

IFA Annual Report 2021 **INDEX**

Forewords	4-5
PART 1: Membership	6-11
IFA Board and Executive Board	6-8
Membership and Elections	9-10
Membership in Action	11
Finance	12
PART 2: Accelerating the transition to sustainability	13-21
Future-proofing our market intelligence proposition	13
Accelerating sustainability	14-15
Fostering innovation and research	16-17
Advocating and partnering for responsible plant nutrition	18
Contributing to climate solutions	19
Convening on industry developments	20
Telling our story, spreading ideas	21
PART 3: Who we are	22
A dedicated team	22

The International Fertilizer Association (IFA) was founded in 1927 and is the only global fertilizer association, with more than 400 members in some 70 countries. IFA represents providers of plant nutrition solutions. Members include fertilizer producers, traders and distributors, as well as their associations, service providers to the industry, research organizations, ag-tech startups and non-governmental organizations.

www.fertilizer.org





IFA in a nutshell

The International Fertilizer Association (IFA) was founded in 1927 and is the only global fertilizer association, with 400+ members in some 70 countries and a mission to promote the efficient and responsible production, distribution and use of plant nutrients. This mission plays a critical role in helping to feed the world sustainably.

IFA's approach is:

- · Outreach-oriented: Communication and collaboration are integral to how we operate.
- · Data-informed: Quality data and market analysis are of utmost importance.
- Sustainability-driven: Clear and tangible commitments to industry stewardship, aligned with sustainability principles and practices, drive strategy.

What we do:

The IFA Secretariat, headquartered in Paris and working globally, includes experts in sustainability, science and agronomy, climate business, finance, innovation, market intelligence, public affairs, strategic communication and event organization. The team works with and for members to carry out the association's strategic plan.

RANGE OF SERVICES:

Statistics and Market Intelligence

IFASTAT is the leading source of fertilizer and raw materials statistics in the world. Compiled by IFA's Market Intelligence team, IFASTAT is a one-stop shop for the most comprehensive statistical information on fertilizers and raw materials supply and fertilizer consumption.

Business Networking

IFA organizes leading global fertilizer conferences and events year-round. The <u>IFA Annual Conference</u> is the flagship event where all the key fertilizer players gather to network and learn about the latest developments in the industry. It also convenes annual gatherings for cooperation along thematic and regional lines.

Stewardship and Sustainability

The fertilizer industry, just like others, has responsibilities to a wide variety of stakeholders from employees to shareholders to communities. IFA members have

access to benchmarking and certification programs as well as awards programs that support members' business goals in the areas of stewardship and sustainability. As of 2019, IFA has awarded the Industry Stewardship Champions label to fertilizer companies that have completed IFA's latest benchmarks for Safety Performance, Environmental Performance and Energy Efficiency & CO. Emissions and have a valid Protect & Sustain certification.

International Engagement and Strategic Communication

Global issues of the day from climate change to hunger and malnutrition are relevant to fertilizer production, distribution and use, as well as to others across the agriculture value chain. IFA seeks to engage, inform and support solutions.

Science Program

IFA has a track record of investing in science and science-related agricultural services - from funding research projects conducted by partner organizations to participating in global, regional or national science initiatives.

MEMBERSHIP BENEFITS

Engagement

Our members decide together on areas of common interest, joint actions and positions on emerging and complex issues facing the industry today.

Networks and Expertise

IFA events facilitate the sharing of information and best practices. Joining IFA's committees, steering groups and other bodies expands members' knowledge and contacts and allows them to shape the strategic work program of the association and common positions.

Membership at IFA is open to any organization interested in plant nutrition. Contact us to see which membership category is right for your organization: IFAmembership@fertilizer.org

OUR PARTNERS:











From the Chair



Svein Tore Holsether

Averting a "hurricane of hunger"

"We must do everything possible to avert a hurricane of hunger and a meltdown of the global food system," said UN Secretary General, António Guterres in March 2022.

He was of course referring to the war in Ukraine and the enormous consequences it has, not only for the people of Ukraine, but for the entire global food system. Several hundred million people are food dependent on Russia and Ukraine, both of which are world powers within agriculture. A food crisis was already in the making before the Russian invasion, and this is now being exacerbated. Once again, it is the most vulnerable in the world that are hit the hardest. Those already suffering the most from climate change, those already suffering the most from Covid-19 - they are the same that will now suffer the most from the increased cost of food and energy.

The fertilizer industry has a particularly important role to play to prevent us moving from a crisis to a catastrophe. Approximately half the world's population have food on the table due to mineral fertilizers. Without replenishing the soil with nutrients, we will see significant reductions in yield and therefore further food price increases.

As an industry, there is a lot we can do, and I would like to highlight three key actions:

- · Keep supplying: Despite the extreme volatility in the markets and also in our own supply chains, we must continue to produce and supply as many products as possible, preventing shortages.
- Keep trade corridors open: Working with the value chain to make sure markets and trade corridors are kept open.

A key learning from the food crisis of 2007/2008, was that shutdown of trade and protectionist policies were the major driver of the food price increases.

• Help closing the yield gap: Support developing countries to reach the same productivity level as other regions, thereby making sure food is produced where it is needed the most. With the right inputs and techniques, farmers can multiply their yields already for their next harvest.

All of these actions will contribute to limiting the impact of the crisis. However, it is not enough. To not only prevent a meltdown of the food system, but help transform it, we must come together with other players. As I see it, António Guterres called upon all of us to act – governments, private sector and NGOs. Let there be no doubt that IFA and its members are answering that call to action.

Scir Tac Molsethe

"The fertilizer industry has a particularly important role to play to prevent us moving from a crisis to a catastrophe."

From the CEO/ Director General



Alzbeta Klein

As I reflect on a year of IFA operations in 2021, I cannot help but think about 2022. Conflict in Europe has affected thousands of lives in profound ways and disrupted the availability of fertilizers, which are indispensable for the global food system. But in all this, the IFA Secretariat is continuing to work hard to accelerate the sustainability transformation and other strategic priorities of our industry while we respond to the evolving situation in Europe.

Now I will turn to last year, which is the focus of this annual report, and 2021 was indeed productive for our Association - thanks to the efforts of IFA members, my dedicated colleagues and our partners and stakeholders.

After successfully navigating the global Covid-19 pandemic, a period in which many governments recognized fertilizers as essential goods, IFA looked to position the industry on a range of global issues. Members agreed to six industry positions in areas such as the Sustainable Development Goals (SDGs), pathways to decarbonization of our industry and support of carbon trading. IFA members also committed to playing a leading role in achieving key ambitions for a sustainable future, including improving average global nutrient use efficiency. Importantly, IFA consolidated several existing bodies into one overarching Sustainability Committee, and it quickly became the largest IFA committee - because many of you, our members, found its work relevant to your business.

Within the Secretariat, our focus remained on delivering value to your business, and engaging effectively with external audiences on our industry's constructive approach to sustainable food systems. We launched Smart&Green, a virtual platform that serves as a bridge between the agtech startups ecosystem and our more established members. And it was wonderful to see so many members at IFA's 2021 Annual Conference in Lisbon, our first in-person event since the pandemic began.

As I look back at this past year, a key feature was partnerships.

First, the publication of the Ammonia Technology Roadmap during the UN climate conference COP26. The fruit of a twoyear collaboration of IFA, the International Energy Agency and the European Bank for Reconstruction and Development, it is a critical document providing guidance to governments, producers, financial institutions and other stakeholders on the possibilities of cutting direct CO₂ emissions from ammonia production by 70 to 95% by 2050 through widespread deployment of near-zero-emissions technologies.

Throughout the year, IFA worked with an array of partners across the agriculture value chain on the launch of a soil health coalition dedicated to raising awareness and facilitating action.

In December, we formalized our long-standing collaboration with FAO through the signing of a new Memorandum of <u>Understanding</u> to further our shared goal of promoting sustainable food and agriculture. Under the agreement, we will work with FAO to promote the sustainable use of fertilizers, continue our collaboration on fertilizer statistics and work on other critical issues of global food systems.

These partnerships are critical for IFA to fulfill our mission of helping to feed the world sustainably, a mission that has never been more important than today.

"After successfully navigating the global Covid-19 pandemic, IFA looked to position the industry on a range of global issues."

IFA Executive Board

MAY 2021 - MAY 2022















1 **CHAIR SVEIN TORE HOLSETHER** Yara International, Norway

2 **IMMEDIATE PAST CHAIR MOSTAFA TERRAB** OCP, Morocco

3 **VICE CHAIR DMITRY KONYAEV** Uralchem, Russian Federation Resigned March 2022

4 **EXECUTIVE BOARD MEMBER ANTHONY WILL** CF Industries, United States + Chair, Finance Committee

5 **EXECUTIVE BOARD MEMBER ZHAI JIDONG** Kingenta, China P.R.

6 **EXECUTIVE BOARD MEMBER JEANNE JOHNS** Incitec Pivot, Australia + Chair, Market Intelligence Committee

7 CEO/DIRECTOR GENERAL, IFA IFA Member ex-officio **ALZBETA KLEIN**

IFA Board

MAY 2021 - MAY 2022























AFIRCA

1 MUNISH JINDAL Indorama Eleme Fert. & Chem. Ltd, Nigeria

2 WILLIAM O'NEILL IRM, United States/ Madagascar

EAST ASIA

1 MULYONO PRAWIRO P.T. Pupuk Sriwidjaja, Indonesia

2 JIDONG ZHAI Kingenta, China P.R. + Executive Board Member 3 HENGDE QIN Sinofert Syngenta Group, China P.R.

4 SHAKEEL AHMAD KHAN Petronas, Malaysia

EASTERN EUROPE & CENTRAL ASIA

1 ANDREY GURYEV PhosAgro, Russian Federation Resigned March 2022

2 DMITRY KONYAEV Uralchem, Russian Federation + Vice Chair Resigned March 2022

LATIN AMERICA 1 DANIEL PETTARIN

Profertil, Argentina Resigned July 2021

2 FEDERICO VELLER Profertil, Argentina

3 DAVID DELANEY Itafos, Brazil

IFA Board Continued

MAY 2021 - MAY 2022





























WESTERN & CENTRAL EUROPE

NORTH AMERICA

1 ANTHONY WILL CF Industries, United States Nutrien, Canada + Chair, Finance Committee

2 MAYO SCHMIDT Resigned January 2022

3 JAMES O'ROURKE The Mosaic Company, **United States**

OCEANIA 1 IAN HANSEN

Wesfarmers, Australia

SOUTH ASIA 1 SAMEER GOEL

Coromandel International Ltd. India

WEST ASIA 1 RAVIV ZOLLER ICL, Israel + Chair, Sustainability Committee

2 JEANNE JOHNS

Incitec Pivot, Australia + Chair, Market Intelligence Committee

2 SURESH KRISHNAN

Adventz - Agri business Group, India

3 TARIQ KHAN Fauji Fertilizer Company

Ltd, Pakistan Resigned October 2021

4 SARFARAZ AHMED REHMAN

Fauji Fertilizer Company Ltd, Pakistan

2 SAMIR AL ABDRABBUH

SABIC, Saudi Arabia + Chair, Public Affairs Committee - Resigned October 2021

WESTERN & CENTRAL EUROPE

1 SVEIN TORE HOLSETHER Yara International, Norway + Chair

2 AHMED EL-HOSHY OCI NV, The Netherlands **3** GIUSEPPE NATALE Valagro S.P.A, Italy

IFA convened a Sustainability Committee and some 100 members signed up. One of its first projects was the Ammonia Technology Roadmap, launched with the IEA, in cooperation with the EBRD. That's a sign of the commitment of this industry to doing the right thing and the commercially smart thing. Sustainable business is good business.

> Raviv Zoller, President & CEO of ICL and Chair of IFA's Sustainability Committee.

Membership

At the end of 2021, IFA had 401 members from 70 countries as follows:'

- 156 Ordinary members
- 136 Associate members
- 38 Correspondent members
- 71 Affiliate members

Sustainability offers me an opportunity to contribute to ensuring the future of humanity, including my own children, on Earth. IFA allows me and OCI to have a more global impact

Hahn Nguyen, VP Global Sustainability, OCI

NEW MEMBERS

During 2021, 17 new members were elected as follows:

Ordinary Member

• Gomel Chemical Plant JSC (Belarus)

Associate Members

- Afrigom (United Arab Emirates)
- Archer Daniels Midland Company, D/B/A ADM Fertilizer (United States)
- Ductor AG (Switzerland)
- FEECO International, Inc. (United States)
- Fertiglobe (United Arab Emirates)
- Jiangmen Plant Protection Co., Ltd (China P.R.)
- Quest Group DMCC (United Arab Emirates)
- Rodeva SAS (France)

Affiliate Members

- Abisolo Brazilian Association of Plant Nutrition Technology Industries (Brazil)
- African Plant Nutrition Institute (APNI) (Morocco)
- Estonian Environmental Research Centre (EKUK) (Estonia)
- European Consortium of the Organic-Based Fertilizer Industry (ECOFI) (Belgium)
- Fertilizer Association of Malawi (FAM) (Malawi)
- · Institute for Agrarian Studies of Higher School of Economics (Russia)
- Plant Nutrition Canada (Canada)

Correspondent Member

Hillel Magen (Israel)

RESIGNATIONS

There were 24 resignations during the year:

Ordinary Members

- Avenira Ltd (Australia)
- · Compass Minerals (United States)
- Jiangsu Changzhou Zhongdong Fertilizer Co., Ltd (China P.R.)
- Madras Fertilizer Ltd (India)
- · Plantin SARL (France)

Associate Members

- Actatrade S.A. (Switzerland)
- · Bureau Veritas (Switzerland)
- Crystal Peak (United States)
- Danakali Ltd (Australia)
- Desmet Ballestra S.p.A. (Italy)
- Dragon Asia Fertiliser Limited (Honk Kong, China)
- FertiGlobal SCL Italia SpA. (Italy)
- International Zinc Association (United States)
- Kore Potash plc (United Kingdom)
- Orica Ltd (Australia)
- Pacific Exim (Pvt) Ltd (Pakistan)
- Rams & Co (France)

As a leader of a startup, it's useful to connect with industry leaders from all over the world through IFA, and to be kept informed of global policy developments of relevance for the industry.

Hunter Swisher, CEO and Founder, Phospholutions, Inc., USA

Membership Continued

- TCIS Inspection Singapore Pte Ltd (Singapore)
- Toyota Tsusho Corp. (Japan)
- Tradient International FZE (United Arab Emirates)
- Young-Inh Corporation (Rep. of Korea)

Correspondent Members

- · Jim D. Beaton (Canada)
- Lotfi Ben Frej (Tunisia)
- Rajiv Sinha (India)

NAME CHANGES

Ordinary Members

- Haifa Chemicals Ltd (Israel) has become Haifa Group.
- Mediterranean Fertilizers Industry (MSIFCO) (Lebanon) has become Mediterranean Fertilizers Ltd.

Associate Member

Italpollina s.p.a. (Italy) has become Hello Nature.

OTHER CHANGES

Associate Members

- · The joint venture Agrifert Liven International Pte Ltd (Singapore) between Agrifert Malaysia Sdn Bhd (Malaysia) and Liven Agrichem Pte Ltd (Singapore) has been discontinued. The membership of Agrifert Liven International Pte Ltd (Singapore) has been transferred to Liven Agrichem Pte Ltd (Singapore).
- The membership of Ameropa AG (Switzerland) has been transferred to AMS Ameropa Marketing and Sales AG.
- JESA Technologies LLC (formerly known as Worley) (United States) has become a subsidiary of JESA SA (Morocco), already a member of IFA.

- The membership of Profercy Ltd (United Kingdom) has been transferred to Profercy Phosphates Ltd (Malaysia).
- Raintrade Petrochemicals (Turkey) has gone into liquidation.
- The membership of Southern Star Shipping Co. Inc (United States) has been transferred to Star Trading (CY) Company Ltd (Marshall Islands)

MEMBERSHIP TERMINATION

Ordinary Members

- ENAS (Rwanda)
- Foskor Ltd (South Africa)
- Wuzhoufeng Agricultural Science & Technology Co., Ltd (China P.R.)
- Yueyang Juyuan Petrochemical Co., Ltd (China P.R.)

Associate Members

- BiOWiSH Technologies Inc. (United States)
- China Petroleum Technology and Development Corporation (China P.R.)
- EcoPhos S.A. (Belgium)
- Erlianhot Tianyu Trading Co., Ltd (China P.R.)
- Ferttrade DMCC (United Arab Emirates)
- Grow Faster Ltd (United Kingdom)
- MMTC Ltd (India)
- Omya International AG (Switzerland)

Correspondent Members

- · Dani Chen (Israel)
- Mondher Maaref (Tunisia)

Our industry creates a lot of opportunity for women: I joined it because it allows me to translate values and meaning into a clear purpose of action.

> Burçu Türkes, Corporate Sustainability, Risk and Governance Director, Toros Agri, Turkey

Membership in Action

IFA has always been a member-led organization. Members decide together on areas of common interest and positions on the industry's most pressing issues, through IFA's thematic committees (Market Intelligence, Sustainability, Public Affairs), steering groups and other bodies.

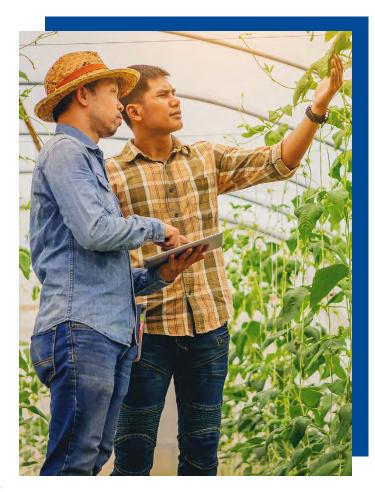
In the past year, IFA sought to strengthen and diversify the pathways of engagement for members:

IFA relaunched the long-standing Ambassadors initiative in February 2021 with a virtual tour of the world and an inperson meeting in Lisbon in September, to consolidate the dialogue among the Secretariat and its members in every region of the world.

We established a Communications Steering Group in July to connect senior communication professionals and champions who give guidance on strategic communication and public relations work at IFA. Early work is focusing on a global industry narrative and a green ammonia communication campaign. IFA members may use IFAproduced articles, infographics, podcasts and videos on a range of topics in their own outreach efforts. The IFA monthly membership newsletter is now available in Chinese, Russian and Spanish, as well as English.

The Sustainability Committee was created in July 2021, with more than 100 companies from 40 countries joining, to help advance the industry's transition to more sustainable production, distribution and use of plant nutrients all globally (see page 14). A new Science & Agronomy Steering Group was also formed to help steer IFA's new Science Strategy.

The Gender Diversity Task Force, formed in 2019 to explore how diversity could be a transformative tool for the agricultural sector and the fertilizer industry, continues



to bring focus on the issue through the sessions at IFA Annual Conferences, and through the development of communications tools for members.

To learn more about the various ways to engage with IFA, please contact IFA Membership Manager Annie Cohen.



Finance



Total operating income amounted to €7.53 million in 2021, comprised from income from subscriptions and conferences of €5.81 million and €1.72 million, respectively.

This represented an increase of 28% compared to 2020 mainly due to the in-person IFA 2021 Annual Conference held in Lisbon, Portugal, whereas the IFA 2020 Annual Conference was cancelled. Thanks to the support of our members, revenue from sponsorship represented €734k, or 42% of total conferences revenues. Overall, income from Conferences and meetings increased by €1.4 million between 2020 and 2021.

Operating expenditures increased by 5.5% compared to 2020 and reached €8.08 million, compared to €7.66 million in 2020. The main increases were in staff costs and external consultancy fees. On the other hand, savings were made on recruitment fees and provisions for unpaid subscriptions and bad debts.

The total expenses related to the Scientific Panel on Responsible Plant Nutrition (SPRPN) amounted to €708k, compared to €502k in 2020, and were financed entirely by the dedicated fund coming from the IPNI reserves and registered as "other reserves" in IFA accounts.

As regards financial activity, a surplus of €14k was recorded in 2021 against a surplus of €39.5 k in 2020. During 2021, cash was invested in two funds managed by Rothschild Bank and BNP Paribas for €2 million each.

In summary, the year 2021 ended with a deficit of €567k, compared to a deficit of €1.7 million in 2020. However, after the allocation of the Scientific Panel expenses to "other reserves", the comprehensive income of the year amounted to €178k, compared to a deficit of €1.2 million in 2020.

Details of the Association's financial situation in 2021 are provided in the "Audited Accounts at 31 December 2021" attached to the Annual Report.

Future-proofing our market intelligence proposition



One of the main priorities of the Market Intelligence (MI) Service is to ensure a high quality of fertilizer statistics.

IFA's historical data sets the benchmark for global industry statistics and is the only source of company-verified data. It is critical to ensure that these statistics remain accessible and available to members, and importantly, to evolve, both in terms of quality of data and data visualization, as well as covering new industry trends.

The IFA Secretariat started the redesign of its data platform IFASTAT in 2020, setting out a vision for a Digital Fertilizer Atlas that would consolidate all of IFA's market intelligence in one central digital platform and serve as a global fertilizer science-to-business guide. The Secretariat started working on a data transformation project with the consultancy firm ADSP in June 2021, with the objective to complete the project by Q4 2022.

In addition to helping IFA avoid the risk of data loss by using outdated databases, the added benefits of this new platform will include the improved accessibility and

visualization of Market Intelligence statistics, as well as an expansion of IFA's science-based approach to fertilizer consumption statistics. We thank all IFA members that are contributing to this project.



During (and despite) this major transformation of its backend data system in 2021, the MI Service continued to produce its Market Intelligence Outlook Reports, as well as the Annual Capacity Report 2021, 2020 Annual Production and Trade Statistics, the Medium-Term Outlook Presentation Series and Historical Consumption Estimates. All of these are currently available to IFA Members on IFASTAT.



IFA formally launched its Sustainability Committee in June 2021, with more than 100 companies from 40 countries signing up to join its multiple workstreams.

LAUNCH OF THE COMMITTEE:

With a mission to promote the sustainable production and use of plant nutrients, the committee started by defining eight top priorities to guide its work until the end of 2022, including the publication of the Ammonia Technology Roadmap (ATR) (see page 19 for further information); the adoption of an industry ambition to reduce greenhouse gas emissions from fertilizer production by at least 30% per ton by 2040 and the creation of a Nutrient Stewardship Roadmap, inspired by the ATR, to help accelerate nutrient use efficiency around the world.

These priorities, defined and carried out by IFA members, are helping to accelerate the industry's sustainability transition.

To learn more, please visit our website >>

KNOWLEDGE-SHARING: THE SUSTAINABLE FERTILIZER ACADEMY

To systematically help member companies and their employees understand how to get started on their sustainability journey (level 1) or to deepen their basic knowledge (level 2), IFA is launching the Sustainable Fertilizer Academy e-learning platform. The work on the academy began mid-2021 for a summer 2022 launch. The academy will offer courses on all facets of sustainability, from sourcing, through production to the use of fertilizers on the farm.

To learn more, please contact IFA Sustainability Director Volker Andresen.

OUR PROGRESS:

The Nutrient Stewardship Benchmark

IFA launched a survey among members at the end of the year, based on IFA's Nutrient Stewardship Code of Practice and the FAO's Code of Conduct on the Sustainable Use and Management of Fertilizers, to help define a Nutrient Stewardship benchmark for the industry.

The preliminary results of the Nutrient Stewardship survey were encouraging:

- · More than 30 companies took part in this first
- · Half of the respondents are involved in the production, distribution and retail of fertilizers, and have a direct link with farmers
- Half use in-house and external advisory services on nutrient management
- · 60% had staff who participated in recognized national and international nutrient stewardship certification programs
- More than 70% of them conduct research on high-efficiency fertilizer products (in-house and in partnership with third parties).

PRODUCT STEWARDSHIP

2021 IFA Benchmarks and Protect & Sustain

To track progress, IFA regularly offers surveys for industry members in three established pillars of Safety, Health & Environment (SHE) performance. The benchmarks help companies with their ESG reporting and confirm their commitment to stewardship and sustainability. In 2021, IFA issued the Safety Performance and Energy Efficiency and CO₂ benchmarks to its membership in English, Chinese and Russian.

The **Safety Performance Benchmark** has been measuring the global industry's yearly achievements in lost-time injuries and total recordable injuries for the past 20 years. In 2021, the lost-time injuries reported for 631 million employee and contractor man hours reached an all-time low of 1.03. reflecting IFA members' continuous efforts to achieve excellence in safety performance.

Every three years since 2004, IFA performs its **Energy Efficiency and CO**₂ **Benchmark** as an industry-wide survey to estimate the energy consumption and environmental impact of ammonia production. The objectives are to improve members' knowledge of their plants' performance, assess plant efficiency and identify opportunities for improvement.

The 2021 benchmark had an all-time high participation of 95 ammonia plants and recorded a 10.3% reduction in CO₂ generation from ammonia production since 2004. This demonstrates how wider uptake of best available technologies reduced the global fertilizer industry's energy consumption, and resulting CO₂ emissions.

Protect & Sustain certifications continue to gain ground globally. IFA members understand the unique value of this certification with its focus on product security and the indepth coverage of the whole supply chain: from raw material sourcing to security of fertilizer sales. Since its launch in 2011, the number of voluntary Protect & Sustain certifications has grown to 57 producers and three non-producers from 58 countries, representing a global adoption rate of one third of all IFA producer members.

Industry Stewardship Champions

The IFA Industry Stewardship Champions label is awarded to fertilizer companies that have participated in all of IFA's most recent Safety Performance, Environmental Performance and Energy Efficiency and CO₂ Emissions benchmarks and that are certified IFA Protect & Sustain, the product stewardship standard for fertilizer companies. This label also applies to members who have valid international certifications that are the building blocks of Protect & Sustain (ISO, OHSAS and Responsible Care).

IFA MEMBER COMPANIES' COMMITMENTS TO NET ZERO:

Yara - "Our ambition is to become climate neutral by 2050, and to reach a milestone of a 30% reduction in our scope 1 and 2 emissions by 2030."

Nutrien: "Our 2030 commitment: Achieve at least a 30% reduction in Greenhouse Gas (GHG) emissions (Scope 1 + 2) per tonne of our products produced from a baseline year of 2018.

ICL: "ICL takes extensive actions to reduce its Greenhouse Gas (GHG) emissions and has set a new challenging goal - to reduce 30% of its GHG emissions by 2030 (vs. a 2018 baseline) and a long-term goal of becoming net zero by 2050."

Incited Pivot: "We are committed to: Reducing our contribution to climate change through manufacturing excellence, energy efficiencies and abatement opportunities. - 5% absolute reduction by 2025. - 25% absolute reduction by 2030. - Net Zero by 2050 ambition.

OCP: "We are committed to be carbon neutral by 2040, and we tunning our decarbonation trajectory using science-based targets to align ourselves with the goal of the Paris Agreement. Today, 87% of our electricity needs are covered with clean energy and we will reach 100% by 2030."

Disclaimer: This list is indicative only and non-exhaustive. For more information on member pledges, please contact ifa@fertilizer.org



Fostering Innovation and Research



The IFA Smart & Green Conference

In June 2021, IFA launched the new Smart & Green virtual conference, dedicated to innovation in plant nutrition, with the objective of fostering relationships among industry leaders, startups, investors, scientists and other stakeholders. The conference showcases the next generation of innovations and discusses actions required to accelerate adoption.

In its first edition, the conference highlighted cutting-edge plant nutrition technologies, from slow- and controlledrelease fertilizers to digital farming, biostimulants and nutrient recovery and recycling in interactive sessions. It also offered a place to meet and connect with the top scientists and investors involved in plant nutrition.

Join us for the second edition in 2022: Participation and conference registration are complimentary for startups, who will have the opportunity to participate and present their innovative approaches, and learn about market, policy, technology and other developments related to this innovation-intensive segment of the plant nutrition space.

IFA Science Awards

Since 1993 IFA has granted the IFA International Plant Nutrition Award or the Norman Borlaug Award to a person whose research or extension work has led to significant

advances in crop nutrition. In 2021, the association expanded the scope for its science awards to fully reflect that the new paradigm for responsible plant nutrition follows a food system and circular economy concept - the web of activities from food production and consumption to nutrient recycling and impacts on the environment and health.

IFA Norman Borlaug Plant Nutrition Award Winner: **Dr Patrick Brown**

The 2021 IFA Norman Borlaug Plant Nutrition Award recipient was Dr. Patrick Brown, Distinguished Professor at the Department of Plant Sciences, University of California-Davis, U.S., for his work that has tackled many of the key challenges threatening crop productivity, resource use, environmental degradation and climate change.



IFA Emerging Scholar Award Joint Winner: Dr. **Pauline Welikhe**

Dr. Pauline Welikhe's research has focused on evaluating phosphorus losses in tile-drained agricultural systems that can help contribute to improved nutrient conservation practice recommendations.



IFA Emerging Scholar Award Joint Winner: Dr. **Maarten Everaert**

Dr. Maarten Everaert developed an efficient new slowrelease fertilizer that can be used to recycle phosphorous in waste streams.



IFA Science Program

The IFA Science Program, led by Chief Scientist Achim Dobermann, provides scientific analysis and advice on issues of importance to the industry and its stakeholders, including improving global data resources on fertilizer use and nutrient use efficiency. It also interacts with the Scientific Panel on Responsible Plant Nutrition (SPRPN). In its own work, the SPRPN published groundbreaking issue papers on a new paradigm for responsible plant nutrition, on fertilizers and biodiversity and on the future of 4R Nutrient Stewardship.



In 2021, a new IFA Science Strategy was launched, focusing on two key research areas: the role of fertilizers in helping to feed the world sustainably and climate change and soil health. The priority of the science program in 2021 has been the improvement of various nutrient input and output data layers that form the core of IFA's global Nutrient Use Efficiency database. To guide IFA's science and agronomy program, a new Science & Agronomy Steering Group was formed in 2021, composed of representatives from IFA member companies as well as three leading global NGOs.

Last year, IFA together with other partners launched a new Consortium for Precision Crop Nutrition (CPCN, https:// www.precisioncropnutrition.net/), which seeks to foster data sharing and open innovation for developing digital nutrient advisory solutions for smallholders and other farmers in developing and transition countries. The CPCN currently has 36 members, including 12 IFA member companies.

Advocating and Partnering for Responsible Plant Nutrition

A few years ago, IFA undertook the strategic exercise <u>IFA2030</u> to map out potential scenarios for the future of the industry.

It was a unique opportunity for the Association and its members to reflect on the strengths and weaknesses of the global food system, and to define the fertilizer industry's role within it. The main outcome of the exercise was a recognition of the need for a sustainability- and innovationdriven plant nutrition approach as a core business strategy for the fertilizer industry.

This focus has helped us navigate through unforeseen global events such as the Covid-19 pandemic and some of its long-term consequences, notably rising energy and food costs.

We have had success with this strategy: last year, IFA seized the momentum offered by the UN Food Systems Summit to decisively position the fertilizer industry as a solutions provider for food systems transformation. Throughout the summit's year-long cycle of consultations and high-level dialogues, IFA and its members took great care to amplify the message that fertilizers have a key role for agricultural transformation and human health and nutrition.

Another pillar of our engagement was to bring attention to the importance of preserving and improving soil health. To that end, IFA created, together with CropLife International, a new Soil Health Coalition comprising of input producers, broader food industry and the financial sector.

Since its inception, the coalition brought attention to the issue of soil health, by issuing a Call to Action on Soil Health on the occasion of the Food System Pre-Summit and amplifying its messages through an op-ed. Partnerships such as these can bring our vision into concrete action.



Memorandum of Understanding with the FAO

IFA ended 2021 with the signing of a new Memorandum of Understanding (MoU) with the FAO. Under the agreement, IFA and FAO will work together to raise awareness about the International Code of Conduct for the Sustainable Use and Management of Fertilizers (Fertilizer Code), promote education and knowledge transfer and continue their successful collaboration on fertilizer statistics. This is the second MoU between the two organizations.

Read more about it here.

Continued engagement on biodiversity, environment and climate change

IFA remained actively engaged in the preparation of key summits taking place in 2022: UNEA-5, whose agenda contained resolutions on nitrogen management, water quality, health and environmental protection; and the Convention on Biological Diversity's preparation of a Post-2020 Global Biodiversity Framework. IFA also continued to monitor the work of the Koronivia Joint Work on Agriculture at the UN Convention on Climate Change, which is expected to adopt the first COP decision on agriculture at COP27 in November 2022.

For more information, please contact IFA's Director of Public Affairs Yvonne Harz-Pitre.

Contributing to Climate Solutions



DEVELOPMENTS IN PRODUCTION

The publication of the Ammonia Technology Roadmap (ATR) by the International Energy Agency (IEA) in October marked a significant milestone for the future of fertilizer production. The study laid out detailed pathways toward more sustainable ammonia production, examining three possible futures from a "business as usual" scenario to a "Net Zero by 2050" scenario, and recommendations for actions by stakeholders, including the fertilizer industry, policymakers, investors and technology providers, to significantly reduce emissions from the sector. Learn more about these through the Summary for Policy Makers.

IFA contributed data and knowledge during this two-year project, funded by by the European Bank for Reconstruction and Development (EBRD). IFA also raised the profile of the ATR during COP26 in Glasgow through an official side-event, joining experts from the IEA, EBRD and the fertilizer industry.

REDUCING EMISSIONS IN FERTILIZER USE

Closely mirroring the industry's efforts to reduce emissions from production sites, IFA is taking the lead on developing roadmaps for reducing greenhouse gas emissions from fertilizers at the point of use, the main component of Scope 3 emissions in our industry. In November 2021, with voluntary funding from a subset of members, IFA selected SystemIQ, a systems change advisory company to analyze practices, technologies and policies that could lead to substantial reductions of emissions from fertilizer use globally and in major cropping regions of the world, without compromising food security and nutrition needs.

IFA is also taking this work forward with the World Business Council on Sustainable Development, with which it signed a memorandum of understanding in early 2022, to develop a sectoral decarbonization approach for the fertilizer industry.

Convening on Industry Developments

From business networking to industry trends and expertise, IFA holds a leading position in the organization of annual global events and conferences. Its Annual Conference gathers all key fertilizer stakeholders to share their experiences. Regional cooperation events and thematic conferences,

such as the Global Sustainability Conference and the Smart & Green Conference cover innovative initiatives, showcase the latest advances in science and technology and represent a great opportunity to improve visibility and knowledge about the most recent developments in this fast-changing industry.



HIGHLIGHTS IFA2021 LISBON VIDEO



THANK YOU TO OUR 2021 SPONSORS



Telling our Story



IFA redoubled efforts to be the global voice of the industry in 2021.

The senior leadership team used events, digital communication and media relations to convey the message: IFA members are helping to feed the world sustainably and contributing solutions to global challenges as a forward-looking and responsible industry.

Activities included an interview on CNBC Africa, on the occasion of the High-Level Dialogue on Feeding Africa, and speeches at the Climate Bonds Initiative Conference, the UN Food Systems Pre-Summit and at COP26, which along with other keynotes and panels, all these events helped IFA gain additional audience on social media. As a result IFA's LinkedIn channel had 49% net year-on-year growth with more than 22,000 followers.

The IFA Podcast, launched in late 2020, brought together experts on topics ranging from plant nutrition and biodiversity, to new fertilizer technologies and crop innovation.

IFA's membership newsletter is now available in English, Chinese, Russian and Spanish.

IFA Secretariat



CEO / DIRECTOR GENERAL'S OFFICE

- Alzbeta Klein, CEO/Director- General
- Valeria Pitto, Executive Assistant to the Director General

DEPUTY DIRECTOR-GENERAL'S OFFICE

- Patrick Heffer, Deputy Director-General
- Samy Beltaief, Policy Analyst

MARKET INTELLIGENCE COMMITTEE

- Laura Cross, Director
- José de Sousa, Supply Program Manager
- 7 Armelle Gruère, Fertilizer Demand Program Manager
- 8 Etienne Achard, Phosphate Analyst
- Olivier Rousseau, Senior Market Analyst-Potash & NPK
- 10 Grace Chilande, Fertilizer Demand Analyst
- 11 Sylvie Marcel-Monnier, Project Coordinator

SUSTAINABILITY COMMITTEE

- 12 Volker Andresen, Director
- 13 Lucia Castillo Nieto, Senior Sustainability Analyst

PUBLIC AFFAIRS COMMITTEE

- 14 Yvonne Harz-Pitre. Director
- 15 Margot Clifford Laguette, Public Affairs Analyst

SCIENTIFIC PROGRAM

- 16 Achim Dobermann, Chief Scientist
- 17 Cameron Ludemann, Data Scientist

COMMUNICATIONS AND MARKETING

- 18 Rita Jupe, Director
- 19 Sam Joll, External Communications Specialist
- 20 Annie Cohen, Membership Manager
- 21 Elif Oguz, Graphic Designer

CONFERENCE SERVICE

- 22 Stéphane Leleu, Director
- 23 Sandie Bouttemy, Conference Planner
- 24 Jessica de Lafargue, Conference Planner

I.T. SERVICE

- 25 David François, I.T. Director
- 26 Aline Bortot, Webmaster

ADMINISTRATIVE SERVICE

- 27 Aurélien Palaric, Director
- 28 Sylvain Rivière, Accountant
- 29 Sophie Babeix, Assistant