

Providing Balanced Crop Nutrition to a Growing World

Sydney Opening Session

President's Address

Esin Mete

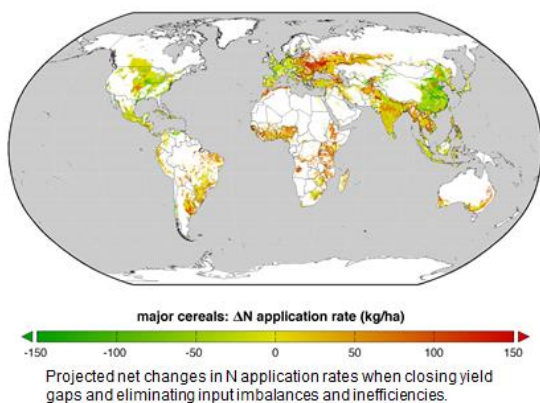
I would like to focus my opening address on the need to provide the world with proper and balanced nutrition.

In this respect, I think that as an industry we should pay greater attention to:

- The need to disseminate information about balanced nutrition globally to address both issues of under- and over-use, as well as imbalanced use;
- The need to develop markets in regions where access remains an issue;
- The need to teach farmers site-specific and crop-specific nutrient recommendations to increase nutrient performance globally; and finally
- The need to innovate.

I will then share with you the proactive steps taken by IFA to address nutrient stewardship strategically through the Association's committee work.

Painting the picture



Mueller et al., Nature, 2102



If we take a world view of Nitrogen use, what is striking is the diversity of the issue. This map published in Nature illustrates nitrogen imbalances; it shows that some regions of the world use regrettably too little nitrogen (in red on the map), whereas others have an excess nitrogen input (in green). Similar imbalances also exist for phosphorus and potassium.

We may find some faults with how such a map was drawn up, and I believe that we

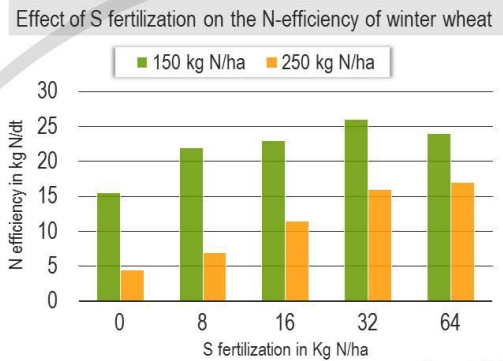
need to come up with our own, perhaps more accurate and detailed maps. But it is important to show how the world is looking at this issue and to acknowledge and address the significant imbalances in global fertilizer use.

In regions of underuse, the industry has an important role to play in improving supply and promoting balanced fertilization to bridge the yield gap. The “yield gap” represents the difference between farmers’ actual and attainable yields, and fertilizers play a vital role in closing this gap.

In regions of excess or imbalanced use, the industry should also promote balanced fertilization and nutrient stewardship.

For those who simply argue for reducing fertilizer rates, we need to explain the importance of balanced fertilization that seeks to provide the right source, at the right rate, but also at the right time and place (4R Nutrient Stewardship Framework).

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**Balanced fertilization
 for nutrient use efficiency**



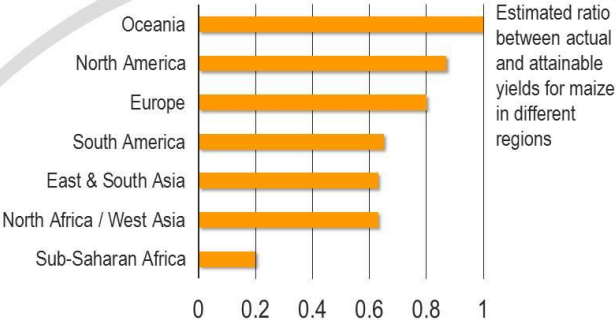
Source | Walker und Booth (1994)

We have known for a long time that multi-nutrient crop nutrition helps to increase nitrogen use efficiency. This graph, for example, shows how simply applying sulphur greatly increases the nitrogen use efficiency of winter wheat.

Underdeveloped markets

As industry leaders, we must recognize the tremendous market opportunity presented by areas of the world with the largest yield gap. This graph shows well the regions where the yield gap is more severe: Africa, Latin America and West Asia. In Sub-Saharan Africa, the average maize yield is only one fifth of the attainable yield.

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**Bridging the yield gap
 underdeveloped markets**



Our business is to invest in increasing crop output, but we cannot continue to overinvest in areas that are close to their yield potential. Our market growth opportunities are in the regions where the yield gap is more significant.

Africa

While the global average for fertilizer use is about 100 kg/ ha, in most of Sub-Saharan Africa fertilizer application rates are below 10 kg/ha.

I would like to pause on Africa. Africa is not only the continent with the most evident nutrient deficiencies but also the place where our market has the greatest potential to grow. I believe that we cannot talk about Africa without remembering the size of the continent and the demographic and economic changes that are taking place in many African countries. And today, the continent still accounts for only 3% of world fertilizer consumption. With one person out of four projected to live in Africa by 2050, regional fertilizer demand has an enormous potential to increase.

The African Development Bank just released a report where it estimates that “Africa has the potential to increase the value of its annual agricultural output from USD 280 billion in 2010 to about USD 500 billion by 2020 and to USD 880 billion by 2030.”

As Kofi Annan just stated in a new report published by the Africa Progress Panel: “Unleashing Africa’s green and blue revolutions may seem like an uphill battle, but several countries have begun the journey. In these countries, farmers are planting new seeds, using fertilizers and finding buyers for their harvests.”

We must seize the opportunity and develop public-private partnership programs that are localized and that can help increase fertilizer application in a responsible and efficient manner in regions where the soils are famished for nutrients.

Our Business Model

Let me be clear: fertilizers are an absolute requirement for crop productivity and as such we are running a vitally important industry. What may appear as challenges are actually tremendous opportunities.

Despite the obstacles, there are terrific market growth opportunities in the regions where the yield gap is more significant. We must act collectively to allow all of us to take advantage of these opportunities.

This is not to say that we have exhausted our business opportunities in mature markets that are close to reaching their optimum yield. In these markets, there is great scope for

providing more balanced and accurate fertilization. Improved outreach to farmers both in underdeveloped and mature markets is essential.

There are also great opportunities in new product development. Concerns about insufficient nutrient use efficiencies do present serious challenges for our industry, but I believe that these can also be turned into fantastic opportunities.

Let us keep in mind the significant growth in sales of specialty fertilizers that seek to improve nutrient use efficiency. New products used in specialty fertilizers are contributing to reducing emissions of ammonia and nitrous oxide to the atmosphere, as well as nitrate leaching and phosphate runoff into surface and groundwater.

Outreach to farmers

The greatest gains in terms of reducing the environmental impacts of fertilizer use are to be found in application techniques. We have to find new models for knowledge transfer and last-mile delivery. Ever improving nutrient stewardship programs and nutrient performance monitoring systems are also vital elements of innovation for our industry.

The world counts 1.5 billion farmers, and 70% of them are smallholders, farming on fields of one or two hectares. Small family farms are a critical engine of food supply. However, they operate under great constraints.

Small farmers around the world urgently need fertilizers to become more productive in order to:

- grow enough and more nutritious food;
- become reliable suppliers;
- increase their incomes and improve their lives in rural areas;
- create jobs and new economic opportunities for the youth;
- reduce gender inequalities by giving women access to productive resources;
- protect our ecosystems and be resilient against climate change.

It is straightforward to see that our primary partners in all our efforts towards food security are also our customers: the farmers. Farmers need our products to grow their crops.

I stress that we depend on farmers, big, medium and small, men, women and youth, to use our products appropriately so they can increase their yields and take care of their land, soils, environment and livelihoods.

Our industry has a role to play in serving all farmers worldwide but, in particular, in empowering smallholders in Africa, Asia and Latin America to become commercial farmers.

Multi-stakeholder partnership for farmer outreach

Partnering with farmers to provide balanced nutrition and contribute to feeding a growing population is the fertilizer's industry imperative. But how can we fulfill our mandate most effectively is a question we have to ask ourselves.

No one alone can reach out to the hundreds of millions of farmers who either already use our products but not efficiently or do not have access to them.

This quote from the FAO summarizes my vision:

“The efficient use of plant nutrients, whether from mineral fertilizers or from other sources, involves the shared responsibility of many segments of society, including international organizations, governments, the fertilizer industry, agricultural research and advisory bodies, traders and farmers”, FAO, 2004.

We need a multi-stakeholder effort to enhance outreach to farmers in order to teach fertilizer best management practices. By pooling our know-how and capacity networks with a variety of partners, we can achieve sustainable intensification, mitigate climate change, and improve access to sufficient and nutritious food for all.

Although it is true to say that without fertilizers we would only produce half of the food we eat today, the fertilizer industry alone will not solve the challenges that are posed to the agricultural sector. We ought to develop strategic partnerships with:

- Farmer groups and all the other players in the food value chain,
- Governments,
- International organizations,
- Agronomic research centers,
- Farm advisors, and
- Civil society organizations.

Nutrient stewardship

By concerning ourselves with ensuring proper and balanced nutrition globally, we can inform and sway policy-makers to not only focus on nutrient losses and targets and indicators but on nutrient management programs. This is why I strongly believe that nutrient stewardship should be the priority for the association and each member company.

Under the leadership of IFA's governing bodies, the Secretariat has embraced nutrient stewardship as a priority and developed a cross-cutting program of activities engaging all IFA members.

I would like to present to you IFA's new strategy on nutrient stewardship and update you on some of the activities implemented recently.

IFA's nutrient stewardship program aims at encouraging knowledge sharing among members on fertilizer best management practices and partnering with external stakeholders to transfer knowledge to farm advisors worldwide.

This strategy is organized in the following five clusters:

- Cluster 1: Advocacy

IFA works with international organizations and initiatives to share industry positions on nutrient issues and monitors and influences key processes. Good examples of this work are IFA's activities in relation to the Sustainable Development Goals at the United Nations and to the Global Partnership on Nutrient Management.

- Cluster 2: Research and Scientific Partnership

IFA participates in international scientific efforts and debates on nutrient-related research to map nutrient imbalances and improve understanding of the impacts of these imbalances. One such activity is the publication of scientific books with leading research institutions. In 2014, a publication on water management will be published with IPNI, IPI and the International Water Management Institute (IWMI).

- Cluster 3: Best Management Practices and Outreach to Farmers

IFA promotes multi-stakeholder efforts to improve nutrient management programs and facilitates national dialogues. IFA recently hosted two country seminars on sustainable fertilizer management in China and Indonesia to relay to our members the importance of nutrient stewardship. We will continue to hold these national dialogues. IFA is keen to partner with others, and has already initiated a dialogue with farmer organizations and other actors in the food value chain.

- Cluster 4: Policy Analysis

IFA seeks to better understand the role of government policies with regard to nutrient management. This year, IFA is partnering with IPC, FAI and IFDC for a study on subsidies. Fertilizer subsidies are absolutely crucial to help especially poor farmers increase their productivity. Policymakers in many countries however are struggling to contain rising fiscal burdens and sometimes subsidies can trigger unbalanced crop nutrition.

- Cluster 5: Member Engagement

IFA encourages knowledge-sharing, learning and benchmarking on nutrient stewardship among its members. IFA is encouraging voluntary benchmarking for nutrient stewardship initiatives.

I believe that this strategy will greatly contribute to improving the performance of our industry vis-à-vis the social, economic and environmental pillars of sustainable development.

While many of our critics are exclusively focused on nutrient losses, I much prefer to speak of nutrient performance.

It is by addressing such scientifically complex and politically sensitive issues that the industry demonstrates its ethics and position in a global world. We are proving to our partners that we are ready to face our challenges and find solutions collectively by working, in particular, with farmers, governments and civil society.



Esin Mete is the President of the International Fertilizer Industry Association and the CEO of Toros-Agri. She is a chemical engineer by profession, holding a BSc from Bosphorus University, and a problem-solver by vocation. She led the effort to produce zinc-enhanced NPK fertilizers, thus pioneering micronutrient fertilization in Turkey, her home country. A vocal advocate for food and nutrition security, Ms. Mete strongly believes in the role of extension services and initiated agronomic training programs dedicated to women farmers in Turkey.



The International Fertilizer Industry Association (IFA) is a trade association representing the global fertilizer industry. IFA member companies represent all activities related to the production and distribution of every type of fertilizer, their raw materials and intermediates. IFA's membership also includes organizations involved in agronomic research and training. IFA has some 540 members in about 85 countries. The global fertilizer industry produces some 170 million tons of fertilizer nutrients annually. These are used in every corner of the globe to support sustainable agricultural production and food security.

www.fertilizer.org

End



ESIN METE

IFA President

**Providing Balanced Crop Nutrition
to a Growing World**

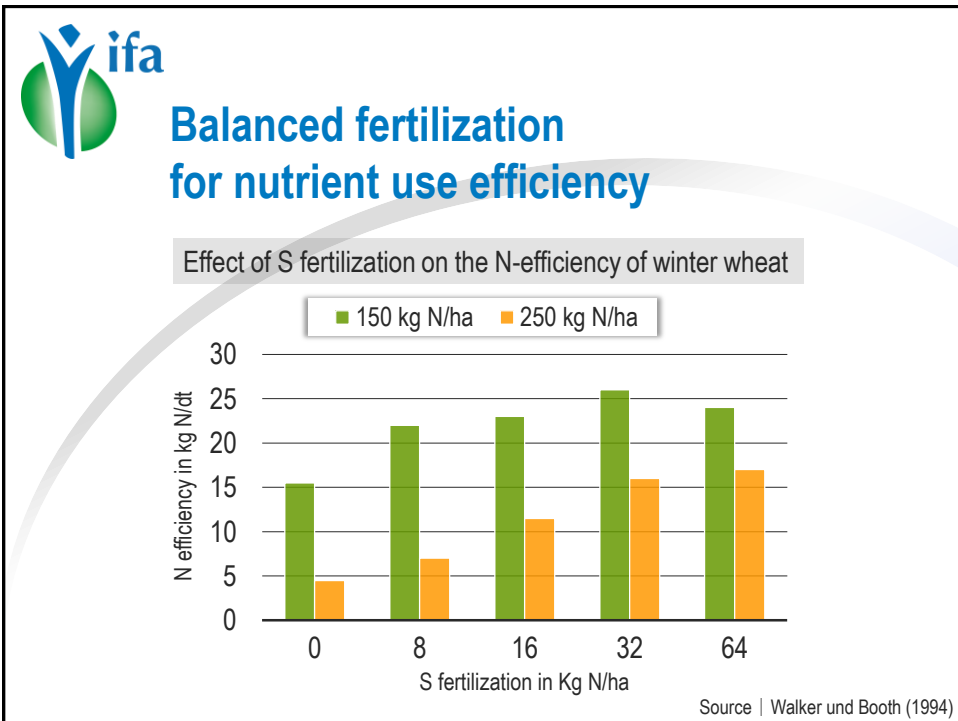
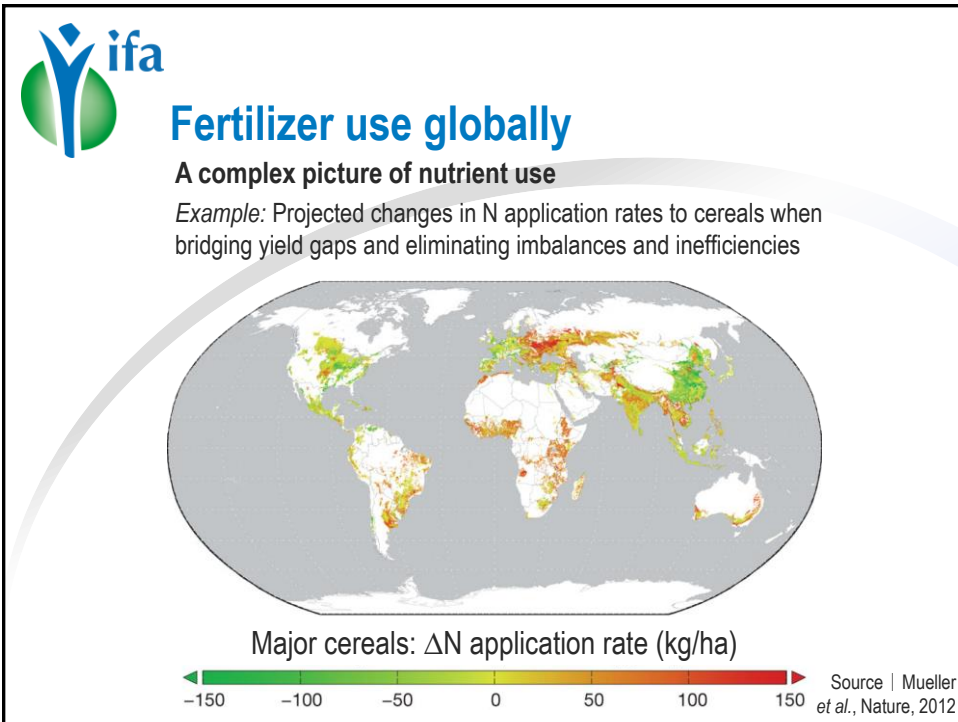


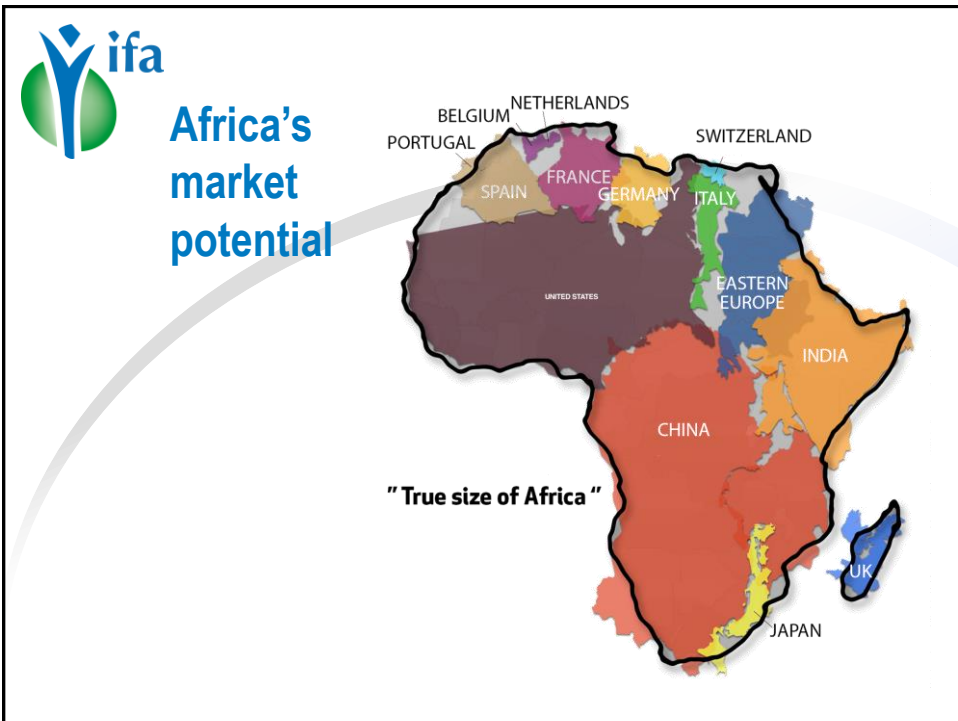
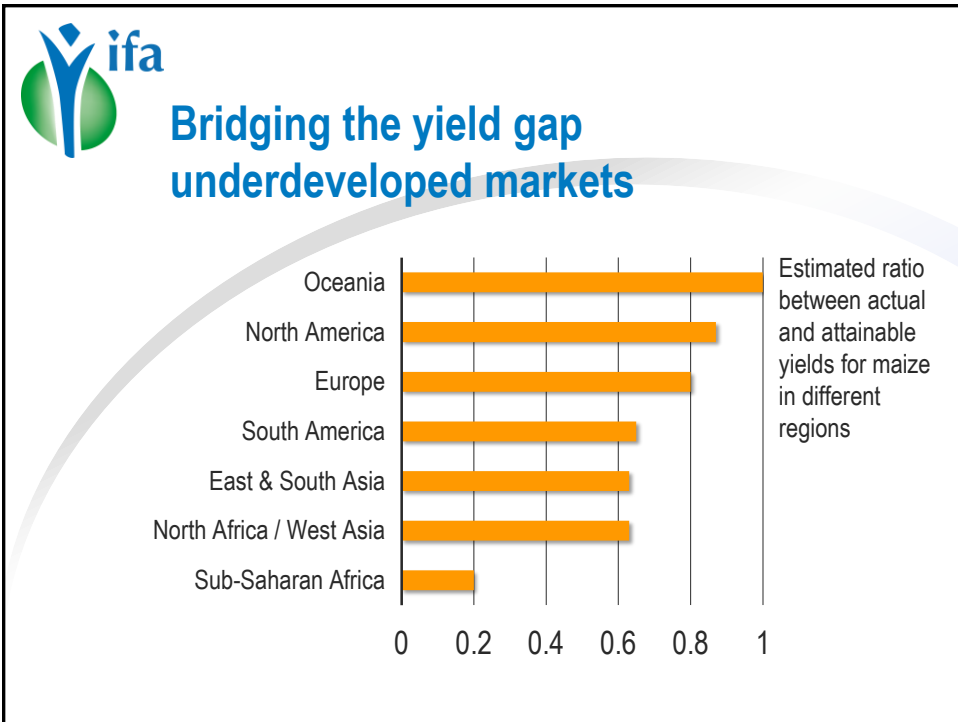
82nd IFA ANNUAL CONFERENCE, SYDNEY, AUSTRALIA, 26 - 28 MAY 2014



Proper and balanced nutrition

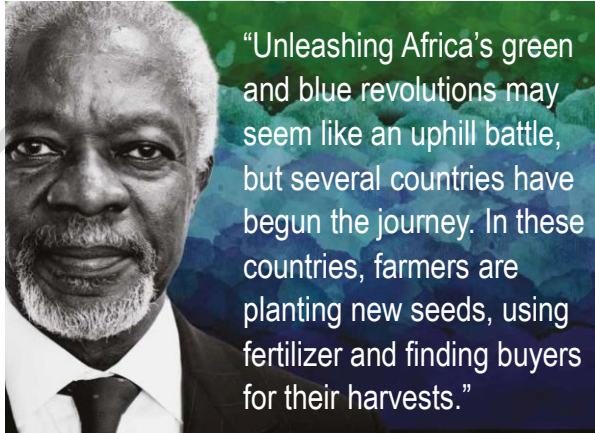








Unleashing Africa's green and blue revolutions



“Unleashing Africa’s green and blue revolutions may seem like an uphill battle, but several countries have begun the journey. In these countries, farmers are planting new seeds, using fertilizer and finding buyers for their harvests.”

60%
of the uncultivated arable land in the world is in Africa

NIGERIA 26th
world economy
\$ 510 billion before South Africa
\$ 372 billion



Kofi Annan, African Progress Panel Annual Report 2014



Our Business Model



MARKET GROWTH

- Innovation in product development
- Innovation in application principles & technologies
- Innovation in business models



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Small farmers

WORLD 1.5
billion farmers

70% are smallholders

The infographic features a central circular image of three women carrying large, colorful bundles of produce on their heads. The text is arranged around this image, with 'WORLD 1.5 billion farmers' in a blue arc above and '70% are smallholders' in a white arc below.

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Increased productivity

- grow more
- reliable food supply
- nutrient-dense food
- women's empowerment
- job creation for youth
- landscape management

The infographic lists six benefits of increased productivity, each in a colored box with a dashed border, arranged in a descending staircase pattern from top-left to bottom-right.



Fertilizer-farmer partnership



From subsistence to commercial farming

Farmers of all sizes use fertilizers

Improving access



Our imperative



The fertilizer industry supplies farmers with nutrients for their crops to grow and feed a growing population.



Partnering for farmer outreach

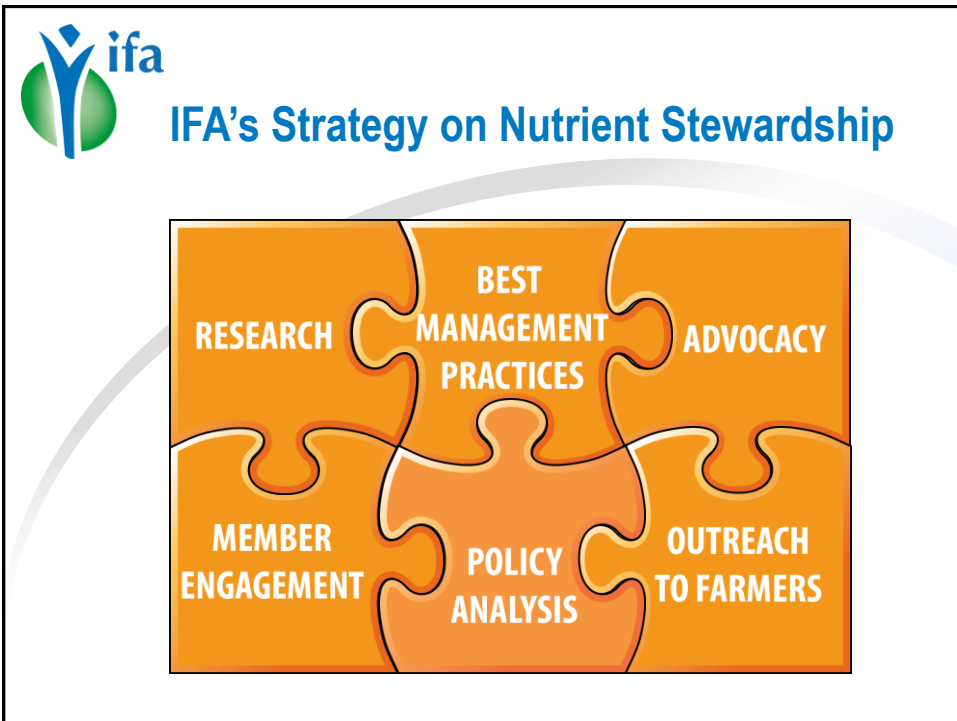
Working TOGETHER

“The efficient use of plant nutrients, whether from mineral fertilizers or from other sources, involves the shared responsibility of many segments of society, including international organizations, governments, the fertilizer industry, agricultural research and advisory bodies, traders and farmers.”



Strategic partnerships

- Farmer groups
- International organizations
- Agribusinesses
- Agronomic research centers
- Civil society organizations





Nutrient Stewardship Strategy

1 **ADVOCACY**



SUSTAINABLE DEVELOPMENT 2015
PUTTING STAKEHOLDERS AT THE CORE OF POST-RIO+20 PROCESSES



Global Partnership on Nutrient Management
GPNM



Nutrient Stewardship Strategy

2 **RESEARCH**
& SCIENTIFIC PARTNERSHIPS



INI

IPNI
INTERNATIONAL
PLANT NUTRITION
INSTITUTE

IWMI
International
Water Management
Institute



Nutrient Stewardship Strategy

**3 BEST MANAGEMENT PRACTICES
& OUTREACH TO FARMERS**

Country Seminars on Fertilizer Management

China & Indonesia



Nutrient Stewardship Strategy

4 POLICY ANALYSIS

Nutrient Policies Fertilizer Subsidies

International
Food & Agricultural Trade
Policy Council





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Nutrient Stewardship Strategy

5 MEMBER ENGAGEMENT

Innovation

Voluntary benchmarking

Surveys

2014 IFA
Global Technical Symposium
Amsterdam, The Netherlands, 1-3 April 2014

The slide features the IFA logo at the top left. Below it is the title 'Nutrient Stewardship Strategy'. A large orange puzzle piece with the number '5' is positioned to the left of the text 'MEMBER ENGAGEMENT'. A large grey arc spans across the middle of the slide. Below the arc, three grey boxes contain the text 'Innovation', 'Voluntary benchmarking', and 'Surveys'. On the right side, there is a photograph of red tulips under a blue sky. In the top right corner of the photograph, there is a globe icon and the text '2014 IFA Global Technical Symposium Amsterdam, The Netherlands, 1-3 April 2014'.



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Building our reputation

IFA's reputational DNA

Ethics

Cooperation

Openness

Partnership

The slide features the IFA logo at the top left. Below it is the title 'Building our reputation'. On the left side, there is a green card with the IFA logo and the text 'APCO Reputation Survey'. In the center, there is a photograph of a small green plant growing in a field. Below the photograph, there are five grey boxes arranged in two rows. The top row contains 'IFA's reputational DNA' and 'Ethics'. The bottom row contains 'Cooperation', 'Openness', and 'Partnership'. A large grey arc spans across the middle of the slide.



By members for members

