



Thank you for the invitation to join you today. I am pleased to be with the Canadian Fertilizer Industry and to see many familiar faces.

As some of you may know, prior to joining IFA in January this year, I spent much of my career dedicated to food and agricultural policies, in particular in relation to trade policies. In my previous work at the International Food and Agricultural Trade Policy Council (IPC), I closely monitored lobbying activities on agricultural trade issues within the World Trade Organization but also within some countries and advocated for the role of open trade in helping to achieve global food security.

It has been very rewarding for me to put my agricultural policy background to work for such a vital industry.

As head of the International Fertilizer Industry Association, I believe that it is of utmost importance to work closely with national associations on promoting our common brand – while each region of course has its own priorities and specificities, there are many issues facing the fertilizer industry that we are best advised to work on together – and this is one of the themes of my presentation. I have been very pleased to continue the excellent IFA-CFI relationship and am keen to build on it even further.



Fertilizers are crucial for food security

- + productivity
- + nutrition
- + poverty alleviation

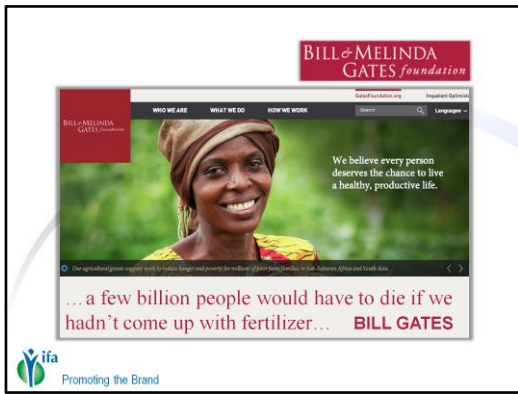


Promoting the Brand

Roger has asked us to focus in this panel on “promoting the brand,” and I think that it is an excellent way to kick off this conference.

I can think of no better way of promoting our brand than emphasizing their crucial role in global food and nutrition security. Their contributions to agricultural productivity are enormous. IFA also emphasizes their role in nutrition and poverty alleviation.

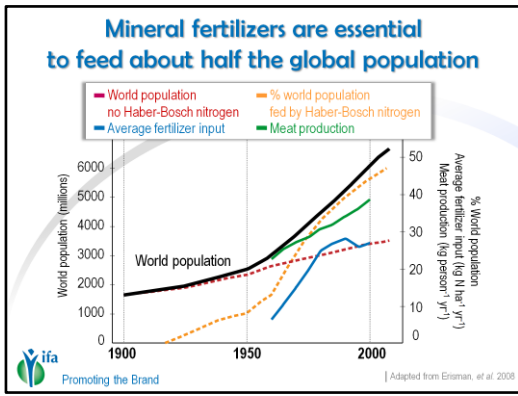
My presentation will then turn to the topic of nutrient losses, which the industry must also continue to address in a proactive manner to effectively promote our brand.



We have an excellent brand to promote – our products are vital for the world’s farmers and consumers – as so aptly expressed by Bill Gates just a few months ago.

“...a few billion people would have to die if we hadn’t come up with fertilizer”

Bill Gates in 60 minutes, CBS, May 2013



IFA has traditionally put forward fertilizers' outstanding contribution to growing more food through productivity increases; citing in particular the fact that half of the world food production relies on the fertilizer industry.

There is no doubt that this message will and must remain at the center of our international brand, in particular in today's context when we face the challenge of feeding a world of 9.3b people by 2050 in a world with limited arable land.

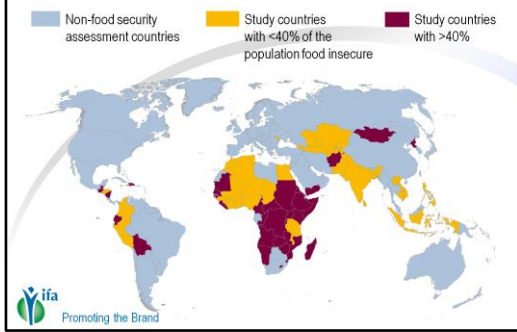


Today’s food security debate is not solely focused on the need to increase agricultural productivity, however. Today, we recognize that full bellies are a good start, but that we must raise the bar and aim for well-nourished bellies. The term “hidden hunger” refers to the fact that some 2 billion people are affected by micro-nutrient deficiencies. Some 10 million children under the age of five die each year, and sixty percent of these deaths are related to malnutrition.

We can also promote our brand by speaking about the role of fertilizers in the fight against malnutrition through the use of micronutrients, following the publication of a book on this subject jointly edited by IFA and the International Plant Nutrition Institute (IPNI). “Fertilizing Crops to Improve Human Health” conveys powerful positive messaging on fertilizers playing an important, cost-effective part in nutrition-sensitive agriculture, and shows how human deficiencies in Zinc, Iodine and Selenium can be eradicated through the relatively cost effective use of micronutrient-enriched fertilizers, using examples from India, Australia and Turkey.

IFA has built on these important findings to create linkages with international campaigns, such as the UN’s Zero Hunger Challenge, which – among others – advocates for Zero Stunting.

Poverty alleviation and human development



Achieving global food security also requires large scale poverty alleviation, as food insecurity is all too often the result of insufficient economic access to food. It is a cruel irony that the world's poorest live in rural areas and many of them are farmers. There are about 2 billion people who live and work on small farms in developing countries. Most of the world's smallholder farmers are struggling to live and to feed their families on less than US\$2 a day.

Our brand – fertilizers - also play a crucial role with regard to overcoming this type of poverty. Proper access to fertilizers allow subsistence farmers to produce a surplus that they can sell, using the income to buy additional food for their families, but also to send their children to school and pay for health care.



ANDREW YOUN
FOUNDER, One Acre Fund

Most of the world's hungry people actually grow food as a profession

- Most of the world's hungry people are farmers, and their profession is to grow food
- They have land, abundant sunshine, rainfall, and equatorial climates
- But they are missing nutrients. Modern fertilizer and training double their farm income per acre

Fertilizer is the world's most important humanitarian product



In this context, IFA has been promoting strong development-related messages, focusing in particular on the role that fertilizers play in overall agricultural and economic development, poverty eradication for small and medium-sized farmers and overall improvements in rural livelihoods through increased surplus in crop production and subsequent revenue creation.

Fertilizers, are, simply put by Andrew Youn of One Acre Fund, the world's most important humanitarian product.



Reputational challenges Nutrient losses



One would imagine that the obvious link between fertilizers and food security would be grasped by the public, policymakers and specialized agencies, but unfortunately this is not always the case. We face some silly but also some serious reputational issues. Let me take this opportunity to relay what I would term silly (but persistent!) challenges in my role at IFA so far.

This mostly North American audience might appreciate this first anecdote. I have been amazed by the number of people whom I have met since moving to France, who upon learning what I am doing for a living, responded by saying “ ah, you work for Monsanto.”

Yet it is not only with the French man and woman on the street that we seem to carry the reputational issues of other industries. I have found in my dealings with the UN Rome based agencies and the many stakeholder groups that strive to influence them, that fertilizers are often put into the same basket as GMOs and crop protection products.



IFA served as chairman of the private sector mechanism to the UN Committee on World Food Security for the past two years and worked closely with countries permanent representations, as well as civil society organizations. Let me point out that the entire private sector has one chair on the CFS Advisory Board, whereas Civil Society gets four (farmers by the way get none!). Moreover, the efforts of civil society are quite frankly much better funded. They are well financed and good at making themselves heard! Many argue for rights-based approach, such as the right to food; food sovereignty; agro-ecology; small-scale farming; indigenous knowledge; and local production. These themes often are implicit criticism against the private sector, investment in general, market economy, innovation, technology, international markets, and labor. In fact, fertilizers are often deridingly referred to by these groups as part of the “input industry.”

A recent example is a consultation on “The Future of Agriculture” by Oxfam International, based on contributions by 23 expert voices. Two of the essays in this collection referred to fertilizers in very negative way, referring to phosphate and nitrogen as petroleum-based products contributing to soil degradation, and speaking out against GMOs dependant on the use of specific petroleum-based pesticides and fertilizers, sold as part of a package by large multinational corporations...and called for a return to organic agriculture.

ENVIRONMENTAL CONCERNS



- Eutrophication
- CO₂ and N₂O release from fertilizer production and field use
- Reactive Nitrogen / Nitrogen Cascade
- Soil Degradation

Clearly, we all have an important task in promoting our brand: we must provide accurate information about the nature of our products and reassure the general public on concerns related – even distantly – to our industry.

While we are unlikely to sway the French public opinion with regard to GMOs or convince certain civil society groups about the benefits of markets and technology, there is an important and growing set of criticisms aimed in particular at nutrient losses resulting from fertilizer use, including:

Eutrophication

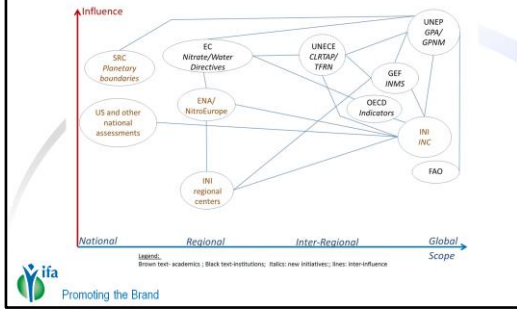
CO₂ and N₂O release from fertilizer production and field use

Reactive Nitrogen/Nitrogen cascade

Soil degradation (acidification)

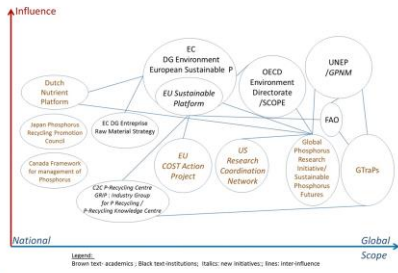
(In a recent speech, Mark Lynas – the environmentalist who refreshingly back tracked his views on GMOs – still hits on fertilizer use by saying: “We need to improve- and probably reduce- nitrogen use (i.e. chemical fertilizers) which is creating a dead zone in the Gulf of Mexico and eutrophication in fresh water. “) Article published in The Economist on 7 January 2013

Reactive N initiatives and relative influence

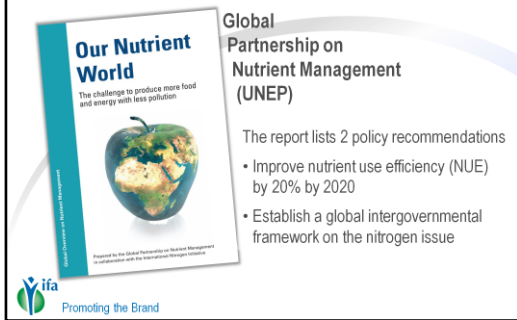


In the past years, IFA has observed a multiplication of initiatives focusing on nutrients and their detrimental impacts on the environment and also on nutrient governance and management.

Reactive P initiatives and relative influence



ENVIRONMENTAL CONCERNS



The UNEP report “Our Nutrient World – The Challenge to Produce More Food and Energy with Less Pollution” launched in February 2013 by the International Nitrogen Initiative (INI) and the Global Partnership on Nutrient Management (GPNM) is the most prominent example. It examines the anthropogenic effects on global nutrient cycles, focusing on N and P. Among the report’s recommendations are calls to improve nutrient use efficiency (NUE) along the food chain by 20% by 2020, and to establish a global intergovernmental framework on reactive nitrogen.

The release of this report has been followed up by an INI/GPNM call for a \$30M effort to deliver underpinning evidence in support of an “International Nitrogen Management System (INMS).” “Our Nutrient World,” with its policy-related recommendations, signals that discussions on nutrient stewardship/management have moved beyond the scientific domain into the policy realm. Besides INI and GPNM, there are numerous other initiatives underway that raise concerns about environmental implications of nutrient over-, under-, and mis-use.

A new global effort is needed to address ‘The Nutrient Nexus’, where reduced nutrient losses and improved nutrient use efficiency across all sectors simultaneously provide the foundation for a Greener Economy to produce more food and energy while reducing environmental pollution.

Our Nutrient World, UNEP, 2013



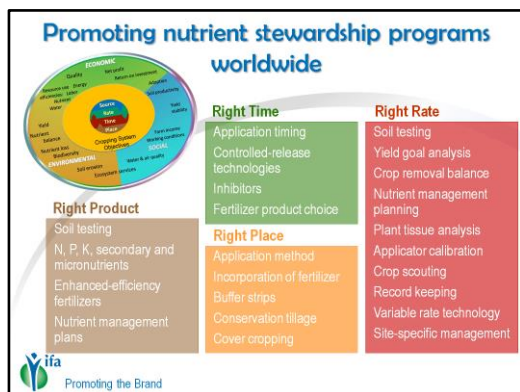
IFA actively follows these initiatives and – along with IPNI – provides often much needed input from the industry. Often the assumptions and approaches taken by these initiatives are simply not correct and science based, and we work hard to correct these.

More generally, when it comes to “promoting our brand,” there are important messages that we promote in response to these concerns expressed about the detrimental environmental impacts of excessive fertilizer use.

We emphasise that in many regions of the world, it is insufficient, rather than excess use of nutrients that not only keeps yields low, but also creates its own set of environmental problems. For instance in Sub-Saharan Africa where fertilizer use remain low averaging 10 kg/ha, massive nutrient mining occurs. The low fertilizer use and continuous cropping without replenishing exported nutrients has degraded 40% of the 220 million ha of farmland in Africa, losing at least 30 kg of nutrients per hectare yearly (IFDC).

We also point to the fact that imbalanced use of nutrients is problematic.

Use of nitrogen advanced more progressively than that of phosphorus and potassium causing the imbalance in nutrient use. IFADATA shows N:P:K ratio averages globally at 1:0.38: 0.19. Studies (Potash Agronomy Program in China which is supported by the Canadian International Development Agency (CIDA)) have shown that adding only K fertilizers to farmers’ practice-which applies only N and P – crop yields increased between 11-74% (depending on the crop). Clearly this demonstrates the need for balanced use of nutrients and not just reducing use to improve nutrient efficiency.



Most importantly, we emphasize that the answer to improper fertilizer use already exists and has existed for quite some time: namely best management practices in the use of fertilizers. We have very compelling evidence that when farmers have access to the right information and tool, they are more than capable of taking appropriate nutrient management decisions.

IFA and IPNI helped to develop the 4R nutrient stewardship framework, which aims to convey the principle of using the right fertilizer products at the right rate, right time and right place to farmers, policy-makers and all other stakeholders so that fertilizer application can be managed to achieve economic, social and environmental goals.

4R is a very strong brand in North America and I commend CFI, TFI and IPNI for the outstanding leadership they have shown in making nutrient stewardship their flagship area of work. (CFI's 4R nutrient stewardship projects – such as “Farming 4R Land; Farming 4R Watersheds; Farming 4R Climate”, among others)

We know that under farm conditions some 20-50% of N applied is recovered during the year of application in the major cereal cropping systems, but that recovery can go as high as 60% in some cereal systems in Western Europe. Under well managed field trials, recovery efficiency levels of 60-80% are common. This shows that there is tremendous opportunity for increasing NUE by improving farm management.

(Cassman et al. (2002) and Balasubramanian et al. (2004)



These are important messages that we need to continue delivering. But we can and must do more.

It is increasingly urgent to demonstrate that best management practices are an effective way to address improper application of fertilizers.

Here, I would again like to congratulate CFI and TFI for launching a research project with IPNI to determine the impacts that the 4Rs have had in North America: it is important to demonstrate real and large-scale impacts of nutrient stewardship programs, and hopefully this effort in North America can be replicated elsewhere.

At IFA 2013 in Chicago, it was decided that the Agricultural Committee will develop some criteria that nutrient stewardship programs should meet and then undertake an inventory of the various existing programs that meet those standards. It is important to have an overview of the various regional and national nutrient stewardship programs around the world, to promote best practices in these programs and to encourage the development of additional ones. We also need to understand more about their impact on the ground.

FARMING FIRST



IFA is a member of
the Farming First coalition

- Improving the efficiency in farmers' use of agricultural inputs
- Developing improved crop varieties
- Heavily investing in agricultural research and development
- Closing existing "yield gaps"



Promoting the Brand

Clearly, effective nutrient stewardship relies ultimately on farmers' efforts: It is only through change at the farm-level that the industry's sustainability track record can be achieved. But the challenge of reaching the billions of farmers around the world – particularly those in developing countries – remains formidable, and is realistically not one that the fertilizer industry can meet on its own.

Many extension services are no longer performed by public organizations. New successful models build on innovative partnerships between companies, farmer groups, national research institutions to create direct linkages between farmers and agronomists and customize tools and techniques.

Global outreach efforts need to be implemented worldwide to train farmers, by providing knowledge, training and encouraging sharing of experience.

IFA's role will focus on making sure that the international policy debate is framed with the voice of farmers at the center of policy design. IFA will pursue advocating for governments to commit to investing in the agricultural sector in the long-term.

Farming First....



In addition to improved fertilizer application methods and outreach to farmers, there are of course also innovative fertilizer products that have been developed to increase nutrient use efficiency.

Slow-and controlled release and stabilized fertilizers (i.e. urea reaction products, coated/encapsulated fertilizers, nitrification inhibitors, and urease inhibitors) are gaining popularity because of their improved efficiency (lesser losses to the environment).

These have made an important contribution to nutrient stewardship, but on the whole, advanced fertilizers represent a small percentage of the overall market and are used mainly for specialty products that can attain a price premium. *(Estimated consumption of slow-and controlled release fertilizers in 2006/07 was 2.28 million tonnes (of product). The share of these 'special' fertilizers to the overall global fertilizer consumption is very negligible. In 2005 including China's capacity stand only at about 0.20 % - 0.47% (Trenkel, 2010). This is the latest data. Unfortunately we do not have updated statistics on this as this is a specific market (niche) and producers are not willing to share the information- Dr Trenkel was able to get statistics because of his personal contacts)]*

This can be explained by simple economics: farmers adopt new technologies only if it helps them to increase their own income through a significant yield jump. Hopefully, investments on research and innovations for new and less expensive coating materials or production technologies that will lower cost and improve efficiency and environmental impact of these products will increase. But even today, there is also an economic case that can be made in order to increase the use of these products:

A Chinese agronomist recently pointed out that in a Chinese field trial, farmers were asked to deploy slow release fertilizers as one third of their overall fertilizers. *Results show that an increase in yield of 20% can be attained with the combination, thus creating a sufficient economic incentive to use slow release fertilizers.*

Moreover, as you have certainly been told, the fertilizer industry is often accused of low investment in these areas compared with the other industries i.e. seed and plant protection product. Are there areas in which we could step up R&D to help us accomplish greater nutrient use efficiency and thus promote our brand?

For your information, IFA's Working Group on Innovation and Research did a survey on what IFA members considered the next breakthrough technologies:

Seed nutrition-based fertilization.

Development of low-cost, scientifically robust and accurate methods to measure or estimate nitrogen fertilizer efficiency at

the field level.

Global assessments of nutrient management strategies on crop yields, soil fertility, nutrient use efficiency and micronutrient deficiencies.

POLICIES

- Fertilizer subsidy schemes
- Crop insurance
- Common agricultural policy – EU
- Nitrous oxide emissions reduction program (NERP)

The industry must do what it can to reach out to farmers on nutrient stewardship and to develop increasingly efficient products.

Nutrient management issues are closely intertwined with government policies and while it is not easy to affect policy change, it may in fact be easier than reaching out to billions of farmers. Policies, of course, are national or provincial as in Canada, and in that sense fall fully into the remit of national associations. IFA, however, can gain a better overview of the different countries' policies, in order to gain a better sense of what policy approaches offer the greatest benefits, and which ones, might be best avoided and are therefore an important area for IFA to focus on. I am keen for IFA to undertake a thorough study of different types of policies. Some examples to look at might be:

Fertilizer subsidies are always a sensitive topic. They are deemed crucial in many developing countries, yet they can also lead to imbalanced fertilization, as we have seen in India and China. *[Because of the lower cost of N fertilizers due to subsidy in China, farmers have been over using fertilizer N by as much as 400kg/ha against the recommended rate of 165-255 kg N/ha. In India, sulphur (S) has been identified to be deficient in many soils since fertilizer subsidy is focused on N, P and K.]*

Crop insurance programs in various national countries may well be based on outdated fertilizer recommendations.

While none of us is likely to be pleased with regulations that restrict farmers' use of fertilizers, there is also the "carrot approach" that is generally more suited for agricultural producers. Do we know enough about the various economic incentives that governments can offer farmers when it comes to encouraging proper fertilizer use? What is the experience that we can gather so far from US conservation programs, the EU's Common Agricultural Policy and the different carbon markets that have been established? What are the lessons learned so far from Alberta's Nitrous Oxide Emissions Reduction Program, which builds on the 4Rs?

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In summary

- A great story to tell
- Tackle reputational challenges
- Correct wrong perceptions
- Proactive on Nutrient Management
- Business as Usual is not Enough
- Partnerships – Partnerships – Partnerships

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Promoting the Brand

We must continue to focus our efforts on promoting fertilizer as a vital ingredient to global food and nutrition security; and as an important catalyst for agricultural development. We have a great story to tell.

Despite the acknowledgement of the role of fertilizers in food security, the public opinion and policymakers, in particular in developed countries, do not deem this contribution to be sufficient and the focus on the environmental impacts of fertilizer use has greatly sharpened in the last few years. In a recent dialogue with IFA's EMG, a high ranking UN official who understands the crucial role of fertilizers for food security, nonetheless spoke of the need for "rebranding" the industry by having a stronger focus on environmental issues.

There are wrong perceptions of our industry that need to be corrected and there are additional steps that we as an industry should take to address the use of our products once they leave the factory gates.

It will also require greater investment in outreach and communications, but also in research and development efforts.

Partnerships are crucial: Promoting our fertilizer brand will require greater collaboration between IFA, regional and national associations and scientific institutes, such as IPNI. We also need to be smart about building partnerships with other actors in the agricultural value chain, the public sector and civil society organisations.