic and international members, the AFIA represents more than 75% of the feed and 70% of the non-whole-grain ingredients manufactured in the U.S.

2020: Year In Review

COVID-19

Like all industries in 2020, the world changed overnight for the U.S. animal food industry in March 2020. The well-functioning, highly efficient agricultural system the country relied on to keep grocery store shelves stocked with quality, affordable animal protein and dairy products suddenly had to change and adjust to shift food destined for U.S. food service to grocery stores. The growing uncertainty in the market caused Americans to stock up on food and pet food staples as well as other household items, and some farmers and ranchers to stockpile feed to keep their livestock, poultry and aquaculture fed.

State-imposed lockdown orders sent the American Feed Industry Association (AFIA) into overdrive – with its staff working round-the-clock on behalf of its membership to ensure the 944,000 essential workers in the animal food industry could continue reporting to work. Not only that, the AFIA collaborated with others throughout the U.S. agricultural value chain to minimize supply disruptions, from the ports to farms to feed mills to retailers.

Meanwhile, the ongoing politicization of the pandemic meant that the industry’s response could not be painted with a broad stroke. Companies made the best decisions they could to protect the health and safety of their employees – without precedent – amid changing, and sometimes conflicting,
guidance from local, state and federal public health authorities. All while taking the time to care for their employees balancing the emotional and mental toll of the pandemic with their newfound personal responsibilities, as well as give back to their communities.

Despite the challenges, the demand for animal food remained strong and is expected to grow 2.5% by 2025. The Institute for Feed Education and Research (IFEDER) projects even with COVID-19, animal food consumption is projected to increase in the United States from 248.4 million tons to 254.6 million tons, valued at $47.5 billion (USD) to $48.8 billion (USD).

COVID-19 PROJECTIONS* FOR TOTAL U.S. FEED CONSUMPTION IN 2025

* Based on 2020 prices of feed (excluding forages and roughages) for six major species.

Presidential Elections
Couple the public health crisis with ongoing social issues and a heated presidential election led to increased polarization among Americans across the country. Firms felt those tensions as they reacted to the states’ scattershot approach to managing the public health emergency, with some states providing businesses more leeway than others.

The association focused its efforts on ensuring the incoming presidential administration understood the work the industry had put into keeping its employees safe throughout the crisis, as the Biden White House contemplated changes to workplace safety standards in light of COVID-19. So far, these efforts have paid off, with the administration maintaining the current effective existing oversight of worker protection, but the industry anticipates further regulatory changes, an area it will continue to monitor in 2021.

In addition, the AFIA leveraged the opportunity to communicate to the U.S. Congress myriad concerns facing its members in rural America – particularly, access to COVID-19 testing and vaccination, the need for universal broadband and funding to deal with America’s aging infrastructure. The association also supported legislative proposals geared toward boosting the agricultural sector’s long-term economic health and will continue work in 2021 to advocate for measures to improve this unique industry sector’s business climate.
Looking Ahead to 2021

Regulatory Environment
The U.S. Food and Drug Administration (FDA) has focused most of its efforts over the past year on safely bringing COVID-19 vaccines to the general population. While the industry saw a temporary reduction in inspections, as the agency focused on for-cause inspections of facilities to reduce risks to both the government and industry staff, work continued in other areas, such as in the area of review for new animal food ingredients.

For many years, the industry has struggled with an unstable, tedious and inefficient review system within the FDA for new animal food ingredients. Some ingredients can move relatively quickly through the regulatory review system in roughly two years, while others linger for eight or more years, driving up costs for ingredient companies and putting U.S. producers at a competitive disadvantage with their international counterparts. The AFIA is working with the FDA and U.S. policymakers to provide the necessary resources and appropriate policy interpretations to ensure animal health and safety, while allowing for a more predictable regulatory environment.

The AFIA is also leading an effort with several animal food and health-focused organizations and climate coalitions to seek modernization of the regulatory system for products seeking label claims for animal production, animal well-being, food safety and the environment. Currently these products are regulated as "animal drugs" instead of a more appropriate and accessible "ingredient category." It is an opportunity for the industry to seek reasonable changes to the existing regulatory system that will yield big impacts for the future of U.S. agriculture and climate change.

Trade
U.S. trade policy made a 180-degree turn with President Joe Biden at the helm. The AFIA has been advocating for the administration to seek renewal of Trade Promotion Authority, to maintain the president’s ability to fast-track trade negotiations with other countries, an ability set to expire July 1, 2021. However, the Biden administration has made it clear that until the U.S. meets its threshold for COVID-19 vaccinations and the economy is humming along again, it will not focus on negotiating new trade agreements. Despite this, the demand for U.S. animal food products is growing – as evidenced by the fact that the overall export value for feed, feed ingredients and pet food increased by $874 million in 2020, or 7.2% over 2019.
The AFIA has been working to ensure China meets the commitments it made in the U.S.-China phase one trade agreement. As China continues to expand and invest in its beef cattle and dairy industries, it provides opportunities for the AFIA to educate Chinese beef and dairy producers on the variety of U.S. feed additives available, which the AFIA is doing through Market Access Program (MAP) funding.

The AFIA is also using MAP funding to implement market access and development programs in Vietnam, where there are significant opportunities.
to improve the competitiveness of U.S. animal food products by meeting the Asian country’s need to update technologies, improve regulatory compliance and upgrade input and management quality. The AFIA is primarily focusing on the aquaculture and pet food industries, and will be working in 2021 with its consultant to carrying out this program.

**Sustainability**

The focus on climate change, retailer and consumer pressures for greater transparency and accountability from those who grow and produce their food continues to grow. Recognizing the feed industry’s contribution to the carbon footprint of animal protein and dairy foods, the industry continues to pursue research and develop technologies that advance solutions addressing climate and the environment.

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**OVER 40% OF INGREDIENTS USED IN U.S. FEED COMES FROM OTHER INDUSTRIES**

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In partnership with IFEEDER, the AFIA is pursuing a strategy to equip its members with tools to build or grow their internal sustainability programs, respond to product transparency demands and communicate their sustainability stories to a variety of audiences. IFEEDER is working with a global food and agribusiness consulting firm strongly experienced in sustainability initiatives to develop its road map. Launching in 2021 the work will align animal food industry sustainability initiatives, strategies and communications at a field, farm, facility and association level. The AFIA also recently stood up its Sustainability Committee, further formalizing its commitment to this work.

Additionally, the association is leading a food and agriculture industrywide effort to ensure that industry innovation and access to diverse production systems and diets is part of the global dialogue being spearheaded by the United Nations’ secretary-general later this year at the Food Systems Summit. It is critical that the summit holds a constructive dialogue about the real issues of reducing global hunger, food waste and environmental impact, without denigrating or undoing years of scientific progress.

*For more information please visit: afia.org.*
IFIF is made up of national and regional feed associations from Africa, Asia Pacific, Europe, North and South America and the Middle East, as well feed related organizations and corporate members from around the globe.

IFIF members represent over 80% of total compound animal feed production worldwide.

National and Regional Associations

![AFIA](image1.png)  ![AFMA](image2.png)  ![ANDI](image3.png)  
![ANAC](image4.png)  ![BPFMA](image5.png)  ![CLFMA](image6.png)  
![FEFAC](image7.png)  ![FEFANA](image8.png)  ![FIAAA](image9.png)  
![JFMA](image10.png)  ![NZFMA](image11.png)  ![SFMCA](image12.png)  
![Sindirações](image13.png)
Under its Articles of Association, held in Luxembourg, IFIF is managed by the Executive Director and overseen by an elected Chairman and Board of Directors drawn from the membership. Board Members serve two-year terms and are elected at the IFIF General Assembly.

**IFIF Executive Committee 2020 — 2021**

**Dr. Daniel Bercovici**  
Chairman, International Feed Industry Federation, France

**Adriano Marcon**  
President & Group Leader, Cargill Animal Nutrition, USA

**Alexandra de Athayde**  
Executive Director, International Feed Industry Federation, Germany

**Asbjørn Børsting**  
President, European Feed Manufacturers’ Federation, Belgium

**Constance Cullman**  
President & CEO, American Feed Industry Association

**David Bray**  
Executive Director, Animal Feed Manufactures Association, South Africa

**Dr. Reinder Sjitsma**  
Director Government Relations & Regulatory Affairs, Nutreco & Treasurer, International Feed Industry Federation, Netherlands

**Roberto Betancourt**  
Board Member, Brazilian Feed Industry Association, Brazil
IFIF Board Members 2020 — 2021

Dr. Daniel Bercovici
Chairman, International Feed Industry Federation, France

Adriano Marcon
President & Group Leader, Cargill Animal Nutrition, USA

Alexandra de Athayde
Executive Director, International Feed Industry Federation, Germany

Asbjørn Børbring
President, European Feed Manufacturers’ Federation, Belgium

Dr. Bruno Kaesler
Managing Director, Kaesler Nutrition GmbH, Germany

Dr. Colm Moran
Director European Regulatory Affairs, Alltech, France

Constance Cullman
President & CEO, American Feed Industry Association (AFIA)

Daniela Calleri
VP Business Management Animal Nutrition, BASF SE, Germany

David Bray
President, Stock Feed Manufacturers’ Council of Australia, Australia

De Wet Boshoff
Executive Director, Animal Feed Manufacturers Association, South Africa

Enzo Trimigliozzi
Vice President Business Transformation, DSM, Switzerland

Dr. Frank Chmitelin
Executive Vice President, Sales, Marketing & Customer Success, Adisseo, France

Jesse J. Sevcik
Senior Director Global Government Affairs, Elanco Animal Health, USA

Joerg Seifert
Secretary General, EU Association of Specialty Feed Ingredients and their Mixtures, Belgium
Melissa Dumont
Executive Director, Animal Nutrition Association of Canada, Canada

Dr. Michael Binder
Vice President Sustainability Development, Evonik Industries AG, Germany

Michael Goble
Global Managing Director, Diamond V, USA

Nicolas Martin
Sustainability and Public Affairs Director, METEX NØVISTAGO, France

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Government Relations & Regulatory Affairs Director, Nutreco & Treasurer, International Feed Industry Federation, Netherlands

Roberto Betancourt
Board Member, Brazilian Feed Industry Association, Brazil

Ruud Tijssens
Group Director Public & Cooperative Affairs, Royal Agrifirm Group, Netherlands

Zongli Wang
Secretary General, China Feed Industry Association, China

IFIF Structure

IFIF is registered as a non-profit organization in Luxembourg and was founded on December 1, 1987.
Expert Committees 2020 – 2021

Experts from member companies and national associations participate in IFIF’s expert and technical committees. These consider key industry issues and help develop global feed and food industry standards.

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- Alexandra de Athayde, Executive Director, IFIF
- Andressa Kobylanski Maçaneiro Caliman, Product Stewardship & Regulatory Senior Manager – LATAM, DuPont
- Annie Bailey, Senior Regulatory Affairs Specialist, Chr. Hansen A/S
- Antje Holthausen, Patents & Registration, Delacon
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- Arnaud Bouxin, Deputy Secretary General, FEFAC
- Bente Tvede Lund, Regulatory Affairs Manager, Novozymes A/S
- Bernadette Okeke, Global Director & Senior Adviser Regulatory Affairs and Compliance, Lallemand
- Bruno Caputi, Regulatory / Quality Coordinator, Sindirações
- Chandrika Venkatesh, Executive Director, CLFMA of India
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- Ruth Hayler, Director Regulatory Affairs & Quality Compliance, BASF SE
- Duncan Rowland, Executive Director, SFMCA & FIAAA
- Liwen Wang, Division of International Cooperation, CFIA
- Eliane Dannenhauer, Regulatory Affairs Superv, Impextraco
• Eric Auclair, Head of Regulatory Affairs and Downstream Development, Phileo
• Gerald Schulteis, Head of Quality and Regulatory Affairs, BIOMIN Holding GmbH
• Jesse Sevcik, Sr. Director, Global Government Affairs, Elanco
• Giacomo Sisinni, Scheme Manager, FAMi-QS
• Heidi Burrows, Regulatory Director, AB Vista
• Joerg Seifert, Secretary General, FEFANA
• Karine Tanan, Global Regulatory Lead, Cargill
• Liesl Breytenbach, Manager Technical & Regulatory Affairs, AFMA
• Mallory Gaines, Manager, Market Access and Trade Policy AFIA
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• Melissa Dumont, Executive Director, ANAC
• Monica Fanti, Global Regulatory Affairs Manager, Alltech
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• Padmakumar Pillai, Scientific and Regulatory Affairs, Cargill
• Peyman Zolfagharian, Secretary-General, Iran Feed Industry Association
• Reinder Sijtsma, Director Government Relations & Regulatory Affairs, Nutreco
• Richard Coulter, Senior Vice President, Phibro Animal Health Corporation
• Roland Brugger, Chief Innovation Officer, Royal Agrifirm Group
• Ruth Hayler, Director Regulatory Affairs & Quality Compliance, BASF SE
• Sabine Van Cauwenberghe, Regulatory Affairs Manager, DSM
• Sarah Mustafa, Regulatory Affairs Manager for the Middle East, Africa, and South Asia, Alltech
• Sébastien Oguey, Regulatory Affairs & Quality Manager, Pancosma
• Séverine Deschandelliers, Head of Global Regulatory Affairs, Adisseo
• Sophie Izard, Regulatory Affairs Manager, Phodé
• Sophie von Alvensleben, Regulatory Project Manager Bio Amino Acids, Evonik
• Tobias Aumiller, Scientific Lead & Deputy Head of R&D, Delacon
• Tomas Beloso, Vice President of Global Regulatory Affairs, CALYSTA, Inc.
• Vera Houriet, Regulatory Affairs, Pancosma
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- Anton van den Brink, Senior Policy & Communication Manager, FEFAC
- Asbjørn Børsting, President, FEFAC
- Constance Cullman, President & CEO AFIA
- Daniel Bercovici, Chairman, IFIF
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- Duncan Rowland, Executive Officer, SFMCA/FIAA
- Joerg Seifert, Secretary General, FEFANA
- Karine Tanan, IFIF Nutritional Innovation Chair, IFIF
- Lucas Cypriano, President, WRO
- Martina Helmlinger, Technical and Regulatory Officer, FEFANA
- Michael Binder, Director Sustainability Development, Evonik
- Mike Goble, Global Managing Director, Diamond V
- Nicolas Martin, Sustainability Director, METEX NØØVISTAGO
- Roberto Betancourt, President, Sindiracações
- Philippe Becquet, Technical Advisor, IFIF
- Sabine Van Cauwenberghe, Regulatory Affairs Manager, DSM
- Sebastian Csaki, Senior Advisor, IFIF
- Sebastian Form, Director Applied Sustainability Nutrition & Health, BASF
- Tomas Bellosa, Vice President of Global Regulatory Affairs, CALYSTA

IFIF Working Group on Nutritional Innovation to Promote Animal Health

Members 2020 – 2021
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- Alexandra de Athayde, Executive Director, IFIF
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• Etienne Corrent, Director of Innovation, METEX NØOVISTAGO
• Franz Waxenecker, Development and Innovation Director, Biomin
• Gerardo Morantes, Director of Food Safety, Bühl AG
• Hans Van Dam, Nutreco
• Henk Enting, Global Poultry Technical Director, Cargill
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Definitions and Terms

The page below breaks down some common terms and definitions used throughout this online report.

Definitions

Feed (Feeding Stuff)
Any single or multiple materials, whether processed, semi-processed or raw, which is intended to be fed directly to food-producing animals.

Feed Ingredient
A component part or constituent of any combination or mixture making up a feed, whether or not it has a nutritional value in the animal’s diet, including feed additives. Ingredients are of plant, animal or aquatic origin, or other organic or inorganic substances.

Feed Additive
Any intentionally added ingredient not normally consumed as feed by itself, whether or not it has nutritional value, which affects the characteristics of feed or animal products. Micro-organisms, enzymes, acidity regulators, trace elements, vitamins and other products fall within the scope of this definition depending on the purpose of use and method of administration.

Medicated Feed
Any feed which contains veterinary drugs as defined in the Codex Alimentarius Commission Procedural Manual.
Terms

Complete Feed
A nutritionally adequate feed compounded by a specific formula to be fed as the sole ration and capable of maintaining life and/or promoting production without any additional substance except water.

Concentrate
A feed used with another to improve the nutritive balance of the total and intended to be diluted or mixed to produce a supplement or a complete feed; may be unsafe if fed free choice or alone as a supplement.

Micro-ingredients
Vitamins, minerals, antibiotics, drugs/medicines, and other materials usually required in feeds in small amounts as feed additives.

Premix
A uniform mixture of one or more microingredients/ additives with a diluent and/or carrier to facilitate their even distribution in a larger mix.

Primary feed
A feed formulated from single ingredients, sometimes containing a premix (less than less than 45.5 kg per tonne or 100 pounds per tonne).

Trace Minerals
Mineral nutrients required by animals in micro amounts (measured in units of grams per kg or smaller).
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