

IFA wishes all its readers a Happy New Year.

## Changing Food Patterns and Biofuels Buoy Fertilizer Markets

Given changing dietary preferences and continued political pressure for biofuel production, the outlook for agricultural commodities is likely to remain rosy in the near future – with positive knock-on effects for the global fertilizer industry. During the preparation of the short-term outlook for the Enlarged Council Meeting in Doha in November, IFA reviewed global fertilizer use by

crop for the first time in a number of years. It discovered that frequently cited

figures overstate the share of cereals and that they underestimate the

importance of fruit and vegetable production as a key driver of fertilizer demand today.

Against this backdrop, 2007 was a record production year for most nutrients as buoyant demand challenged the industry's ability to meet global requirements. Although some nutrient markets will ease, especially in the medium term, conditions are expected to remain tight for much

of the coming year. IFA members can access detailed short-term supply and demand forecasts on the IFA web site. A

summary outlook is available to the general public.

Fruit and vegetable production has become an important driver of global fertilizer demand



Photo: IFA/ K. Sukalac

T. Enger, IFA President; F.H. Al-Mahanadi, Keynote Speaker and K. Al-Sowaidi, IFA's Regional Vice President for West Asia

In addition to the global forecasts presented at the Enlarged Council Meeting, senior executives heard reports from IFA's Regional Vice Presidents on conditions in their parts of the world. Three invited speakers also provided useful insights.

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## IFA Crossroads Asia-Pacific Conference Addresses Emerging Trends

The 2007 IFA Crossroads Asia-Pacific conference was held from 17 to 19 December in Bali, Indonesia with attendance of some 270 delegates from 31 countries. Prior to the start of the main sessions, about 30 people participated in the Kim Gai Soh Memorial Golf Tournament held on 17 December. During the opening ceremony the

L. M. Maene, IFA Director General, presents a token of appreciation to A. Apriyantono, Indonesian Minister of Agriculture.



following day, Benny Wachjudi, Director General of Agro and Chemical Industries, delivered the keynote address on behalf of Fahmi Idris, Minister of Industry. The Minister of Agriculture, Anton Apriyantono, addressed delegates at a dinner reception, kindly hosted by the Indonesian fertilizer industry.

Conference sessions covered a wide range of topics, from agriculture to international fertilizer trade. Particular attention was paid to the situation in Indonesia, with papers on the outlook for domestic agriculture and fertilizer demand, the prospects for domestic gas supply and nitrogen fertilizer production, as well as national standards for fertilizers.

Other presentations concerned the spread of the rice-maize rota-

tion in Asia and its impact on fertilizer demand; the outlook for potash supply and demand; the market for compound fertilizers in South-east Asia and the impact of biofuels on the world fertilizer market.

The agronomic workshop, attended by more than 40 delegates, focused on balanced fertilization in Asia, with papers discussing phosphorus and potassium, sulphur and micronutrients. Two presentations dealt with case studies for developing and promoting fertilizer best management practices in India and the Philippines respectively.

The conference concluded with a panel discussion on the Asian market for enhanced-efficiency fertilizers.



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# The Arab Fertilizer Association

by Shafik Ashkar, Secretary General, AFA



The membership of the Arab Fertilizer Association (AFA) comprises 160 companies and institutions from 30 countries in the Arab region engaged in fertilizer manufacturing and trade. AFA provides a framework within which information on state-of-the-art fertilizer manufacturing technologies is exchanged and used. The Association helps to increase industry awareness of key

issues, while providing an opportunity for company representatives to strengthen relations with international institutions, organizations and companies.

Since AFA was founded in 1975, the Arab region has grown in importance for business and for information exchange. Fertilizer demand in the region has increased substantially during this period. The region's fertilizer industry, therefore, not only has a clear strategic role to play in contributing to agricultural development and food security, but also as a motor of economic diversification. Over the next five to six years, a number of projects will increase the industry's capacity significantly.

As part of its mission to educate stakeholders about the regional fertilizer industry, AFA is updating a 20-year-old sector review. This Arab Fertilizer Sectorial Study Towards 2016

will provide recent information on the fertilizer industry. The Association intends to make the study's findings and forecasts available to decision-makers, government planners, private sector investors, researchers, commodity dealers/fertilizer distributors and agricultural communities in Arab countries.



Participants during an AFA Technical Conference

## Promoting excellence in production and tackling issues

In the Arab region, as elsewhere in the world, the industry is keen to produce fertilizers using the best available technologies. Starting in 2008, AFA member companies will be eligible for an annual award recognizing excellence in protecting safety, health and the environment.

The 14th AFA International Annual Fertilizers Forum and Exhibition will focus on the use of crops as biofuels and how this is likely to affect crop supply and demand, in order to help the industry better understand the context in which it will be operating in coming years. To be held in Cairo, Egypt, from 5 to 7 February 2008, its theme will be "The Fertilizer March: Where To? Food or Fuel: Which Comes First?".

The AFA International Fertilizer Techni-

cal Conference, which helps improve production performance, will follow in Jeddah, Saudi Arabia, from 10 to 12 November.

## Towards sustainable fertilizer use

AFA, a Platinum Sponsor of the 2006 Africa Fertilizer Summit, supports the Summit's goal of an African Green Revolution, which will require greater and better fertilizer use across much of the continent.

AFA's members believe their duty-of-care includes promoting best agricultural practices which contribute to environmental protection as well as improving farmers' output. AFA has worked closely with the International Potash Institute (IPI) on joint training programmes and on a series of booklets and leaflets related to plant nutrition, in order to promote the appropriate use of fertilizers in Arab countries.

### The Arab region's share of international production and exports of key fertilizers and their raw materials in 2007\*

Exp. (%)	Prod. (%)	Product
13	9	Ammonia
36	12.5	Urea
80	34	Phosphate rock
74	19	Phosphoric acid (P <sub>2</sub> O <sub>5</sub> )
70	27	TSP
4	4	Potash
25	20	DAP
22	10	Sulphur

\* Estimated from data for January-June 2007

### The production and exports of key fertilizers and their raw materials in the Arab region (Unit: million tonnes product)

Product	2000		2006		2007*		2016	
	Prod.	Exp.	Prod.	Exp.	Prod.	Exp.	Prod.	Exp.
Ammonia	8	1.8	11.8	2.6	12.6	2	17.5	2.5
Urea	8.9	6.9	13.5	11.9	15	12.5	20	16.9
Phosphate rock	39.5	17.5	51.2	23.3	52	24	54	24.5
Phosphoric acid (P <sub>2</sub> O <sub>5</sub> )	4.8	2.4	5.4	2.8	5.5	2.9	8.9	8
TSP	1.7	1.4	1.8	1.5	1.9	1.5	2.2	1.6
Potash	1.9	1.9	1.7	1.5	1.9	1.5	2.5	2.0
DAP	3.4	3	3.7	3.3	3.9	3.5	6.4	5.7
Sulphur	4	4	6.6	5.4	6.8	5.5	10	6

## "The Law of the Soil" – Promoting Awareness of Soil Conservation through Theatre

In early 2007, Fertilizar Asociación Civil, an Argentinian organization whose purpose includes increasing public awareness of sustainable soil conservation, launched a project called "Futuro Fértil" (Fertile Future). A literary contest was organized for students aged 15 to 18 on the topic "Taking Care of our Soil". Fifty students from Argentinian agrotechnical schools took part, demonstrating their knowledge of how to care for the soil in productive systems. The winning story was "The Earth and Man: Histories of Understanding and Misunderstanding" by María Arribalzaga, a senior student at the agricultural high school in Tres Arroyos, Buenos Aires.

As a continuation of this project, a play, "The Law of the Soil", premiered on 16 November. Targeted at an adult audience, the play was inspired by the fourth place entry in the contest. This new way of presenting technical information to the community was a success. An exit survey confirmed that the 4000 people who attended took on board the play's message concerning the importance of conserving and respecting the soil.

The play presents the conflicting perspectives of two characters: an environmentalist, Félín and a sort of Everyman, Dígoto. Their struggle suggests that this conflict derives from their basic ways of thinking, and that people are influenced more by their feelings than by real knowledge of the situation. A third character, Sáctas, functions as a mediator between the two points of view. The play argues that the more we increase our awareness, the more readily we will find the appropriate tools to care for the soil.

The goals of this initiative were: to make people aware of how to care for the soil; to show how industry protects the soil; to create a functional, effective communication tool at low cost (compared with an advertising campaign); to suggest ideal subject matter to be presented at congresses and other events and to build up communication alliances with other national and international institutions.



Photos: AFA

2006 AFA Award Winners

Close cooperation between AFA, IFA, and the regional office of the Food and Agriculture Organization (FAO) of the United Nations has produced a *Near East Fertilizer Use Manual* (see page 12). More than a dozen scientists from seven countries in the Arab region contributed to this manual which is destined for soil scientists, plant nutritionists, farmers and fertilizer manufacturers.

As part of its ongoing efforts to promote research that increases agricultural production through fertilizer use, AFA offers an award for research leading to significant advances in: improving fertilizer quality; environmental protection; optimizing the use of water sources and preserving energy; developing the fertilizer industry's technology and raw materials; improving and increasing production and decreasing production cost; and widely promoting fertilizer use. The value of the prize is US\$ 5000.

### Providing an interactive online home for the regional industry

AFA recently revamped its web site. The new version includes databases containing papers, speeches and information about AFA events. Technical and economic databases are another new feature. Information is used by all member companies. Any AFA member may contribute to the site.

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"For Fertilizar, being able to transmit such an important message as taking care of the soil through literature and theatre represents a big step towards reaching the entire community in a new way," said Enzo Cástino, Fertilizar's Executive Manager.

### About Fertilizar

Fertilizar is a non-profit association made up of different stakeholders in the agriculture and livestock industry (e.g. companies, institutions, growers' associations, universities). Its purpose is to make the public aware of the importance of the efficient and responsible use of fertilizer, and of the sustainability of the productive system, through the dissemination of technical-scientific information adapted to local conditions. Fertilizar carries out numerous information and research activities. The companies that make up Fertilizar are ACA, ASP, Bunge, Emerger, Quebrachito, Félix Menéndez, Ferticrops, Fertiva, Nidera, Petrobras, Profertil, Refractarios Argentinos, Repsol YPF, Rio Tinto Borax, Roullier Argentina, Stoller Argentina and Yara. Fertilizar cooperates with agricultural associations such as Aapresid, Acrea, INTA, Maizar, Asagir and Acsoja, as well as universities. [www.fertilizar.org.ar](http://www.fertilizar.org.ar)

# UN Commission to Focus on Agriculture



Over the next two years, the United Nations Commission on Sustainable Development (CSD) will focus on agriculture and related issues. The CSD, which reports to the UN's Economic and Social Council, was established by the General Assembly in December 1992 to ensure effective follow-up of the Rio Earth Summit (held earlier that year) and has since become responsible for providing policy guidance related to outcomes of the 2002 World Summit on Sustainable Development.

The Commission meets annually in New York in two-year cycles, with each cycle focusing on clusters of specific thematic and cross-sectoral issues. At CSD meetings stakeholders from nine non-governmental groupings – one of which is business and industry – have the opportunity to interact with high-level policy makers from across the globe on issues of mutual interest. Most national delegations are made up of a mix of representatives from several ministries, such as foreign affairs, agriculture, environment and finance.

The first year of the current cycle (CSD-16/17) is dedicated to reviewing progress

related to agriculture, rural development, land degradation, drought and desertification. There will also be emphasis on Africa. The fertilizer industry will have ample opportunities to highlight its initiatives in efficient and responsible fertilizer production and use.

In the second year there will be policy discussions. The likely outcome will be a negotiated document proposing a framework for future national policies in these areas.

In some respects, the policy context for fertilizers is more positive than it has been for decades. The 2008 *World Development Report*, recently released by the World Bank, focuses on agriculture as an engine for development and calls on governments to make the necessary investments. Moreover, the UN Food and Agriculture Organization has clarified its position on the use of fertilizers in agricultural development. "We should use organic agriculture and promote it ... [because it] represents a growing source of income for developed and developing countries," Jacques Diouf, FAO's Director-General, said on 10 December. "But you cannot feed six billion people today and nine billion in 2050 without judicious use of chemical fertilizers."

At the same time, the fertilizer industry must maintain and even reinforce its proactive approach to managing the unwanted impacts associated with its products. The first line of responsibility is obviously during manufacturing, when it is imperative to achieve high levels of safety, health and environmental performance. However, the industry's product stewardship also extends to farmers' fields. It is vital that fewer nutrients are lost to the environment in the future. The IFA initiative on fertilizer best management practices (see the special September 2007 issue of *Fertilizers & Agriculture* focusing on this theme) is one way the industry is addressing this issue.

IFA members who would like to send delegates to meetings of the Commission on Sustainable Development (CSD-16 from 5 to 16 May 2008, and CSD-17 from 4 to 15 May 2009), or to submit case studies on sustainability programmes, should contact Kristen Sukalac, Head of IFA's Information and Communications Service, at [ksukalac@fertilizer.org](mailto:ksukalac@fertilizer.org).

## Global Gathering of Scientists Looks at Two Sides of Nitrogen Coin

The 4th International Nitrogen Conference, held during the first week of October in Brazil, paid due attention to regions with too little reactive nitrogen, particularly Sub-Saharan Africa. Economist Jeffrey Sachs and soil scientist Pedro Sanchez, both of Columbia University's Earth Institute, insisted on the urgent need to use more N fertilizer in African countries to improve soil fertility and crop productivity, thus alleviating poverty. This was in stark contrast to previous editions, which had focused on regions (Europe, North America and Asia) where excessive reactive nitrogen is a more common problem.

Some of the main issues addressed during the conference were:

- **Biofuel production and nitrous oxide (N<sub>2</sub>O) emissions:** There were lively discussions on the overall impact of biofuel

production on greenhouse gas balances. In particular, opposing points of view emerge from macro-ecological approaches and agronomic data generated at field level.

- **Animal production and alteration of the N cycle:** There was wide recognition that optimizing animal waste management is the main challenge for the global N community.
- **Indirect impacts of N losses on human health:** Some scientists argue that N losses might increase the prevalence of diseases such as cholera and malaria. However, no empirical basis has yet been demonstrated for these claims and the topic remains highly controversial.
- **N fertilizer use and poverty alleviation:** There is growing consensus that improving



the availability and affordability of fertilizers in Sub-Saharan Africa is vital to reduce poverty there.

For the first time, the International Nitrogen Conference included a full session – coordinated by the International Plant Nutrition Institute (IPNI) – dedicated to the fertilizer industry, namely its initiatives to improve nitrogen use efficiency. In this context, IFA made a presentation on industry's voluntary initiatives to develop and disseminate fertilizer best management practices.

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# FAO Media Release Reaffirms the Importance of Fertilizers to Feed the World

10 December 2007, Rome – “FAO has no reason to believe that organic agriculture can substitute for conventional farming systems in ensuring the world’s food security”, Dr. Jacques Diouf, FAO Director-General, said here today.



Dr. Diouf was commenting on recent press and media reports suggesting that FAO endorses organic agriculture (OA) as the solution to world hunger.

“We should use organic agriculture and promote it,” Dr. Diouf said. “It produces wholesome, nutritious food and represents a growing source of income for developed and developing countries. But you cannot feed six billion people today and nine billion in 2050 without judicious use of chemical fertilizers.”

Organic farming generally bars the use of any chemical inputs. Nearly 31 million hectares, or roughly two percent of the world’s farmland, was farmed organically in 2005, generating sales of some US\$ 24 billion in the EU, US, Canada and Asia in 2006.

In May of this year, FAO hosted an international conference on organic agriculture. One of the papers presented for discussion – not an FAO document – argued that organic agriculture could produce enough food for the current world population.

## Insufficient potential

However, according to FAO, data and models regarding the productivity of organic as opposed to conventional farming show that the potential of organic agriculture is far from large enough to feed the world.

Organically-grown products generally attract higher prices than conventionally grown ones and therefore represent a good source of income for farmers. However, they must meet certain farming and quality standards and require capacity-building, large investments and efficient organization along the production and marketing chains, which puts them beyond the reach of most resource-poor farmers of developing countries.

## Judicious use

Judicious use of chemical inputs, especially fertilizers, could help significantly boost food production in Sub-Saharan Africa, where farmers use less than one tenth of the fertilizer applied by their Asian counterparts, Dr. Diouf said. Much of African soil suffers from constraints such as acidity and lowered fertility and is greatly in need of soil amendments and nutrients.

In its annual World Development Report, the World Bank noted this year, that “low fertilizer use is one of the major constraints on increasing agricultural productivity in Sub-Saharan Africa”.

Malawi, for years a recipient of food aid, has recently boosted its maize production after adopting a policy of providing small-scale farmers with seeds and fertilizers.

“However, chemical inputs must be used with care,” Dr. Diouf said. “You have to choose the right inputs, right amounts, and apply them in the right way and at the right time.”

Higher productivity with lower inputs can be obtained from such systems as Integrated Pest Management (IPM) and Conservation Agriculture (CA), Dr. Diouf noted. IPM can reduce pesticide use by 50 per cent in the case of cotton and vegetable production and up to 100 per cent with rice. CA and no-tillage agriculture reduces labour requirements by doing away with ploughing and can use 30 per cent less fertilizer and 20 per cent less pesticides.

The key elements in feeding the world now and in the future will be increased public and private investments, the right policies and technologies, knowledge and capacity building, grounded in sound ecosystem management. “There is no one solution to the problem of feeding the world’s hungry and poor,” Dr. Diouf concluded.

World leaders, international figures and distinguished researchers and academics will examine how to ensure the world’s future food supply next year when FAO is due to host a High-Level Meeting on “Feeding the World in 2050”.

## IFA Responds

The global fertilizer industry welcomes FAO’s endorsement of the coexistence of different farming systems while stressing the importance of modern farming technologies to feed a growing population with changing dietary preferences.

At the same time IFA regrets the continuing use of the term “conventional agriculture” which perpetuates an outdated image of farmers relying solely on chemical inputs to increase yields.

Today’s farmer combines improved seeds, fertilizers and crop protection products with elements of organic agriculture, “traditional” farming and other management practices in an approach called integrated farming. The key to good management practices is designing the most appropriate response for site-specific needs, drawing on the full range of available technologies and techniques. In this, we strongly support Dr. Diouf’s conclusion that “There is no one solution to the problem of feeding the world’s hungry and poor.”

When applying manufactured inputs, farmers should also strive to apply “as little as possible, but as much as necessary”. The fertilizer industry promotes the use of its products within an integrated plant nutrient management framework that maximizes the recycling of on-farm sources of nutrients. The industry also advocates using the right fertilizer products at the right time and rate in the right place.

Caution should be applied when making generalizations about the potential to reduce the use of inputs in integrated farming. Different crops have widely varying nutrient needs, and the behaviour of each nutrient in the soil also varies. As an example, conservation agriculture will reduce surface erosion and therefore phosphorus losses through run-off. However, phosphorus will accumulate in the soil’s surface layer, where it is not easily available to crops. Highly mobile nitrogen may still need to be replenished in similar quantities, regardless of whether conservation methods are used or not. Conservation agriculture is also facilitated by the use of herbicides. Furthermore, crop protection products safeguard yields from pests and prevent losses during storage. While adopting integrated pest management optimizes the use of these products and eliminates unnecessary applications, arbitrary reductions in pesticide use could undermine the ability to protect yields.

# Is Your Company Prepared for Europe's REACH Legislation?

The European Union's (EU) new legislation on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), which became effective on 1 June 2007, aims to identify chemical risks and hazards of chemicals more systematically and to improve companies' communication of appropriate risk management measures throughout the supply chain. The ultimate goal is to lower the occurrence of occupational diseases and preventable deaths, thus reducing the costs of chemical use to society. **Companies that have not registered their substance by the appropriate deadline will no longer be permitted to manufacture or import that substance into the EU.**

Under the new regime, all companies that manufacture or import one tonne or more of a chemical substance annually must register it in a central database at the European Chemicals Agency (ECHA), regardless of when it was first available in the EU market.

The registration procedure involves submitting a technical dossier containing information on the substance and guidance on safe handling. For quantities over 10 tonnes, companies must also submit a Chemical Safety Report. Authorities will then determine if further testing is necessary. Substances of very high concern are subject to an authorization procedure.

The IFA Technical Committee is exploring the role IFA can play in helping its members to navigate this process. Contact the Committee's Executive Secretary, Ben Muirheid, for more details [bmuirheid@fertilizer.org](mailto:bmuirheid@fertilizer.org).



## Some Useful Facts about REACH

- ECHA will provide REACH guidance and coordinate national helpdesks. EU member states will carry out the evaluation work and on that basis will propose whether to subject substances to harmonized classification, restriction or authorization. Decisions on authorizations and restrictions will be made by the European Commission.
- When companies share data, the data owner will be compensated by the others.
- REACH registration fees will be defined in a Fee Regulation to be published by 1 June 2008.
- Naturally occurring substances such as minerals and ores do not need to be registered **unless they are chemically modified**.
- Polymers are exempted from registration, but their monomers and other components are not.
- Substances manufactured and used inside a closed system are exempted, but intermediates that are separated during the production process must be registered.

### Key Dates to Note

<b>1 June – December 2008</b>	<b>Pre-registration of so-called phase-in substances<sup>1</sup>.</b> Pre-registration allows companies to benefit from staggered registration times. It also makes it possible for companies intending to register the same substance to set up "Substance Information Exchange Forums" (required collaboration to minimize animal testing).
<b>1 December 2010</b>	<b>All substances produced or imported in quantities equal to or exceeding 1000 tonnes/year must be registered.</b>
<b>1 June 2013</b>	<b>All substances produced or imported in quantities equal to or exceeding 100 tonnes/year must be registered.</b>
<b>1 June 2018</b>	<b>All substances produced or imported in quantities equal to or exceeding 1 tonne/year must be registered.</b>

<sup>1</sup>Non-phase-in substances are essentially new substances that have not been notified in accordance with Directive 67/548/EEC. Any substance already notified under the terms of that Directive is automatically in conformity with REACH.

## For More Detailed Information

### European Commission

- [http://ec.europa.eu/enterprise/reach/index\\_en.htm](http://ec.europa.eu/enterprise/reach/index_en.htm)
- <http://ecb.jrc.it/REACH/>
- [http://ec.europa.eu/environment/chemicals/reach/reach\\_intro.htm](http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm)



### European Chemicals Agency

- <http://echa.europa.eu/>



### European Chemical Industry Council's ReachCentrum

- [www.reachcentrum.org](http://www.reachcentrum.org)



Every EU member state is required to set up helpdesks to assist companies fulfill their REACH obligations.

### Steps that EU Manufacturers and Importers Need to Take

Nominate a REACH manager

Consult information sources

Identify the company's obligations under REACH

Comply with REACH requirements



## Engineers Sharpen Skills at Nitrogen Production Technology Workshop



The IFA Technical Committee and IFDC (an International Center for Soil Fertility and Agricultural Development) teamed up again in 2007 to organize a workshop on nitrogen production technologies in Trinidad and Tobago from 5 to 9 November. This is the first time the joint workshop has taken place outside Europe. The previous one was held in Maastricht, The Netherlands, in 2005.

This workshop was a truly global affair, with 39 participants registered from 15 countries. Speakers addressed topics ranging from the economics of the industry, to safety, health and environment (SHE) best practices, to the latest developments in production technology and processes. The classroom environment was complemented by plant visits to Yara Trinidad and PCS Nitrogen, in Trinidad's Point Lisas area, where some of the world's largest ammonia exporters are located.

To promote continual improvement in the sector, each workshop strives to diffuse the best available production technologies. Participants, including many up and coming engineers, learned about cutting-edge technology in the sector from speakers representing leading licensors such as Ammonia/Urea Casale, GPN, Stamicarbon, Snamprogetti, Toyo and Uhde.

Both IFA and The Fertilizer Institute (TFI) provided non-technical presentations, covering such topics as the five-year outlook for fertilizers, climate change and fertilizers, risk management and chemical safety.

The next workshop is scheduled for 2009 in another region. For more information, please contact Ben Muirheid, Executive Secretary of the IFA Technical Committee at [bmuirheid@fertilizer.org](mailto:bmuirheid@fertilizer.org).

## 2008 Technical Symposium to Focus on Clean, Efficient and Sustainable Fertilizer Production



An IFA Technical Symposium is held every two years in a different region. The 2008 Symposium will take place in a particularly dynamic part of the world for the fertilizer industry: Brazil. Given that country's importance on the fertilizer and agricultural scene, the 2008 edition will have the theme of Food, Fuel and Climate Change – Challenges for the Fertilizer Industry.

Climate change has moved to the top of the international agenda, and biofuel production in Brazil, already at a high level, continues to expand steadily. The symposium will open with a special session on these key issues, including presentations by local and international experts. Global biofuel developments and the interlinkages with fertilizers, agriculture and climate will be covered. Second generation bio-ethanol production and its potential will also receive serious consideration.

The special session will provide the context for two and a half days of in-depth technical

presentations, touching on the latest developments in fertilizer production technology and sustainability practices within the industry. Technical site visits will be organized to the Fosfertil nitrogen and phosphate facilities, in Curitiba and Uberaba respectively, and to CVRD's Taquari-Vassouras potash mine and processing facility in the state of Sergipe.

This week-long event is a not-to-be-missed opportunity to obtain the latest technical information from the world's leading experts. It also provides an excellent occasion for participants to renew contacts and develop their global networks. IFA expects over 150 production decision-makers to participate.

The 2008 Technical Symposium will be held at the Hotel Hilton Morumbi in Sao Paulo from 10 to 14 March. For more details, please visit the IFA web site ([www.fertilizer.org](http://www.fertilizer.org)) or contact Ben Muirheid, Executive Secretary of the IFA Technical Committee, [bmuirheid@fertilizer.org](mailto:bmuirheid@fertilizer.org).

*continued from page 1. IFA Council Meeting, Doha, UAE*

### Changing Food Patterns and Biofuels Buoy Fertilizer Markets

The welcoming address was delivered by Fahad Hamad Al-Mahanadi, Board Member of Qatar Petroleum and Managing Director of Qatar Electricity & Water Company, on behalf of His Excellency Abdullah Bin Hamad Al-Attiya, the Deputy Prime Minister and Minister of Energy and Industry of Qatar. Ides de Willebois, Director of the Eastern and Southern Africa Division of the International Fund for Agricultural Development (IFAD), discussed "The Context for Agricultural Development in Eastern and Southern Africa". Finally, Richard Doornbosch, Principal Advisor to the Round Table on Sustainable Development at the Organisation for Economic Co-operation and Development (OECD), gave a thought-provoking report, "Biofuels: Is the Cure Worse than the Disease?".

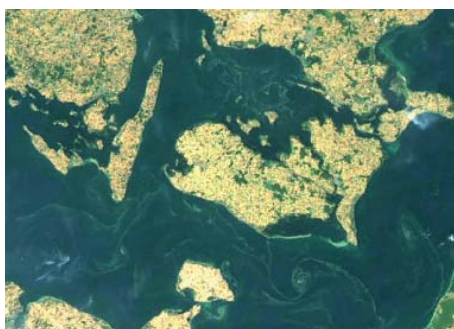
IFA members can download all the presentations from the Doha Enlarged Council Meeting at [www.fertilizer.org](http://www.fertilizer.org). A cd-rom is also available on request (*see order form page 12*).

## Outreach Addresses Full Range of Nitrogen Use Issues

### IFA's Proactive Approach to Improving Nutrient Management Wins Praises and Allies for the Industry

During recent months, IFA has been closely involved in a dialogue with the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) and other intergovernmental stakeholders on reducing the impacts of reactive nitrogen in coastal waters. A two-day brainstorming meeting in June brought together national government delegates, representatives of international bodies and programmes, the International Nitrogen Initiative (INI) and IFA to discuss existing initiatives, challenges and opportunities. This was the first contact that IFA had with many of the participating organizations. The atmosphere was extremely constructive, and a joint effort (called the Global Partnership on Nutrient Management) was created to address nutrient – particularly nitrogen – over-enrichment.

In a related development, the United Nations Industrial Development Organization (UNIDO) convened a meeting in October to determine how international policy makers and agri-business (including the livestock sector) can cooperate to address the negative impacts on large marine ecosystems of nutrient losses from the food chain. IFA presented the fertilizer industry's Fertilizer Best Management Practices Initiative and highlighted the challenges facing wider uptake of such practices.



## IFA Benchmarking: A Key Step on the Road to Profit Maximization

To continue developing its global benchmarks, the IFA Technical Committee will survey the Association's membership in early 2008. These benchmarks will build on historical data gathered in the following areas of industrial performance:

- Energy efficiency and CO<sub>2</sub> emissions during ammonia production
- Safety "lost time injury rate"
- Emissions to land, water and air

Participation by IFA members in such surveys greatly facilitates the ability to develop credible and practical global benchmarks, which can be used by member companies to gauge more effectively industrial performance relative to competitors. Participation can also help companies to identify areas for potential improvement and further investment. Not only does taking part in IFA benchmarking surveys increase awareness of such important issues among production personnel, but it generally leads to higher performance standards, increased efficiencies and productivity and lower costs in the long run. Moreover, the availability of global benchmark data allows IFA accurately and effectively to communicate the fertilizer industry's strong Corporate Social Responsibility record to key international authorities.

We look forward to your participation in the upcoming survey cycle. To submit questions or provide comments, please contact Ben Muirheid, Executive Secretary of the IFA Technical Committee, [bmuirheid@fertilizer.org](mailto:bmuirheid@fertilizer.org).



## IFA Tackles Inconsistent Fertilizer Sampling and Analysis Procedures

Global fertilizer producers and traders face an increasing number of international trade disputes, due to an apparent lack of internationally accepted or standardized methods which can be used to sample and analyze fertilizers across regional markets. Such trade disputes – and the associated inefficiencies and arbitration – incur significant monetary losses by fertilizer companies.

To address this issue proactively, IFA has formed a task force of member company executives from various stakeholder groups to identify action steps and move towards increased harmonization of methods. Currently the task force consists of IFA member representatives from Brazil, China, Europe, India, the Middle East, North Africa, North America and Russia.

Since the task force's initial meeting in January 2007, it has met regularly to compile methods used around the world in a set of priority areas, in order to review and evaluate procedures for their applicability and statistical performance. Once the methods are validated according to acceptable criteria, they will be included in a list of IFA-recommended methods for use in international trade. This non-binding list will be widely disseminated in the fertilizer community (to IFA members and non-members alike) to help guide practices with regard to the sampling and analysis process.

In parallel, the IFA task force is studying interest within the fertilizer community to develop a model contract for use in international fertilizer sales. Once again, this model contract would be non-binding and available to all parties. It would act as a guidance document for international buyers and sellers to help facilitate trade.

If you have any questions or comments on the task force, please contact Ben Muirheid, Executive Secretary of the IFA Technical Committee, [bmuirheid@fertilizer.org](mailto:bmuirheid@fertilizer.org).

## Agriculture Committee to Establish the IFA Africa Forum

At its meeting on 29 November in Doha, Qatar, the IFA Executive Committee approved the proposal developed by the IFA Task Force on Africa to establish an IFA Africa Forum. The Forum is a regional IFA body aimed at representing IFA members with on-the-ground activities in Africa, i.e. with a long-term interest in developing the African fertilizer market.

The Forum's mission is to promote the development of fertilizer use to improve soil fertility, agricultural production and human nutrition, and to alleviate poverty in Africa. In that respect, it will serve as (i) a platform for exchanging views and expertise on key issues among Forum members; (ii) a tool for communicating the interests/positions of Forum members to key interlocutors; (iii) a means for creating greater awareness of the positive role that fertilizers can play in Africa's development; and (iv) a driver for aligning fertilizer consumption in Africa with agronomic recommendations. The Forum will address issues of Pan-African or Sub-Saharan African relevance. It will meet once a year to define its work programme.

More detailed information about the Forum will be circulated to IFA members shortly.



Photo: IFDC

## Fruit and Vegetables Eroding the Dominance of Cereals' Share of Global Fertilizer Use by Crop

The Agriculture Committee has collected and processed information on fertilizer use by crop in 16 large fertilizer-consuming countries (considering the EU-15 as a single entity). Together, these countries represent some 84 per cent of world fertilizer demand. The analysis takes into account 11 crop types: wheat, rice, maize, other coarse grains, soybean, oil palm, other oilseeds, cotton, sugar crops, fruits and vegetables and other crops. Results of the preliminary assessment were presented at the November IFA Enlarged Council Meeting in Doha.

The main conclusion arising from this analysis is that previous assumptions about fertilizer use by crop at the global level tend to overestimate the contribution of cereals and to underestimate applications to fruits and vegetables. Thus, cereals account for only slightly more than half of world fertilizer use, while fruit and vegetables represent as much as 16 per cent of world fertilizer consumption. There are significant differences among the three nutrients. For instance, cereals account for some 55 per cent of world nitrogen fertilizer use and only 40 per cent of world potash consumption.

An article summarizing the main findings of the analysis will be released shortly by the Secretariat. This information will be publicly available on the IFA web site. The assessment will evolve on a step-by-step basis, with progressive improvement of data accuracy and expansion of the dataset to include some additional large fertilizer-consuming countries.

For any questions, comments or contributions regarding the IFA Africa Forum, or the assessment of fertilizer use by crop at the global level, please contact Patrick Heffer, Executive Secretary of the IFA Agriculture Committee, [phaffer@fertilizer.org](mailto:phaffer@fertilizer.org).

## Production and International Trade Committee Publications

In December 2007, following the 33rd IFA Enlarged Council Meeting in Doha, Qatar, the PIT Committee released two reports:

- **Global Fertilizer Supply and Trade: 2007-2008** by Michel Prud'homme, Executive Secretary of the Production and International Trade Committee. The final report and the PowerPoint presentation are restricted to IFA members and are available in pdf format on IFA's web site. Copies are also available on request from the IFA Secretariat.
- **Summary Report – World Agriculture and Fertilizer Demand, Global Fertilizer Supply and Trade, 2007-2008.**

This summary report was prepared by the IFA Secretariat on the basis of the reports presented at the IFA Enlarged Council Meeting. It is available to the general public in English and Chinese.

Statistical reports restricted to IFA members

**Quarterly Production and Trade Statistics: January-September 2007**

- Ammonia
- Urea
- Phosphate rock
- Processed phosphates
- Sulphur

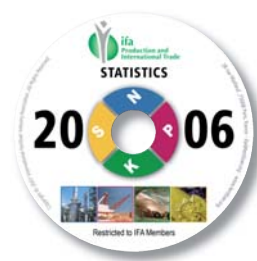
**Survey of Capacities 2007 (Summary Report)**

- Ammonia
- Ammonium Nitrate and Derived Products 2004-2013
- Urea
- Processed phosphates

CD-Rom compiling all the 2006 statistics

Updated ONLINE Production and International Trade Statistics

- Available to the general public by region from 1999 to 2006
- Available to IFA members only by country from 1999 to 2006



**word: Association**

## Food, Fuel and Fertilizers

Anyone who has been reading newspapers in recent months must be aware of the debate raging the environmental credentials of bio-fuels, and whether interest in them threatens food production. We had lively discussions on this topic during the IFA Enlarged Council Meeting in Doha and a few points caught my attention.



*Luc M. Maene  
IFA Director General*

It is indisputable that cereal markets are very tight at the moment. Sustained high demand has driven up prices and eroded global cereal stocks to their lowest levels in two decades. Biofuels have certainly been a factor in the recent past, but the trend is longer term and reflects a simple basic truth: with a growing population that is eating more meat, fruit and vegetables and demanding that farmers also produce energy and other non-food outputs, agricultural production must increase faster than the population. The key questions are: Can it be done? If so, what are the relative roles of sustainable intensification and extensification (bringing new land under the plough)?

The fertilizer industry's view is that it is possible to meet the multiplying needs of

our population, although doing so sustainably will require us to improve agricultural efficiency further. With regard to nutrient management, the efficiency of fertilizer use has risen in developed countries over the past few decades even if still more could be done. Agricultural best management practices are crucial, but improved products (such as enhanced-efficiency fertilizers) are important as well.

Inefficiencies and waste also need to be reduced in other parts of the agri-food chain. For instance, losses due to pre-harvest pests average around 35 per cent (10 to 20 per cent post-harvest). A significant amount of currently cultivated land is producing far below the optimal level. This includes most of the African continent, where land degradation, lack of infrastructure and extremely limited access to modern agricultural technologies and management techniques combine to keep farmers from improving their yields.

The food-fuel debate is potentially dangerous. On the surface, it seems natural that food should always be the priority. However, a number of questions make the difficulties of this position evident. Why is it wrong for poor farmers to earn more by selling bioenergy crops, thus putting themselves in a position to buy a greater amount of more varied food? If food production is somehow considered morally superior to that of non-

food crops, where should the line be drawn? Should the production of some types of food, such as meat or sugar cane, be considered wrong when markets for staples are tight? Who would have the authority to make such judgment calls and to enforce them? Surely, a preferable solution is to work towards sustainable intensification so that all of these emerging needs can be met with affordable, high-quality produce. In that way, societies and the people within them could be free to choose their own preferences.

There is no doubt that the challenges ahead are daunting, but renewed interest in agriculture on the part of policy makers, donors, investors and other stakeholders provides a reason to be hopeful. Sustainable agriculture is a moving target. The context is changing dramatically and rapidly with population and income growth, shifting consumption patterns and market frameworks, rural-urban migration, climate change and other pressures on natural resources. Against this backdrop, it is clear that a globally sustainable system will comprise a mosaic of site-specific solutions that does not a priori exclude any option. Nonetheless, there is little doubt that mineral fertilizers are of central importance, a point reiterated by the Director-General of the Food and Agriculture Organization on 10 December 2007 (*see related article on page 5*).

*continued from page 2*

### Global Gathering of Scientists Looks at Two Sides of Nitrogen Coin

The 4th International Nitrogen Conference gathered some 400 participants from 49 countries. It was the first conference organized under the auspices of the International Nitrogen Initiative (INI). This triennial event allows scientists, policy makers and industry representatives to meet and improve the assessment of the amount and fate of reactive nitrogen in the environment and to discuss possible technical and policy responses to the challenges posed by reactive nitrogen.

The next conference will be held in New Delhi, India in 2010.

## Join us for the 76th IFA Annual Conference

The 2008 IFA Annual Conference will be held in Vienna, Austria from 19 to 21 May.

Look for registration materials in your mailbox – and on IFA's web site – in January.





# Calendar

While every attempt is made to provide accurate information, IFA cannot guarantee the details for non-IFA events. Contact the organizers for confirmation.

## IFA - 2008

10 – 14 March

**IFA Technical Symposium #**  
Sao Paulo, Brazil

19 – 21 May

**76th IFA Annual Conference #**  
Vienna, Austria  
*Registration opens in January 2008*

21 – 24 October

**IFA Production and International Trade Conference #**  
Mumbai, India  
*Registration opens in July 2008*

18 – 20 November

**34th IFA Enlarged Council Meeting #**  
Ho Chi Minh City, Viet Nam  
*Registration opens in July 2008*

16 – 18 December

**IFA Crossroads Asia-Pacific**  
Melbourne, Australia  
*Registration opens in July 2008*

# Restricted to IFA members

## Non-IFA - 2008

20 – 22 January

**BSC – Fertilizer Latin America** Miami, FL, USA  
Fax: +44 20 7903 2432 [conferences@crugroup.com](mailto:conferences@crugroup.com)  
[www.britishsulphurevents.com](http://www.britishsulphurevents.com)

5 – 7 February

**AFA – 4th International Annual Fertilizers Forum & Exhibition**  
Cairo, Egypt  
Fax: +20 2 24173721 [info@afa.com.eg](mailto:info@afa.com.eg) [www.afa.com.eg](http://www.afa.com.eg)

17 – 19 February

**BSC – Phosphates 2008** Paris, France  
Fax: +44 20 7903 2432 [cruevents@crugroup.com](mailto:cruevents@crugroup.com)  
[www.britishsulphurevents.com](http://www.britishsulphurevents.com)

17 – 22 February

**Beneficiation of Phosphates V** Rio de Janeiro, Brazil  
Fax: +1 863 534 7165 [pzhang@mail.usf.edu](mailto:pzhang@mail.usf.edu)  
[www.engconfintl.org/8au.html](http://www.engconfintl.org/8au.html)

4 – 6 March

**FMB – 3rd Americas Conference** Miami, FL, USA  
Fax: +44 20 8979 4573 [fmb@fmb-group.co.uk](mailto:fmb@fmb-group.co.uk) [www.fmb-group.co.uk](http://www.fmb-group.co.uk)

2 – 4 April

**New AG – 6th International Conference & Exhibition**  
New Delhi, India  
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[www.newaginternational.com](http://www.newaginternational.com)

7 – 11 April

**IFDC\* – Strengthening Regional Trade in Agricultural Inputs in Africa: Issues and Options** Lusaka, Zambia

9 – 11 April

**FMB – 5th Asia Fertilizer Conference & Exhibition** Beijing, China  
Fax: +44 20 8979 4573 [fmb@fmb-group.co.uk](mailto:fmb@fmb-group.co.uk) [www.fmb-group.co.uk](http://www.fmb-group.co.uk)

20 – 23 April

**BSC – Nitrogen + Syngas 2008** Moscow, Russia  
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[www.britishsulphurevents.com](http://www.britishsulphurevents.com)

14 – 23 July

**IFDC\* – International Training Program & Study Tour on Fertilizer Production** Muscle Shoals, AL & Tampa/Orlando, FL, USA

20 – 23 July

**9th International Conference on Precision Agriculture (ICPA)**  
Denver, CO, USA  
Fax: +1 970 491 1920 [abstract@icpaonline.org](mailto:abstract@icpaonline.org) [www.icpaonline.org](http://www.icpaonline.org)

11 – 15 August

**IFDC\* – Agro-Input Dealer Development in Africa** Arusha, Tanzania

28 September – 3 October

**2008 ANNA Conference** Kelowna, BC, Canada  
Fax: +1 403 936 5966 [david.hind@orica.com](mailto:david.hind@orica.com)  
[www.members.shaw.ca/david.hind/2008.html](http://www.members.shaw.ca/david.hind/2008.html)

8 – 10 October

**FMB – 2nd Ammonia/Urea Conference & Exhibition** Dubai, UAE  
Fax: +44 20 8979 4573 [fmb@fmb-group.co.uk](mailto:fmb@fmb-group.co.uk) [www.fmb-group.co.uk](http://www.fmb-group.co.uk)

26 – 31 October

**4th International Conference on Silicon in Agriculture**  
KwaZulu-Natal, South Africa  
[jmeyer@netactive.co.za](mailto:jmeyer@netactive.co.za) [www.siliconconference.org.za](http://www.siliconconference.org.za)

\*IFDC – An International Center for Soil Fertility and Agricultural Development  
Fax: +1 256 3817408 [hrd@ifdc.org](mailto:hrd@ifdc.org) [www.ifdc.org](http://www.ifdc.org)

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**information resources**

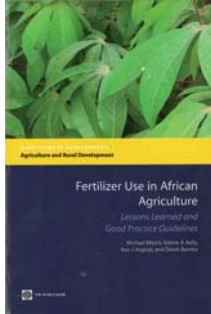
**Fertilizer Use in African Agriculture  
Lessons Learned and Good Practice  
Guidelines**

M. Morris, V.A. Kelly *et al.*,  
The World Bank, Agriculture  
and Rural Development,  
March 2007, 156 pp. Cd-  
rom included. ISBN 0 8213  
6880 X. USD20

This book examines the poli-  
cies and programmes that  
can help African countries  
realize the potential benefits  
of appropriate fertilizer use in agriculture. The cd-rom-  
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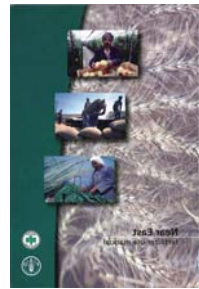
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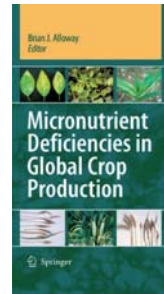
**Micronutrient Deficiencies in Global  
Crop Production**

B. J. Alloway, UK, 2008. 340 pp.  
ISBN 978 1 4020 6859 1

This book is a guide to the require-  
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trients and the causes, occurrences  
and treatment of deficiencies.  
Representative examples of defi-  
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grown throughout the world.

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Springer, Heidelberg, Germany  
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[www.springer.com](http://www.springer.com)



**Near East Fertilizer Use Manual**

FAO, AFA, Rome, Italy, 2006. 160 pp.

Available in English and Arabic.

The manual addresses crop fertilization application for  
the specific agricultural and agronomic conditions of  
the Near East. It provides up-to-date knowledge on  
plant nutrition aspects of the major crops in the Near  
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[www.fertilizer.org](http://www.fertilizer.org)

IFA comprises around 450 mem-  
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al suppliers, regional and national  
associations, research insti-  
tutes, traders and engineering  
companies.

IFA collects, compiles and dissemi-  
nates information on the produc-  
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and acts as a forum for its members  
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IFA also sponsors research related  
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**IFA Request Form  agriculture January 2008**

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- IFA Enlarged Council Meeting proceedings, Doha, UAE, cd-rom *restricted to IFA members*

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