



"For IFA, 2022 marked a year of exceptional challenges, opportunities and transformation. For the first time ever, the fertilizer industry had a seat at the global top table, shaping conversations about food security, the energy crisis, and the availability and affordability of fertilizers across the world."

**Alzbeta Klein, CEO, Director General**



# IFA Annual Report 2022

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The International Fertilizer Association (IFA) was founded in 1927 and is the only global fertilizer association, with more than 430 members in some 74 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.

# From the CEO / Director General



## Alzbeta Klein

For IFA, 2022 marked a year of exceptional challenges, opportunities and transformation. For the first time ever, the fertilizer industry had a seat at the global top table, shaping conversations about food security, the energy crisis, and the availability and affordability of fertilizers across the world. This was achieved while maintaining focus on the continuing sustainability transformation of the industry.

In March, following the onset of the war in Ukraine, IFA pivoted into immediate action. Against the drumbeat of the escalating food security crisis, severe energy shortages, the closure of fertilizer plants in Western Europe and overall market uncertainty, IFA's leadership team took to the road, highlighting the role that the fertilizer industry plays in feeding the world.

This brought us to the highest multilateral talks, beginning with the office of the Secretary General of the United Nations. For the first time ever, the United Nations Security Council held a session on fertilizers. By the year's end, when IFA hosted USAID Administrator Samantha Power at a meeting of our Board of Directors in Washington, D.C., the fertilizer industry had never been as prominently discussed before. Thanks to these efforts, fertilizers are now recognized by many as essential goods.

In a nimble demonstration of how the private sector is essential to delivering global food security, this year we launched the Sustain Africa initiative alongside some of our members and partners to help bring fertilizers to farmers across the African continent. Moving forward, our industry will never lose sight of Africa.

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Despite the geopolitical crisis, IFA kept sustainability at the forefront of our mission throughout 2022. Alongside Systemiq, we released a [Scope 3 emissions report](#) that provides recommendations to fertilizer companies, farmers, and policy makers on how to cut GHG emissions. US Special Presidential Envoy for Climate, Secretary John Kerry, endorsed this report; the first time that our climate work has been publicly recognized by such a high-level envoy.

This year we also launched [IFA's Sustainable Fertilizer Academy](#), a unique e-learning platform and network for fertilizer industry professionals to learn about sustainability – from sourcing to production to use of fertilizers on the farm. Combined with our presence at COP27, the Biodiversity COP, Climate Week and our partnerships with FAO, AGRA and others, we ensured that the industry remains focused on sustainability.

Continuing to set the benchmark for global industry statistics, our Market Intelligence service developed a new forecasting methodology in response to the supply constraints, and also partnered with [Gro Intelligence](#) to track the impact of fertilizer shortage on global food production.

We also launched the [Africa AgTech Startup Showcase](#), an international contest to encourage entrepreneurs offering innovative solutions to the challenges facing African agriculture. The selected start-up entrepreneurs will showcase their solutions in plant nutrition at IFA's Annual Conference in May 2023.

Throughout 2022, our membership continued to grow with 30 new fertilizer entities joining our IFA family. We look forward to working together with all of our members to continue our mission to help feed the world sustainably. Our industry's importance came to the fore like never before in 2022. Looking ahead to 2023, with thanks to you, our members, we are now providing solutions to the most pressing global issues of today.

# From the Chair



**Svein Tore Holsether**

## On course for a sustainable food future

The year 2022 marked a moment when the critical role that fertilizer plays became known far beyond our industry. Spurred by the war in Ukraine and a global food crisis that threatened the lives of millions of vulnerable people around the world, the industry took immediate action to ensure that fertilizers were viewed as indispensable goods. By the end of the year, we had successfully communicated to world leaders and the public that without an affordable and available global supply of fertilizer, we cannot sustainably feed the world.

This past year also yielded three valuable lessons that I believe will shape the future of our industry, as we know it. The first is that the conflict in Ukraine led to the understanding of the importance of food and fertilizer. With limited fertilizer availability in the first half of the year, parts of the world's food production were in jeopardy. Throughout 2022 we had to make every nutrient count.

Second, while continuing to deal with the volatility of fertilizer availability globally, we did not lose sight of the sustainability issues in our industry. While the fertilizer industry is responsible for a large carbon footprint, we also have many of the tools on hand to achieve more sustainable, efficient farming practices. These include low-carbon fertilizers, regenerative agricultural practices, and digital tools for precision farming. The solutions and willingness are here; they just need to be implemented and scaled up – quickly.

*"If we are to lift millions of people out of immediate and hidden hunger -- and speed our transition towards net-zero -- we must act together, fast."*

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Thirdly, the work to decarbonize our industry must accelerate. The combination of energy and food crises cannot jeopardize the transition of our industry towards a net-zero future. On the contrary, it should provide a strong push for the acceleration of decarbonization and climate-positive solutions. With enough clean energy, the fertilizer industry will manage to both remove our own emissions while delivering solutions that will eliminate emissions in other industries too.

This past year saw devastating losses and suffering around the world, impacted by the global food crisis. But despite these challenges, IFA continued to accelerate the sustainability transformation of our industry and the strategic priorities of our industry, while also responding to the evolving situation in Europe. As an industry, we specialize in solutions – putting food on the table for millions of people around the world and helping to produce that food sustainably. If we are to lift millions of people out of immediate and hidden hunger -- and speed our transition towards net-zero -- we must act together, fast.

MAY 2022 - MAY 2023

# IFA Executive Board



**1**  
**CHAIR**  
**SVEIN TORE  
HOLSETHER**  
Yara International ASA

**2**  
**IMMEDIATE PAST  
CHAIR**  
**MOSTAFA TERRAB**  
OCP S.A.

**3**  
**VICE CHAIR**  
**ANTHONY WILL**  
CF Industries, Inc.,  
+ Chair, Finance Committee

**4**  
**EXECUTIVE BOARD  
MEMBER**  
**JIDONG ZHAI**  
Kingenta Ecological  
Engineering Group Co., Ltd

**5**  
**EXECUTIVE BOARD  
MEMBER**  
**JEANNE JOHNS**  
Incitec Pivot Ltd,  
+ Chair, Market Intelligence  
Committee

**6**  
**EXECUTIVE BOARD  
MEMBER**  
**RAVIV ZOLLER**  
ICL Fertilizers,  
+ Chair, Sustainability  
Committee

**7**  
**CEO/DIRECTOR GENERAL, IFA**  
**ALZBETA KLEIN**

MAY 2022 - MAY 2023

# IFA Board

## PERMANENT SEATS



## LARGEST PRODUCERS



## PERMANENT SEATS

### Largest Producers

**1 ABDULRAHMAN AL-SUWAIDI**  
QAFCO - Qatar Fertiliser Company S.A.Q.

**2 AHMED EL-HOSHY**  
OCI Global

**3 SAMEER GOEL**  
Coromandel International Ltd  
*resigned Feb 2023*

**4 SVEIN TORE HOLSETER**  
Yara International ASA

**5 RAKESH KAPUR**  
IFFCO - Indian Farmers Fertiliser Cooperative Ltd

**6 BURKHARD LOHR**  
K+S Aktiengesellschaft

**7 JAMES O'ROURKE**  
The Mosaic Company

**8 BAKIR PASAMAN**  
P.T. Pupuk Indonesia (Persero) Holding Company

**9 KEN SEITZ**  
Nutrien

**10 ABDULRAHMAN SHAMSADDIN**  
SABIC Agri-Nutrients Company

**11 MOSTAFA TERRAB**  
OCP S.A.

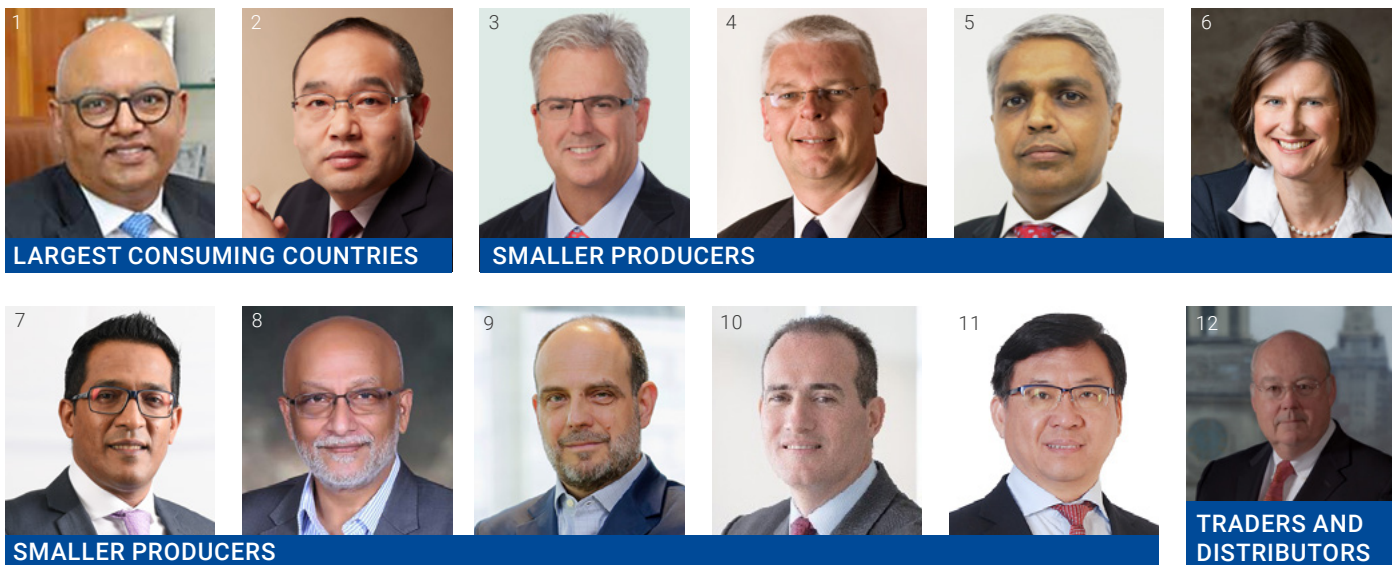
**12 ANTHONY WILL**  
CF Industries, Inc.

**13 RAVIV ZOLLER**  
ICL Fertilizers

MAY 2022 - MAY 2023

# IFA Board Continued

## ROTATING SEATS



## ROTATING SEATS

### Largest Consuming Countries

**1 SURESH KRISHNAN** Adventz - Agri Business  
**2 HENDGE QIN** Sinofert Syngenta China Group

### Smaller Producers

**3 DAVID DELANEY** Itafos  
**4 IAN HANSEN** Wesfarmers Chemicals, Energy & Fertilizers  
*end of appointment Nov 2022*  
**5 MUNISH JINDAL** Indorama Group  
**6 JEANNE JOHNS** Incitec Pivot Ltd  
**7 SHAKEEL AHMAD KHAN** Petronas Chemicals Group, Bhd  
**8 SARFARAZ AHMED REHMAN** Fauji Fertilizer Company Ltd  
**9 MARCOS MARTIN SABELLI** Profertil S.A.  
*since Nov 2022*  
**10 FEDERICO VELLER** Profertil S.A.  
*resigned Sep 2022*  
**11 JIDONG ZHAI** Kingenta Ecological Engineering Group Co., Ltd

### Traders and Distributors

**12 WILLIAM O'NEIL** International Raw Materials Ltd, + Chair, Public Affairs Committee



*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 do 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 2022, the Association reached 435 members in some 74 countries. The various categories of membership were represented as follows:

- 167 Ordinary members
- 147 Associate members
- 38 Correspondent members
- 83 Affiliate members

## NEW MEMBERS

During 2022, 49 new members were elected as follows:

### Ordinary Member

- Agra Group AS (Czech Republic)
- Blue Deebaj FZCO (United Arab Emirates)
- Brahmputra Valley Fertilizer Corporation Ltd (India)
- EL Sharika El Djazairia El Omania Lil Asmida – AOA Spa (Algeria)
- Foskor (Pty) Ltd (South Africa)
- Madras Fertilizers Ltd (India)
- Matix Fertilisers and Chemicals Ltd (India)
- Pacific Exim (Private) Limited (Pakistan)
- STO Madencilik Tarim Ithalat Ihracat Sanayi Ve Ticaret Ltd Sti. (Truagro) (Turkey)
- TotalEnergies Gas and Power Limited (Switzerland)
- Ukrainian Mineral Fertilizers LLC (Ukraine)
- Windmill Pvt Ltd (Zimbabwe)

### Associate Members

- Agri I.O.T Group Ltd (Israel)
- Agricover S.A. (Romania)
- Agven Private Ltd (Pakistan)
- Airbridge Pty Ltd (Australia)
- Atome Energy PLC (United Kingdom)
- Baltic Control A/S (Denmark)

- BP International Limited (United Kingdom)
- Brazil Potash Corp. (Canada)
- CFI Holding Pte Limited (Singapore)
- Cinis Fertilizer AB (Sweden)
- CleverFarm a.s. (Czech Republic)
- Compania Agropecuaria Copeval S.A. (Chile)
- Daelim Co. Limited (Republic of Korea)
- DSS Sustainable Solutions (Switzerland)
- Enaex (Chile)
- Hanwa Co. Ltd. (Japan)
- Poten & Partners (Australia) Pty Ltd (Australia)
- Tosyali Gubre (Turkey)
- Tracegrow Oy (Finland)
- Trigg Mining Limited (Australia)
- Ultrabulk A/S (Denmark)
- Valency International Pte Ltd (Singapore)
- Wood Mackenzie Ltd (United Kingdom)
- Young-Inh Corporation (Republic of Korea)

### Affiliate Members

- African Hydrogen Partnership (AHP) (Mauritius)
- Association of Fertilizers Enterprises and Industries (AFEI) (Greece)
- Cultivida (Peru)
- Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ GmbH (Germany)
- Lovely Professional University (India)

*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

- Réseau Végétal Québec (Canada)
- Sinprifert (Brazil)
- SRP – The Sustainable Rice Platform e.V. (Germany)
- Technical University of Denmark – Department of Physics (Denmark)
- TFRA – Tanzania Fertilizer Regulatory Authority (Tanzania)
- United States Department of Agriculture (USDA) (United States)
- VKS - Association of the German Potash and Salt Industry (Germany)

### Correspondent Members

- Mr. Khaled Tataï (Algeria)

### RESIGNATIONS

*There were 9 resignations during the year*

### Ordinary Members

- InterMag (Poland)

### Associate Member

- Diamond Sphere Trading LLP (United Kingdom)
- Fertisul (China)
- JSC "Ferteksos Transportas" (Lithuania)
- KAO Corporation S.A. (Spain)
- NIIK, Research & Design Institute of Urea (Russian Federation)
- Reward Minerals Ltd (Australia)
- Weir Minerals Lewis Pumps (United States)

### Correspondent Members

- Mr. Naveen Kapoor (India)

### NAME CHANGES

#### Associate Member

- Liven Agrichem Pte Ltd has become Liven Nutrients Pte Ltd
- Technip Corporate Service has become Technip Energies France S.A.S.

### OTHER CHANGES

#### Associate Member

- **Dangote Fertiliser Ltd (Nigeria) has started its production.**  
Its membership is transferred from the Associate membership category (project) to the Ordinary membership category.
- **Eti Gubre – Eti Bakir (Turkey) has started its production.**  
Its membership is transferred from the Associate membership category (project) to the Ordinary membership category.

### MEMBERSHIP TERMINATION

#### Ordinary Members

- Chemical Industries Holding Co. (Egypt)
- Pemex Fertilizantes (Mexico)

#### Associate Member

- El Dawlia Trading and Mining (Egypt)
- Heilongjiang Beifeng International Trading Co., Ltd (China P.R.)
- M/S Projects & Development India Ltd (India)
- NAQ Global Companies (Brazil)

# Finance



Total operating income amounted to €10.77 million in 2022 compared to €7.53 million in 2021. It comprised income from subscriptions of €5.8 million, revenue from conferences of €3.88 million and other revenues from special projects and the Sustainable Fertilizer Academy of €1.08 million. This represented an overall increase of 43 per cent compared to 2021 due to very strong member support through sponsorship, high levels of participation in the 2022 conferences and additional revenues generated by new activities. Total sponsorship represented €2.23 million, or 21 per cent of total operating income.

Overall, income from conferences and meetings increased by €2.2 million between 2021 and 2022.

Operating expenditures increased by 26% compared to 2021 and reached €10.15 million, compared to €8.08 million in 2021. The main increases were in staff costs, external consultancy fees and conferences expenditure.

The total expenses related to the Scientific Panel amounted to €677k, compared to €708k in 2021. Half of these expenditures was financed by the dedicated fund coming from the IPNI reserves and registered as "other reserves" in IFA accounts.

As regards the financial activity, stocks had their worst year since 2008, and bond prices also fell as inflation reached a four-decade high. As a result, a deficit of €305k was recorded in 2022 against a surplus of €14k in 2021.

In summary, the year 2022 ended with a surplus of €395k, compared to a deficit of €567k in 2021. However, after the allocation of half of the Scientific Panel expenses to "other reserves", the comprehensive income of the year amounted to €864k, compared to €178k in 2021.

Details of the Association's financial situation in 2022 are provided in the "Audited Accounts at 31 December 2022" attached to the Annual Report.

# IFA Shapes a Response to the Global Food Crisis



The war in Ukraine exacerbated food shortages throughout 2022 – already worsened by the COVID-19 pandemic – highlighting the critical role that fertilizers play in feeding the world. Thirty-six countries count on Russia and Ukraine for more than half of their wheat imports, including some of the poorest countries of the world. In March 2022, both energy and fertilizer prices skyrocketed, jeopardizing availability and affordability. Prices were already on the rise, but the war made a tough situation far worse.

The IFA secretariat immediately sprang into action. Our Market Intelligence team had already been tracking the situation closely since January and, using their in-depth analysis, we met with international stakeholders to raise awareness of the global market, the impact of sanctions, and at-risk markets such as Sub-Saharan Africa and Sri Lanka. Our first stop was at the office of the Secretary General of the United Nations. For the first time ever, in May 2022, the United Nations Security Council held a session on fertilizers. Throughout the year, IFA continued to contribute

to intense diplomatic efforts with the Food and Agricultural Association of the United Nations (FAO), United Nations Conference on Trade and Development (UNCTAD), World Health Organization (WHO) and others to ensure that food and fertilizers reached those most in need.

In March, in response to the global impact of the war, the United Nations (UN) launched the **Global Crisis Response Group on Food, Energy and Finance** to coordinate the global response to the worldwide impacts of the war in Ukraine. IFA was invited to co-lead the crisis response group's **Food Work Stream** alongside the World Business Council on Sustainable Development. Our Market Intelligence team provided a constant source of up-to-date data and insights to the sub-group and helped support the UN in understanding market routes of Russian fertilizers during their negotiations to facilitate trade.

As the cost of fertilizer continued to rise throughout the year, nearly surpassing its August 2008 peak, Africa emerged as



## FOOD CRISIS POWER PLAY



In 2022, for the first time ever, IFA's Board of Directors opened its meeting to an outsider: Administrator Samantha Power, administrator of the U.S. Agency for International Development (USAID). During this landmark meeting, Administrator Power met with IFA directors to reiterate the industry's critical role in addressing the compounding impact of rising food prices and fertilizer costs on smallholder farmers' ability to maintain their crop yields. Power praised IFA members for providing reduced-price fertilizers to smallholders around the world, while minimizing market disruptions. Our industry has a major role to play in mitigating global food insecurity. In 2022, IFA members admirably stepped up to the plate to meet this challenge.

a top concern. The conflict and ensuing sanctions delivered a devastating blow to food security and fertilizer availability across many African countries. In September we launched **Sustain Africa**, to improve availability and affordability of fertilizers by smallholder farmers in the short term, while improving resilience in the longer term. In partnership with the Gates Foundation and Rabobank Foundation, the initiative is backed by concessional financing, knowledge-sharing and monitoring and evaluation. Launched in Eastern Africa, Sustain Africa covered Madagascar, Malawi, Mozambique and Uganda before moving to countries in West Africa in the beginning of 2023.

By November, when IFA hosted USAID **Administrator Samantha Power** at a meeting of our **Board of Directors** in Washington, DC, the crucial role of fertilizer had become apparent far beyond our industry. IFA's crisis response throughout 2022 has strengthened the voice of the industry in the highest political level engagements with the UN Secretary-General and leaders of major multi-lateral institutions. Moving into 2023, IFA remains the leading source of global industry data, is well known to international policymakers, and is providing solutions to feeding the world sustainably.

# Meeting the Decarbonization Challenge Head On

The decarbonization of the fertilizer industry remained a top priority for IFA throughout 2022. In September, IFA and [Systemiq](#) issued a landmark report, [Reducing Emissions from Fertilizer Use](#), that showed how **nitrous oxide emissions from mineral fertilizer use can be reduced by 70% by 2050**. Targeted towards fertilizer companies, farmers, their advisers and policy makers, the report outlines how to cut Scope 3 emissions – and meet other environmental goals – while feeding a global population of nearly 10 billion by 2050.

Implementing the recommendations in this report, and meeting the decarbonization challenge head-on, will help secure the long-term economic and environmental sustainability of the entire food system and create a crop nutrition sector for the future. Many of the recommended measures in the report – such as wider adoption of industry's **4R Nutrient Stewardship** to apply the right nutrient source, at the right rate, the right time, and in the right place – are well-known, affordable and help improve nutrient use efficiency and effectiveness. At a time when the availability and affordability of food and fertilizer are under enormous pressure, putting the industry on a sustainable footing is more essential than ever.

## IMPROVING LIVELIHOODS THROUGH INNOVATION

Fostering agricultural innovation is essential if we are to help feed the world sustainably. That's why in 2022, IFA launched the [Africa AgTech Start Up Showcase](#) in partnership with the Mohammed VI Polytechnic University of Morocco (UM6P) to stimulate innovation and entrepreneurship on the African continent. An international competition with a prize of €20,000, the showcase was pitched to startups that are developing solutions relevant to Africa in the fields of soil health and plant nutrition, advisory and information services, market access, supply chain services and financial services. The showcase was launched in September at the Africa Green Revolution Forum, the world's premier forum for African agriculture, and received close to 200 applications. In May 2023, the eight finalists will be given the opportunity to pitch their solutions at IFA's Annual Conference to an audience of IFA and UM6P judges.



## JOHN KERRY'S ENDORSEMENT

The **Reducing Emissions From Fertilizer Use** report's importance and impact were underscored in an endorsement by Secretary John Kerry, the US Special Presidential Envoy for Climate. This was the first time that our climate work has been recognized globally by such a high-level envoy. "I applaud the International Fertilizer Association for taking on this critical work. Farmers need support to reduce emissions from fertilizer use. For solutions to this important challenge to be durable and widely-adopted, they need to be flexible and farmer-centric, so we can help mitigate emissions, all while supporting food security. Increasing the use of enhanced efficiency fertilizers, in particular, can help reduce nitrous oxide emissions while matching crop nutrient requirements."

**Secretary John Kerry**  
US Special Presidential Envoy for Climate



# Advancing Sustainability



The International Fertilizer Association and its members are passionate about sharing the message of sustainability as an opportunity, not just a challenge. Corporations have a significant role to play in shaping the United Nations' Sustainable Development Goals. While there are increasing public expectations that businesses will lead the way in tackling critical environmental and social issues, it's not always clear where to turn to for answers to questions like *What is sustainability? How does it relate to fertilizers?* and *How can I improve my company's performance?*

That is why IFA launched the **Sustainable Fertilizer Academy (SFA)** in September 2022. It provides a unique e-learning experience and network for everyone to learn about sustainability – from sourcing, to production, to use of fertilizers on the farm – and to enable them to apply their learning to the real-world challenges facing us all today. The SFA offers students a two-level certification program: Introductory and Intermediate. It includes 32 classes with 50 video lectures from 45 international subject matter experts, providing a wealth of knowledge on sustainability.

By year-end, the first 12 students from three continents had already graduated.

IFA is grateful to the following member companies who supported the SFA as official Founding Partners: Anglo American, CF Industries, GPIC, ICL, Ma'aden, Mosaic, OCI, OCP, QAFCO and Yara. These supporters and our Academic Partner (UM6P) form a Senior Advisory Group which meets regularly to review the SFA's progress and discuss its further development. To learn more about the SFA, please visit [www.ifa-sfa.org](http://www.ifa-sfa.org)

## SFA CLIENT TESTIMONY



"The academy provides an efficient way for companies to get up to speed on sustainability in the fertilizer industry." **Burcu Türkes, Director of Sustainability, Risk and Governance at TEKFEN Toros Agri Industries Inc.**

# Industry Stewardship 2022 Champions

Following the launch of its **Industry Stewardship Champions** program in 2019, IFA is proud to announce that the commitment from its members to Safety, Health and Environment (SHE) further increased in 2022. At our Strategic General Meeting in Washington D.C., IFA's Chairman Svein Tore Holsether, presented a gold medal to K+S (Germany) and praised all thirty-six Industry Stewardship Champions for continuing to maintain excellence in the industry.

This Industry Stewardship Champions label is attributed to fertilizer companies that have participated in all of IFA's most recent Safety Performance, Environmental Performance, and Energy Efficiency & CO2 Emissions benchmarks and who are certified IFA Protect & Sustain, the de facto product stewardship standard for fertilizer companies, or who have valid international certifications.



## 2022 INDUSTRY STEWARDSHIP CHAMPIONS

### CONGRATULATIONS TO THE 36 ISC

Argentina, Austria, Bahrain, Belgium, Canada, Croatia, Egypt, Germany, Greece, India, Indonesia, Israel, Jordan, Lithuania, Morocco, Netherlands, New Zealand, Norway, Pakistan, Poland, Qatar, South Africa, Spain, Tanzania, Turkey, and USA.



# Framing Global Conversations with our Market Intelligence



For IFA's Market Intelligence (MI) Service, 2022 was marked by intensive efforts **to create a data-led response to the conflict in Ukraine** and to help educate the world about the essential role of fertilizers. From the onset of the conflict, the service rolled out a series of data briefs and [blogs](#) on the global market, the impact of sanctions, and at-risk markets. This analysis was used by the IFA Secretariat in the highest multi-lateral talks with various stakeholders including the Secretary General of the United Nations and the UN Crisis Response sub-group on fertilizers.

Despite the global disruption in fertilizer supplies and the evolving situation in Europe, IFA's global industry

statistics continued to remain a stalwart and accessible tool to members. In July 2022, the MI Service released its Medium-Term Outlook forecasting a decline in global mineral fertilizer use of up to 7 percent in a pessimistic scenario -- a reflection of significant uncertainty in market conditions and a feature of the unfolding food crisis. This, and the MI's other 2022 Outlook Presentation Series and reports, are available to IFA members on [IFASTAT](#).

IFA also partnered with [Gro Intelligence](#), an agriculture and climate analytics provider, **to track the impact of fertilizer shortage on global food production** following the conflict in Ukraine. An interactive tool, the [Global Fertilizer](#)



[Impact Monitor](#), is designed to help quantify the potential outcomes of fertilizer supply shortages using application rate forecasts and scientific inputs from IFA and CRU Group. The tool incorporates multiple nitrogen fertilizer application scenarios and estimates their expected effects on the global production of corn, wheat, soybeans and rice, allowing IFA to communicate more strongly and to a wider audience about the importance of fertilizers. The MI service also developed a **new forecasting methodology** in response to the war in Ukraine, to reflect that short-term fertilizer use was likely to be more heavily dictated by the availability of fertilizers, with less emphasis on crop forecasts and agronomic considerations than in “normal” years.

In 2022, the MI continued to make progress with the **data transformation project** to set the foundation for the continuing improvement of IFA’s data development. In time, new data ingestion tools, more efficient survey methods, and data visualization dashboards will be embedded into IFA websites, with the peace of mind of having secure and well-built databases running in the background.

## MARKET INTELLIGENCE PUBLICATIONS



To say that 2022 was a rollercoaster year for fertilizer markets is an understatement. The Market Intelligence Service balanced urgent needs for data and analysis with its rolling publication schedule.

Noteworthy releases included the [ammonia capacity report](#) which includes dedicated coverage of green ammonia. The service also published a new report on **Fertilizer Use by Crop** in collaboration with IFA’s science program. The data was published as a [peer reviewed article in Nature](#), the world’s leading multidisciplinary science journal.

# A Reference Point to Help Feed the World Sustainably



This year, IFA launched a **global nutrient budget reference database** to provide more accurate estimates of the nitrogen, phosphorus and potassium inputs and outputs on all cropland. The groundbreaking database serves as a central knowledge bank of novel data on cropland nutrient inputs and outputs. It provides national scale estimates of nutrient surpluses or deficits as well as nutrient use efficiencies for the period 1961 – 2020. It also provides a foundation for assessing future nutrient needs for sustainable crop production including future demand for fertilizers.

The new information tool is a joint effort by the FAO and IFA, in collaboration with top scientists and experts at the University of Maryland Center for Environmental Science,

the Swedish University of Agricultural Sciences, CEIGRAM-Universidad Politécnica de Madrid, Wageningen University & Research, the University of Nebraska and the African Plant Nutrition Institute.

The database addresses the historical issues of a lack of reliable and harmonized data, different and non-transparent methodologies and inadequate primary data collection, processing and sharing. Working alongside the FAO, the database is part of IFA's vision to jointly create, manage and improve a harmonized global reference data for helping feed the world sustainably.

Available through [IFASTAT](#) and [FAOSTAT](#), the database will be updated annually, while additional features will

*The database is part of IFA's vision to jointly create, manage and improve a harmonized global reference data for helping feed the world sustainably.*



include nutrient budgets for all agricultural land (cropland and permanent grassland), global nutrient flows and more localized estimates of crop nutrient removal and other budget components. The partnership also intends to address data gaps through novel approaches for aggregated field data collection (fertilizer use by crops, crop residues, manure recycling, other practices affecting the nutrient budget).

As part of the [Consortium for Precision Crop Nutrition](#), IFA also supported the release of a new platform for open sharing of crop nutrition data which will further support data collection and sharing including for the purpose of improving the global cropland nutrient database, as well as other applications.

## 2022 SCIENCE AWARDS

### Awarding Excellence in Plant Nutrition Science and Sustainable Development

Every year, IFA invites individual scientists to apply for two awards that recognize excellence in plant nutrition science, innovation and extension for sustainable development.

The [2022 IFA Norman Borlaug Plant Nutrition Award](#) recipient is Dr. Fang-jie Zhao, Professor at Nanjing Agricultural University, China, for his over 30 years of extensive research on crop productivity and quality, soil health and human nutrition.

In 2022, the [IFA Emerging Scholar Award](#) was awarded jointly to two outstanding recipients. The first recipient was Dr. Xia (Emma) Liang from the Faculty of Veterinary and Agricultural Sciences at the University of Melbourne. Dr. Liang's research interests are assessing the nitrogen footprint across agricultural production, supply and consumption and advancing its proper management.

The second recipient was Jean-Martial Johnson, from AfricaRice Center in Côte d'Ivoire. Mr. Johnson's work contributed to the development of innovation in soil properties and nutrients – including the digital map of Africa at 30 m spatial resolution; RiceAdvice – used by stakeholders addressing plant nutrition challenges in sub-Saharan Africa.

# IFA on the Ground at U.N. Climate, Nature and Environment Summits



Food systems, soil health, and halting a dangerous decline in biodiversity dominated the agenda for IFA's high-profile participation at the **Climate Change and Biodiversity COPs** (Conference of Parties) during November and December 2022.

In a landmark development at COP 27, an [official decision on agriculture](#) was reached at the United Nations Framework Convention on Climate Change (UNFCCC). The language used in this decision reflects many years of tireless advocacy by IFA to recognize the critical role that nutrients play in climate-resilient food production systems and global food security.

Amid the vast tented pavilions of the [COP 27 in Sharm el Sheikh](#), IFA worked to highlight the solutions the fertilizer industry brings to high-profile global challenges; to increase members' visibility in these spaces; to raise the profile of our own sustainability journey and to report on

## CLOSE COOPERATION WITH THE UN FOOD AND AGRICULTURE ORGANIZATION

The FAO's main advisory body, the Committee on Agriculture, has approved the development of the first ever Code of Conduct for Agricultural Plastics. IFA is working with the FAO to provide key learnings from a Fertilizer Bag Management survey that the industry is implementing in Africa. As part of its MoU, IFA has organized an education webinar series and kick-started work with the FAO on the first-ever Guide on Biostimulants & Microbials.

the outcomes of negotiations on agriculture, market-based mechanisms and biodiversity targets. IFA's engagement evolved around three key themes -- soil health, innovation and the future of farming, and financing mechanisms for farmers and smallholders.

IFA was one of the lead organizers of a Soil Health Day, held at the first-ever [Food Systems Pavilion](#). Our secretariat and members proposed several dialogues to improve soil health, culminating in the announcement of a Soil Health Resolution proposal.

IFA was also present at the launch event of the [Global Fertilizer Challenge](#), a US \$153 million initiative of the U.S. government to address food insecurity and agricultural emissions through investments in fertilizer efficiency and alternative fertilizer and cropping systems. One new investment emerging from the Challenge will be the [Efficient Fertilizer Consortium](#), a public-private research partnership to advance efficient, environmentally beneficial and cost-effective fertilizers and management practices.

At COP27, IFA also announced the first local implementation of the Nitrogen Roadmap at an event with the European Bank for Reconstruction and Development (EBRD) and the Egyptian government. Events were also organized at the FAO Pavilion and the Pavilion of the International Chamber of Commerce on the future of farming. In all, IFA and our members took part in 10 events during COP 27, highlights of which can be viewed on our [LinkedIn](#) page.

### A New Global Biodiversity Deal

IFA was present at the **Biodiversity COP 15 in Montréal**, where the groundbreaking approval of a Global Framework on Biodiversity by 196 countries is expected to put nature at the forefront of future policy agendas. IFA's engagement in the framework development was marked by successful advocacy for reasonable language on nutrient loss and the recognition of nutrient use efficiency (Target 7).

Moving forward, IFA will focus on demonstrating industry engagement on nature protection and help its members to integrate nature into their corporate strategies. IFA has already begun working on this issue through its Biodiversity Taskforce which organized a first workshop for members in the margin of the IFA Strategic Forum in Washington, D.C. in November 2022.

To learn more please contact Director of Public Affairs, [Yvonne Harz-Pitre](#).

## RESOLVING TO CURB NITROGEN WASTE AND PLASTIC POLLUTION



Throughout the year, IFA closely followed developments at the UN Environment Assembly (UNEA-5) which concluded in March 2022 with several resolutions that will impact our industry over the coming years. A new Resolution on more sustainable nitrogen management encourages U.N. member states to accelerate their action in the significant reduction of nitrogen waste. Resolution 7 includes direct reference to the adverse impacts of fertilizers and urges the private sector to accelerate the development of technologies, and governments to develop stricter policies

The Assembly also passed Resolution 14 which paves the way towards an international legally binding instrument to end worldwide plastic pollution. Considered one of the most significant environmental multilateral deal since the Paris Accord, IFA will support, engage in, and monitor this historic mandate as it moves forward.

# Bringing the Industry Together

2022 was a unique year given the evolution of the pandemic and the war in Ukraine. Despite the absence of delegates from countries still impacted by the COVID pandemic and from countries dealing with other geopolitical issues, IFA managed to reach pre-pandemic levels of participation at its conferences, with 1,200 delegates in Vienna and record-breaking attendance in Singapore for the Crossroads

Asia-Pacific Conference, which had 470 participants and saw IFA returning to the APAC region for the first time since before the pandemic. Sponsorship also reached an unprecedented level for all IFA events. The commitment of IFA's members was crucial in the success of our virtual and in-person gatherings during 2022.



## HIGHLIGHTS IFA2022 VIENNA VIDEO

## THANK YOU TO OUR 2022 SPONSORS

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## Giving Voice to our Global Industry



IFA continues to use media relations, digital communications and events to explain to a broad audience the significance of fertilizers as an essential commodity during the evolving food crisis. In 2022, we selectively engaged with top tier media to increase the public understanding of how the conflict in Europe is reducing the availability of fertilizers, the essential role that fertilizers play and how the industry supports food systems as the crisis continued. Our secretariat – after the long confinement of the Covid pandemic – took the industry’s message to 16 countries to visit plants, attend workshops and conferences. Our social media footprint – spread across LinkedIn, Twitter and YouTube – grew exponentially in 2022, with 9,000 new followers gained on LinkedIn alone.

**Bloomberg (Chart of the Day)** and **BBC World News Business Report** were among the outlets that covered IFA’s [Medium-Term Fertilizer Outlook 2022-2026](#). It was the first time in recent years that IFA distributed this kind of analysis

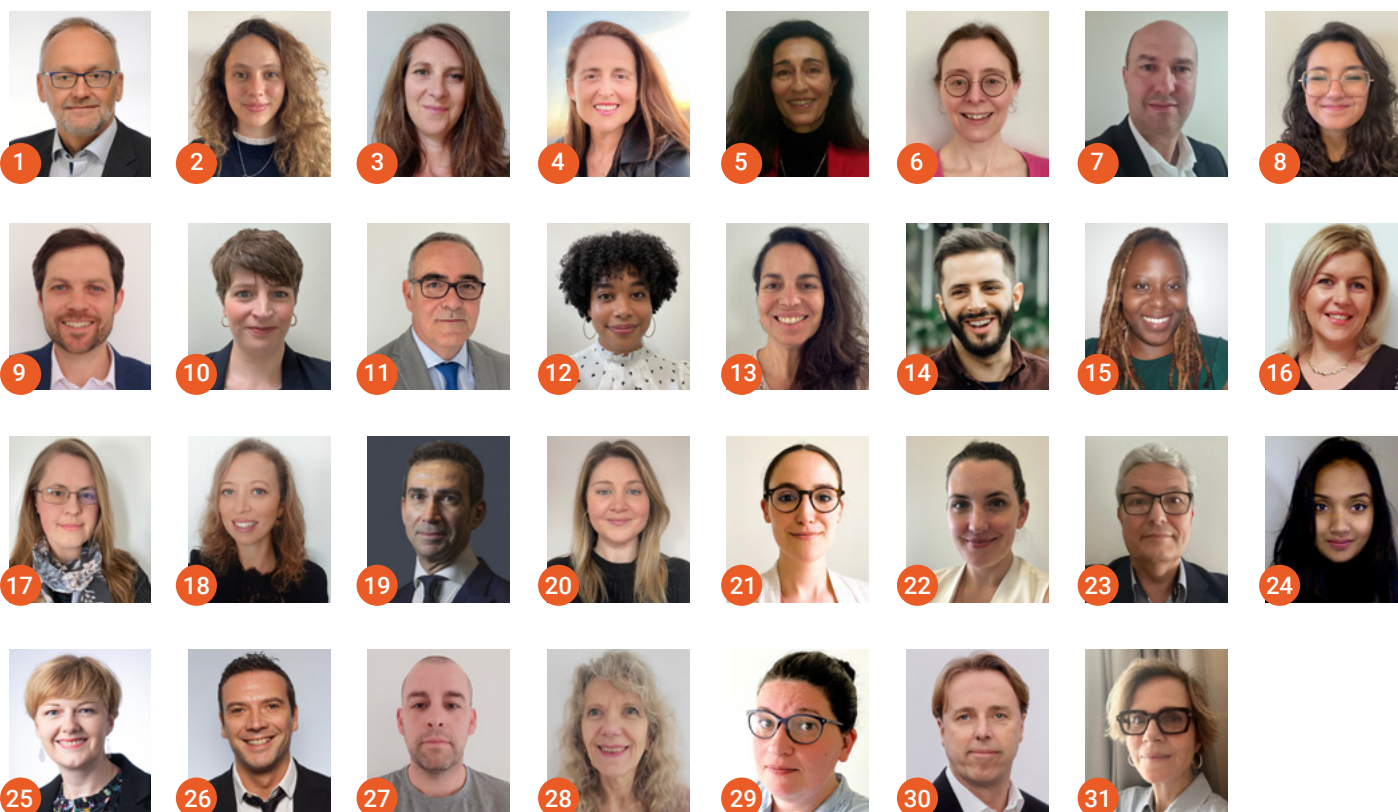
beyond a specialty audience, a sign of the increased recognition of our industry as a player in key global issues of the day. In addition, Nikkei Asia and U.S. media outlets Agri-Pulse and National Public Radio (NPR) interviewed Alzbeta Klein about the effects of the war in Ukraine on the global fertilizer market, supply chains, farmers and food systems.

This year, IFA welcomed a **new Director of Communications and Marketing**, Claire Newell. With more than 17 years’ experience in communications, Claire previously led all corporate communications at the World Association of Nuclear Operators. She is joined by IFA’s **new Communications Manager**, Sally Ekanayaka.

The communications team continued to work on the new IFA public website which has a refreshed ‘look and feel’, a more modern and user-friendly design and better functionality. The new site will be shared with members and the public in early 2023.



# IFA Secretariat



- |                            |  |                                |  |
|----------------------------|--|--------------------------------|--|
| <b>1 Achim Dobermann</b>   | Chief Scientist                            | <b>16 Hanna Chtioui</b>        | Phosphate and Potash Market Analyst                  |
| <b>2 Alexandra Dorison</b> | Sustainability Education Coordinator       | <b>17 Jasna Gamber</b>         | Junior Conference Planner                            |
| <b>3 Aline Bortot</b>      | Webmaster                                  | <b>18 Jessica de Lafargue</b>  | Conference Planner                                   |
| <b>4 Alzbeta Klein</b>     | CEO & Director General                     | <b>19 José de Souza</b>        | Programme Manager - Supply                           |
| <b>5 Annie Cohen</b>       | Membership Manager                         | <b>20 Laura Cross</b>          | Director, Market Intelligence                        |
| <b>6 Armelle Gruère</b>    | Program Manager – Demand                   | <b>21 Lucia Castillo Nieto</b> | Senior Sustainability Analyst                        |
| <b>7 Aurélien Paralic</b>  | Director, Administrative Service           | <b>22 Margot Clifford</b>      | Senior Analyst Public Affairs                        |
| <b>8 Aya Benmoussa</b>     | Junior Analyst, Africa Policy and Strategy | <b>23 Patrick Heffer</b>       | Deputy Director General                              |
| <b>9 Cameron Ludemann</b>  | Data Scientist                             | <b>24 Sally Ekanayaka</b>      | Communications Manager                               |
| <b>10 Claire Newell</b>    | Director, Communications and Marketing     | <b>25 Sandie Bouttemy</b>      | Conference Planner                                   |
| <b>11 David François</b>   | Director, IT                               | <b>26 Stéphane Leleu</b>       | Director, Events                                     |
| <b>12 Déborah Ragal</b>    | Junior Accountant                          | <b>27 Sylvain Riviere</b>      | Senior Accountant                                    |
| <b>13 Elif Oguz</b>        | Lead Designer                              | <b>28 Sylvie Marcel</b>        | Project Coordinator                                  |
| <b>14 Etienne Archard</b>  | Market Analyst Phosphates                  | <b>29 Valeria Pitto</b>        | Executive Assistant to the DG                        |
| <b>15 Grace Chilande</b>   | Market Analyst Demand                      | <b>30 Volker Andresen</b>      | Director, Sustainability and China Initiative Leader |
|                            |  | <b>31 Yvonne Harz-Pitre</b>    | Director, Public Affairs                             |



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