

Best wishes for the New Year from IFA !

Singapore Meeting Marks First Quarter Century of Successful IFA Asia-Pacific Gatherings

Some 300 representatives of 122 companies, based in 40 countries, met in Singapore at the beginning of December for the final IFA Regional Conference for Asia and the Pacific. For the industry the importance of this IFA event, inaugurated a quarter of a century ago, has continued to grow. It is now second only to the IFA Annual Conference in number of participants.

Presentations in December ranged from agricultural policy to fertilizer trade. The workshop on Integrated Plant Nutrient Management (IPNM) and a panel discussion on fertilizer subsidies generated lively and fruitful exchanges of information and views.

IFA wishes to express its appreciation to the members who kindly supported the cocktail reception on 7 December: Yara Asia Pte Ltd, Belarussian Potash Company, Toepfer International-Asia Pte Ltd, Canpotex International Pte Ltd, ICEC Asia Pte and K+S Asia Pacific Pte Ltd.

We are also grateful for the organizational help with the Second Annual IFA Kim Gai Soh Golf Tournament as well as the involvement of all the companies that took part.

The successful 2005 Regional Conference set the stage for the reorientation of this event in 2006 to better reflect the central role of Asia and the Pacific in the



Pakistan, Indonesia and India were represented on the panel discussing fertilizer subsidies, which was moderated by IFA's Director General.

global fertilizer marketplace. Today Asia consumes just over half of all fertilizers used globally. Yet this only accounts for some 40 per cent of all fertilizer production, which means that fertilizer trade is vital to the region's well-being.

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IFA Launches Its Year for Africa

At the Enlarged Council Meeting in Seville, IFA introduced four key themes related to its upcoming Year for Africa. For distribution to a wide public, these themes are presented in the form of a magnetic puzzle and detailed in a short brochure. A sample of these educational tools accompanies this issue of *Fertilizers & Agriculture*, and additional copies can be obtained from the IFA Secretariat.

Briefly, the four themes are:

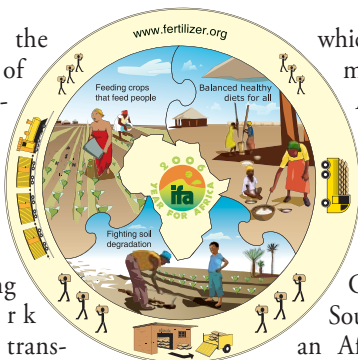
1. Fertilizers help to increase agricultural production and food supplies.
2. Fertilizers help to improve the nutrient content of crops. They can be an important tool for eliminating human micronutrient deficiencies.
3. Fertilizers help farmers to prevent soil degradation by

increasing the amount of organic matter available. They also contribute to water use efficiency.

4. A supporting framework (including transport and affordable credit, appropriate regulations) must exist if fertilizers are to help Africa solve its development problems.

Why did IFA designate 2006 as its Year for Africa?

One reason is that 2006 is the International Year of Deserts and Desertification. Fertilizers have a crucial role to play in combating desertification,



which has an enormous impact on Africa.

Moreover, the 74th IFA Annual Conference will take place in Cape Town, South Africa, and an African Fertilizer Summit will be held in Abuja, Nigeria from 9 to 13 June under the auspices of the New Partnership for Africa's Development (NEPAD).

Although governments have the primary responsibility for establishing the market framework to support sustainable fertilizer use, the fertilizer industry is an indispensable partner in helping Africa to achieve its agricultural and development potential.



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International Student Association Works Towards Tomorrow's Agriculture



*Fertilizers & Agriculture Interviews:
Martin Nielsen and Mette Hessel, IAAS Denmark*

What is IAAS?

The International Association of Students in Agricultural and Related Sciences (IAAS) is the world's leading agricultural student association and one of the largest student organizations of its type. Founded in 1957, its members study, major in and carry out research in agricultural and related areas (e.g. environmental sciences, biotechnology, food sciences, agricultural economics, forestry or landscape architecture). Local committees cover some 90 universities in about 50 countries.

The purpose of IAAS, as set out in its mission statement, is "to promote the exchange of experience, knowledge and ideas and to improve mutual understanding in the field of agricultural and related sciences all over the world." Activities organized by IAAS include seminars, conferences, international exchange programmes, small-scale development projects, international meetings and exchange weeks. Through IAAS, agricultural students meet, create networks, experience new mindsets and cultures, see new places and learn about all aspects of agriculture, together with their future colleagues from other countries.

What is the geographical composition of your membership and how does that affect the association's outlook?

IAAS has members worldwide. The majority come from Europe, Africa, North America and Asia. The association has a unique opportunity to function as a platform where

Participants mingle at the 2005 World Congress, jointly hosted by Togo and Ghana.



different aspects of agriculture relevant to food production all over the world can be studied. Besides the scientific topics which we have in common as university students, we use the association to provide education in association democracy and other skills (e.g. leadership, project management and presentation) that will be important in our future careers. This transforms our mission statement into reality and ensures cultural understanding among all members regardless of race, gender or religion.

How can students, policy makers and agribusiness work together more closely to achieve sustainable agriculture in every sense of the word "sustainable"?

There is a need to create a better network linking universities and society. This is of particular importance in the case of education, which needs to be directed more towards industry to ensure higher quality and greater relevance to the situations that companies deal with in their day-to-day activities. Universities in many countries function as closed governmental institutions that have contact only with politicians. This often means that the education received is not up-to-date. More often, it results in graduates of lower quality. When we talk about sustainability and the basic meaning of the word "sustainable", we mean society's commitment to achieve a common goal. From society's point of view, the agricultural

sector has a special position as food producer and thus as the provider of what is essential to sustain life. Politicians have always been interested in agriculture as a way to ensure sufficient food production. It is clear that current agricultural policies are not



IAAS focused on the needs of developing countries at its 2005 Congress. The opening session of the Ghana segment is shown here.

sustainable for the world as a whole. Education and community involvement by stakeholders in agriculture are important. Seminars or workshops that bring all the stakeholders together are of the utmost importance to successfully achieving the goal of an agricultural sector that is sustainable from the smallest producer to the consumer. Summits, conventions and meetings that involve only one of these parties may solve some problems, but they could also create others. Therefore, they will not achieve the final goals.

How can more top-level people be attracted to agriculture and related sciences?

In most developed parts of the world, agriculture has an image problem that has worsened since the first environmental movements came into existence. A major task for all stakeholders is to improve this image and show all sides of agriculture. In order to be perceived as more modern, many agricultural universities, mainly in Europe, have downplayed or eliminated the word "agriculture" in their names. These changes might attract more people to these institutions, but it ignores the fundamental issue and encourages students to enrol with the wrong educational goals.

We need to emphasize that agriculture is fundamental to our existence. As was once seen written on the back of a shirt from an IAAS member country: "Whether you eat, drink or dress - you depend on agriculture!!!" This is the message we need to communicate to make people aware of agriculture and its importance to the world.

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what's working in Africa

Developing Rural Input Markets: Selling Ag Inputs and Advice Is Profitable, Even at Village Level

Africa is the only world region in which, despite advances in agricultural technologies, per capita food production continues to decline. One of the fundamental reasons is low soil fertility. Africa's soils are mostly of poor quality to begin with. Years of farming to feed a growing population without nutrient replenishment has further reduced fertility. Average fertilizer use in most of Sub-Saharan Africa is around 8 kg per hectare. It is estimated that Africa's soils lose nutrients worth four billion US dollars every year. This is roughly equivalent to the total GDP for the Republic of Congo, Madagascar, Chad or Benin.

Since fertilizers are bulky and heavy, transport costs are high where infrastructure is underdeveloped. Limited effective demand also drives up per unit costs. Thus a chicken-and-egg situation is created. African farmers desperately need access to fertilizers to revitalize soil fertility, but they can rarely afford to buy them. The only way to raise incomes enough to pay for fertilizers is to increase their harvest, which is impossible without access to crop nutrients.

How can this vicious circle be broken? IFA will publish a series of articles throughout its Year for Africa called "What's Working in Africa" to highlight successful projects and draw lessons from them. The article below is the first in the series.

Four years ago Janet Matemba, a wholesale/retail grocer in rural, land-locked Malawi, doubted that selling farm inputs would be a good business move. After she paid to attend a training course on basic business and product technical management, however, she decided to diversify her business in the Lumbadzi Trading Centre about 20 km north of the capital city of Lilongwe. She was encouraged by a credit guarantee facility that would help repay farm input supply companies if the experiment failed.

After just three years as an agri-input retailer, Ms Matemba's sales have reached 200,000 US dollars per year – in a poor country where per capita annual income is under 600 dollars.

The training Ms Matemba received is part of a programme put in place by the Citizens Network for Foreign Affairs (CNFA) and its Rural Agricultural Input Supply Expansion (RAISE) project, with funding from the Rockefeller Foundation. The programme's purpose is to break the vicious circle in Malawi. Ms Matemba quickly learned to manage her working capital, market farm inputs, keep basic records and maintain good commercial relationships with input supply companies. Upon completing the course, she became a certified "agrodealer".

CNFA then linked her with several input supply companies, using the Rockefeller



A local farmer rests with the fertilizer he has just bought from Janet Matemba.

Foundation-supported credit guarantee. Because wholesale quantities were too large to be purchased by individual small farmers, Ms Matemba repackaged the 50 kg bags of fertilizer and maize seeds into smaller ones of 1, 2, 5 and 10 kg. In conformity with ethical and sound business practices, she labelled the new packages and ensured that the product met each firm's quality requirements.

These innovations were successful. Farmers from her village and the surrounding area could now obtain farm inputs in affordable sizes. During Ms Matemba's first year as an agrodealer, sales reached 45,000 dollars. Encouraged by this initial success, she converted her retail grocery shop

into a farm input warehouse and dedicated herself fully to the ag retail business. Sales had quadrupled just two years later. The recent purchase of two trucks has made it possible to procure larger quantities of farm inputs, to lower transport costs and to sell inputs in more distant locations.

Besides providing an economic lifeline and an inspiring model of entrepreneurial success, Ms. Matemba has become the key source of agricultural extension for her community. Major seed, fertilizer and crop protection companies work directly with her when they demonstrate new technologies.

Local farmers, armed with modern farm technology and reliable information on how to use it, can grow more food. The village has been transformed, and well-fed children now attend school regularly.

The Wider Context Shows that the Model Works

Agrodealer shops are an effective way to reach millions of farmers across Africa, with powerful follow-on effects like those in Ms. Matemba's village. In Malawi, where the CNFA/Rural Market Development Trust of Malawi (RUMARK) project started in 2001, 322 agrodealers have been trained and certified. A recent survey showed that the majority of the country's farmers now buy their inputs from these agrodealers. As the number of dealers has grown, the distances farmers travel to obtain inputs have decreased dramatically in several districts. Agrodealers have begun to employ permanent sales staff as well as casual labour to help with loading and unloading, giving an additional boost to local economies.

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Successful entrepreneur Janet Matemba displays her wares.



from principle to practice

This article is part of a series that explores how IFA members integrate concepts such as sustainable development into their business strategy and daily activities.

Yara and its Employees Take their Stewardship Commitment to African Villages

Yara is one of the world's largest suppliers of plant nutrients in the form of mineral fertilizers, with sales in more than 120 countries. Founded a century ago, it was part of Norsk Hydro until March 2004, when it was listed on the Oslo Stock Exchange as Yara International ASA.

The goal of the company's product stewardship programme is to ensure that yields (crop yield and productivity of the labour and money invested) are maximized while environmental impacts are minimized. To achieve this goal, Yara's stewardship covers the whole life cycle from raw materials through production, handling and storage to correct application at farm level. In Africa, where few or no crop nutrients are returned to the soil following harvest, this means encouraging more fertilizer use to improve soil fertility and to reduce hunger and poverty.

In 2005 the company created an annual Yara Prize, which recognizes contributions made to reduce hunger and poverty based on criteria related to African food systems, African food security and African sustainable agriculture.

Yara, which has 20 years of on-the-ground experience in Africa, was the first private sector enterprise to support the Mil-

lennium Villages Project, based at the Earth Institute of Columbia University in New York.

This project seeks to bring about the African Green Revolution called for by UN Secretary-General Kofi Annan in 2004 by implementing the recommendations of the UN Millennium Project task forces at grassroots level.

The Millennium Villages Project is a new bottom-up approach designed to lift developing country villages out of the poverty trap. Earth Institute scientists and development experts in agriculture, nutrition and health, economics, energy, water, environment and information technology are working with local communities and governments to apply a proven holistic package of interventions to improve health and education, make farming more productive, and increase local economic activity by relying on community-based work committees.

Yara has funded interventions in the first Millennium Village Project at Bar-Sauri in western Kenya. A commitment of 200,000 US dollars per year over three years includes employee co-sponsorship: 280 Norwegian-based Yara employees signed up last year to co-sponsor the Bar-Sauri project, which is being carried out in a cluster of ten villages. Of the area covered, 60 per cent is agricultural land with low fertility.

One of the Yara employee co-sponsors who has visited Bar-Sauri in person describes the project as "not only providing money, but the means and encouragement for local people to take the future into their own hands". The company is now ready to extend its support to another Millennium Village Project at Mwandama in Malawi.

Support from Yara and its employees includes a school nutrition programme at the Bar-Sauri Primary School. All of the children who attend the school are covered by this programme, which daily provides nursery children and classes one to three

Millennium Villages Coordinator P. Mutuo (facing the camera) gives Yara employees a tour of the school.



The school food programme has helped these children improve their academic performance.

with porridge and fruit, and classes four to eight with a mixture of maize and beans, fruit and vegetables. Largely because of the school nutrition programme, the Bar-Sauri Primary School, which ranked 68th in Siaya District in 2000, rose to second place in 2003. Pupils are obtaining ever-better exam results, and increasing numbers of them are being offered places in National High Schools every year. Another Yara employee co-sponsor who has visited Bar-Sauri calls the nutrition programme "an important building block to ensure a real future for the community".

Local farms are harvesting rainwater and using new agricultural techniques and fertilizers provided by the project to improve soil fertility and double maize harvests. Out of the surplus, 10 per cent is repaid as a "tax" and becomes school lunches. The village also has a new community centre and clinic.

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Bar-Sauri farmers receive fertilizers.



Built by local residents, the new community centre offers free health care to 5000 villagers.

Cows with Norwegian Names "Moove" African Children towards Better Nutrition

Soon after Head Teacher Anne M. Omolo arrived at the Bar-Sauri Primary School in 1999, she initiated a nutrition programme. Shocked by the children's low performance, as well as the poor condition of the school buildings and the general apathy, Ms Omolo organized parents to repaint the buildings and to bring food to the children in the highest grade. Those who could contribute did so. Food was shared among all of the children, about one-third of whom have lost one or both parents due to HIV/AIDS. More than 40 per cent of the school-children have malaria. As exam results improved, more parents wanted their children to have school lunches, and more classes entered the programme.

When the UN Millennium Task Force on Hunger visited the school on a tour of hunger hotspots, Ms Omolo asked for help to buy a cow. Surprised by her request, no one on the task force responded immediately. However, one member, a retired Yara agronomist and Africa expert named Lars Wiersholm, later began to collect money from everyone he met. The last donor was Cecilie Willoch, daughter of former Norwegian Prime Minister Kåre Willoch, in whose honour the cow was named.

When Cecilie the cow eventually stopped giving milk, Mr Wiersholm received a message that another would be welcome. He shared this information with Ingegerd Rafn, who had the idea to involve Yara employees. How-



ever, since this was in the midst of Yara's split from Norsk Hydro, the timing was not ideal. Instead, Ms Rafn decided to buy a cow herself - on the condition that it should be named after her daughter Julie.

In the spring of 2004 Julie the cow gave birth to a male calf. The villagers named him Lars. The small herd has since been joined by Liv, donated by Mr Wiersholm's sister, and two new calves. Lars was sold in order to buy medicine to treat Cecilie's udder infection. He now spends his time inseminating local cows in the "time honoured way" no longer practised in developed countries.

The cows still live at the school, but they are not part of the Millennium Village Project lunch programme, which focuses on a traditional diet based on maize and beans plus fruit and covers all 500 children. It would require a large number of cows to provide every child with half a litre of milk per day. Keeping a herd that size in a schoolyard would not be sustainable, especially considering the amount of fodder and the staggering amount of water needed. For the moment, the three cows produce just enough milk for the kindergarten children's porridge.

Donated by Norwegian citizens, these cows improve the nutrition of young children in Bar-Sauri.



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What's Working in Africa

Within two seasons, credit guarantees (covering 50 per cent of the risk of default) stimulated sales of nearly a million dollars.

An even larger volume of seeds, fertilizers and crop protection products was actually sold, as many dealers are now able to supply local farmers without relying on the credit guarantee. Certified agrodealers sold fertilizers worth 125,000 dollars in April 2003 and 676,000 dollars a year later, amounting to an annual growth rate of 441 per cent. The default rate on credit guarantees has been less than one per cent.

In Malawi every dollar of credit guaranteed to farm input supply companies translated into fertilizers and hybrid maize seeds worth 16 dollars being supplied to rural areas.

Lessons for Success from the Agrodealer Model

Lessons to be drawn from the success of this model include:

- The use of modern farm inputs can be expanded across rural Africa rapidly by building rural input supply systems, stimulating demand, packaging inputs in small quantities and using credit guarantees to link input supply companies and networks of agrodealers.
- Credit guarantees' good return on investment benefits companies selling farm inputs, agrodealers, farmers and other actors in the local economy, as well as national governments.
- Scaling up credit guarantees to national level will help to rapidly expand the flow of farm inputs into rural areas.
- Adjustments to traditional ways of doing business can accelerate the success of local ag retailers. Agricultural inputs pre-packaged in smaller quantities would allow retailers to better meet the needs of local farmers (while avoiding the risk of adulteration during repackaging).
- Subsidies and other programmes that support wider access to inputs should be designed to support rural entrepreneurs. Instead of free product distribution, for example, the use of vouchers supports both farmers and agrodealers, offering a more sustainable practice in the long term.
- Public/private partnerships for regional procurement and distribution centres could further accelerate rural development by increasing economies of scale and market penetration.
- Entrepreneurial success should be bolstered by the development of transport infrastructure, information channels and appropriate regulation. ●

Governments Agree to Talk about Climate Change Mitigation after 2012



Photo: S. Wood

Panellists at the IFA/CFI side event, from left to right: Gilles Payette (Yara), Don Smith (McGill University), Craig Rickard (Agrium), Doug McKell (SCCC) and Kristen Sukalac (IFA)

At the most recent round of international climate change negotiations in Montreal in December, governments agreed to begin formal, non-binding discussions on how to mitigate climate change after 2012 – the year the Kyoto Protocol expires. This agreement, which may seem modest, nevertheless exceeded the most optimistic expectations of the majority of participants and observers.

The nature of countries' participation in climate change instruments varies. Several sets of talks will therefore take place in parallel. One set will involve only countries that have ratified the Protocol. In more inclusive discussions, a central role will probably be given to technology development and diffusion, an approach strongly favoured by Australia and the United States (neither of which intends to ratify the Protocol). To prevent distortions in economic competitiveness, these countries argue that only an agreement that includes commitments from fast-developing countries such as Brazil, China and India can be effective.

It remains to be seen how the new Asia-Pacific Partnership on Clean Development and Climate, with its emphasis on technology “development, diffusion, deployment and transfer”, will interact with United Nations activities aimed at achieving greenhouse gas emission reductions and promoting emissions trading. The Asia-Pacific Partnership countries are Australia, China, India, Japan, the Republic of Korea and the United States.

The side events at Montreal were considered exemplary, in that they drew attention to a groundswell of initiatives at sub-national levels that often go beyond national governments' official programmes. The side events also stressed the importance of creating a predictable framework for action after 2012.

Side events may be organized by any party or official observer. They often function as

laboratories for new ideas, or provide an opportunity to highlight existing good practices that may or may not be undertaken within official frameworks. The numerous presentations on adapting to climate change indicated that a

more constructive relationship is emerging between those whose main concern is responding to climate change and those for whom development is the most important consideration.

IFA and the Canadian Fertilizer Institute (CFI) jointly organized a side event on the theme “Knowledge Transfer to Reduce Greenhouse Gas Emissions: Lessons from the Fertilizer Industry”. A key message was that the fertilizer industry's average energy use and carbon dioxide emissions per tonne of ammonia produced have declined significantly through the development and diffusion of improved production technology. Based on historical data and IFA's first energy benchmarking exercise for ammonia production, Kristen Sukalac of the IFA Secretariat presented the advances made thus far and explained that further cuts are possible through the generalization of existing technology and management practices.

In addition, Craig Rickard of Agrium talked about the contributions of early adopters of greenhouse gas mitigation technologies and the potential of enhanced efficiency fertilizers to reduce downstream emissions associated with fertilizer use. Don Smith of McGill University and Doug McKell of the Soil Conservation Council of Canada (SCCC) addressed the challenges for farmers, who have a dual role: helping to mitigate agricultural emissions while adapting agricultural practices to the effects of climate change. Gilles Payette of Yara Canada delivered introductory remarks and served as moderator.

All these presentations can be downloaded from the web site of the United Nations Framework Convention for Climate Change (http://regserver.unfccc.int/seors/reports/events_list.html), where the side events are listed in chronological order. The IFA/CFI side event took place at 7:30 pm on 6 December 2005. ●

Symposium Reflects Technical Committee's New SHE Orientation

Innovation and core technologies for sustainable growth will be the focus of the 2006 IFA Technical Symposium, to be held in Vilnius, Lithuania, from 25 to 28 April. Technical developments in fertilizer production that contribute to greater efficiency and environmental stewardship will be emphasized. Increasing attention is being paid to these issues by IFA member companies.

At the high-level opening session on global trends, fertilizer industry CEOs will be joined by senior administrators from the United Nations Environment Programme (UNEP) Division of Technology, Industry and Economics and an occupational safety and health organization.

Other plenary sessions will be dedicated to Technologies for Sustainable Growth. During the bulk of the programme, participants can choose between parallel sessions on Safety, Health and Environment (SHE), or on Production Technologies.

This event demonstrates that the Technical Committee has chosen a new path. When it began, the Committee concentrated on perfecting basic production technologies. Subsequently, it was mainly concerned with technology transfer to manufacturers in developing countries. The latest orientation, which became clear when the Committee's leaders reviewed its 2005 work plan, should help the global industry to modernize and to address policy and regulatory issues associated with fertilizer production.

Complete information about the Technical Symposium, including how to register online, is available on the IFA web site. ●



IFA Agriculture Conference Targets Sustainable Intensification



With the world population expected to peak at around 9 billion some time in the next 50 years, demand for food, feed, fibre and bioenergy will continue to grow at a brisk pace. Initiatives to eliminate poverty will further stimulate this demand. In the case of bioenergy, demand will be driven not only by pressures related to population growth and poverty elimination, but also by concern about the economic and environmental impacts of using other energy sources, particularly fossil fuels.

Nevertheless, the amount of arable land is limited and there is little prospect that the total area under cultivation can be increased significantly. In the words of *The Economist*, meeting the future demand for food, feed, fibre and bioenergy will require “either better yields or [loss of] rainforest – which is why fertilizers, pesticides and transgenes are the best possible protectors of the planet.” But to ensure that fertilizers, pesticides and genetically modified organisms deliver maximum benefits with a minimum of unwanted effects, good management practices are essential.

Efficient nutrient management can only be achieved within an integrated framework. In this context, the 2006 IFA Agriculture Conference in Kunming, China, will include several issues that are traditionally beyond the scope of plant nutrition and soil science. The theme of the conference, which begins with an International Workshop on Micronutrients on 27 February, is “Optimizing Resource Use Efficiency for Sustainable Intensification of Agriculture”. During the core programme (28 February-1 March), speakers will address topics including land-use change, interactions between water and nutrients, knowledge-sharing, leveraging technology to improve management, and making better human nutrition an explicit objective of agricultural practices.

On 2 March, the last day of the conference, participants will be invited to choose between visits to a phosphate mine and factory or to flower production facilities and a flower market. The China National Chemical Construction Corporation (CNCCC), the co-organizer of the IFA Agriculture Conference, has assisted greatly with arrangements for these field trips and the conference itself.

To foster interaction with representatives of IFA member companies, the conference is open to non-members from organizations whose work is related to the use of fertilizers in ways that are consistent with sustainable intensification. For full programme details and registration information, visit the IFA web site. ●

Agricultural Updates in Brief

- IFA is cooperating with the Brussels-based International Zinc Association (IZA) to jointly organize **Zinc Crops 2007**, an international scientific conference. The conference will be supported by Sabanci University in Istanbul. It is currently scheduled to take place in Turkey just after the 2007 IFA Annual Conference.

- The Secretariat has finalized a **discussion paper** on the fertilizer industry's potential contribution to **nutrition security**. The paper highlights related challenges and opportunities for the industry. In particular, there is a very real possibility to improve significantly the nutritional status of millions of people through targeted fertilization. Such an achievement would be likely to enhance the public image of fertilizers.

- At its meeting in Seville, the Strategic Advisory Team of the Agriculture Committee recommended a **partnership with HarvestPlus**, the crop bio-fortification programme of the Consultative Group on International Agricultural Research (CGIAR). The HarvestPlus programme, which is especially concerned with micronutrient deficiencies, approached IFA because of the Association's interest in increasing the industry's contribution to nutrition security.

The Strategic Advisory Team also decided to focus on issues related to **reactive nitrogen in the environment, good agricultural practices** and **improving fertilizer demand forecasts**, which will include assessing the impact of bioenergy on fertilizer demand.

- IFA is sponsoring a doctoral project that should contribute to **better understanding of fertilizer demand prospects in China** and the forces affecting these prospects.

- **IFA supported** the organization of the International Fertiliser Society (IFS) **Annual Conference and the 2005 Dahlia Greidinger Symposium**, held in Cambridge, United Kingdom, in mid-December. This event, which drew some 130 participants, looked at challenges and prospects for efficient crop nutrition. Presentations covered soil science, pertinent genetics, application methods and environmental issues related to crop nutrition.

The conference was co-organized with the Grand Water Research Institute of the Israel Institute of Technology (Technion). It was also supported by the European Fertilizer Manufacturers Association (EFMA).

For more information about the Conference and Symposium, and about IFS, see www.fertiliser-society.org.

Crop Nutrition Award Applications Due 31 January 2006

Applications for the 2006 IFA International Crop Nutrition Award must be submitted to an IFA member by **31 January 2006**, and members are kindly reminded to forward these nominations to the IFA Secretariat by the closing date of **20 February**. This year's award is destined for a researcher from an international agricultural research centre, an industrialized country or a country with an economy in transition. Members are urged to nominate qualified senior crop or soil scientists as the quality of applications reflects on the image of the award, the organization and the fertilizer industry as a whole.

Fertilizer CEOs Turn Out in Force to Consider the Near Future

Attendance was strong at the 31st IFA Enlarged Council Meeting on 14-17 November in Seville, Spain. Some 100 CEOs and other senior executives heard reports by IFA Vice Presidents on developments in all of the world regions. The IFA Secretariat also provided short-term outlooks on fertilizer supply, demand and trade.

Lively debate followed the opening keynote speeches by Kenneth Cassman (University of Nebraska) on research challenges facing the industry and by Dolf Gielen (International Energy Agency) on links between bioenergy development, climate change and fertilizer use. In a video address shown during the Opening Session, the President of Nigeria, Olusegun Obasanjo, invited senior executives from the industry to attend the June 2006 Africa Fertilizer Summit. Organized under the aegis of the New Partnership for Africa's Development

(NEPAD), an offshoot of the African Union, the summit will be held in the Nigerian capital city of Abuja.

IFA is particularly grateful to host company Fertiberia for its hospitality to participants during their visit to the "Los Alburejos" estate on the first day of the meeting and on the occasion of the evening reception on 16 November. While at "Los Alburejos", delegates learned about the tradition of fighting bulls on horseback, which is the origin of now world-famous Spanish equestrian prowess.

The Enlarged Council Meeting was immediately followed by a coordination meeting of representatives from IFA's member trade associations and research institutes. Participants exchanged information and discussed, among other things, climate



Representatives of fertilizer research institutes and fertilizer industry associations met at the end of the Council Meeting.

Photo: K. Sukalac

change, ways to increase fertilizer use efficiency and prospects for a global approach to product stewardship. Several IFA working groups convened informally on the fringes of the Council Meeting.

All the presentations from the Enlarged Council Meeting can be downloaded by IFA members from the Association's web site. Organizations that would like information about becoming IFA members should consult the web site and, for further information, contact cboutaric@fertilizer.org. ●

Latest Fertilizer Market Information Available from IFA Secretariat

Since the previous issue of *Fertilizers & Agriculture*, the IFA Secretariat has published a number of documents presenting information on the state of the fertilizer market and future prospects. Questions concerning any of these documents may be addressed to the staff of the appropriate IFA Committee, as indicated in brackets:

PIT = Production and International Trade Committee

AG = Agriculture Committee

Except where indicated, access to these documents is restricted to IFA members. Organizations interested in becoming IFA members are asked to consult the Association's web site and, for further information, to write to cboutaric@fertilizer.org.

Please note that the online production and international trade statistics for members were updated on 22 November 2005.

Release of the annual IFADATA series of historical production and consumption statistics has been delayed due to circumstances beyond our control. This information will be made available as soon as possible.

- **Quarterly Statistics: January-September 2005:** Ammonia, Urea, Phosphate Rock, Processed Phosphates and Sulphur (PIT);
- **2004 Annual Processed Phosphates Statistics using a product tonne basis** (available only by e-mail) (PIT);
- **Cd-rom** compilation of the **2004 PIT Annual Statistics** (PIT);
- Summary Report - **World Agriculture and Fertilizer Demand, Global Fertilizer Supply and Trade. 2005-2006** (available to the general public) (AG and PIT);
- Reports by IFA's Regional Vice Presidents at the 31st IFA Enlarged Council Meeting;
- **Research Frontiers in Plant Nutrition and Nutrient Management to Ensure Long-Term Viability of the Fertilizer Industry**, keynote speech by Kenneth Cassman (University of Nebraska) at the 31st IFA Enlarged Council Meeting;
- **Bioenergy: An Emerging Market for the Fertilizer Industry?**, keynote speech by Dolf Gielen (International Energy Agency) at the 31st IFA Enlarged Council Meeting;
- **Short-Term Prospects for World Agriculture and Fertilizer Demand: 2004/05-2005/06** (AG);
- **Fertilizer Consumption 2004/05-2005/06: Country Reports** (AG);
- **Global Fertilizer Supply and Trade 2005-2006** (PIT);
- Presentations from the 2005 IFA Regional Conference for Asia and the Pacific (AG).

In addition to the IFA documents listed above, a "Summary Outlook for Sulphur Supply & Demand 2003-2010" was prepared by the Fertecon Research Centre. It is based on the comprehensive report distributed at the Sulphur Working Party Meeting during the IFA Production and International Trade Conference.

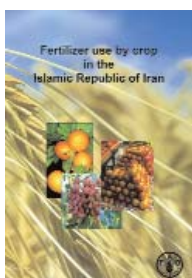
Information resources

FAO Fertilizer Use by Crop series

Fertilizer Use by Crop in the Islamic Republic of Iran

FAO, 1st edition, Rome, Italy, 2005. 63 pp.

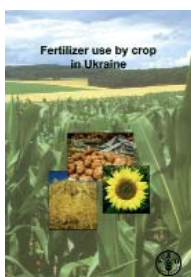
Low rainfall and high temperatures in Iran mean that over half its cultivated land is irrigated. Water availability and salinity are major constraints. Iran has long been a major importer of wheat. Yields are low by world standards. The intensification of production, through greater efficiency of fertilization and irrigation, is required to achieve a permanent reduction in the country's dependence on wheat imports.



Fertilizer Use by Crop in Ukraine

FAO, 1st edition, Rome, Italy, 2005. 56 pp.

Ukraine has large areas of rich, black soils that formerly made the country a major world supplier of cereals. Following independence in 1991, agricultural production declined sharply as a result of a financial crisis in the agricultural sector. Since 1999 there have been signs of a gradual recovery. State support of agriculture includes intervention in pricing, subsidization and supply of fertilizers for the domestic market and in the provision of agricultural services.



Some copies of these two publications are available from IFA (see order form page 12).

Current World Fertilizer Trends and Outlook to 2009/10

FAO, Rome, Italy, 2005. 44 pp.
Available in English, French and Spanish.

Contact

FAO Sales and Marketing Group, Rome, Italy
Fax: +39 06 57053360
publications-sales@fao.org www.fao.org

The publications can be downloaded from FAO's AGL online database at www.fao.org/ag/agl/oldocs.jsp

Some new titles at the International Fertiliser Society



Foliar Urea Fertilisation and the Management of Yield and Quality in Wheat

M.J. Gooding, IFS, Proceedings No. 573, York, UK, 2005. 24 pp.

Fertigation Frequency and Nutrient Uptake by Plants: Benefits and Constraints

A. Silber, IFS, Proceedings No. 571, York, UK, December 2005. 36 pp.

Sustainable Soil and Nutrient Management: EU Environmental Policy Aspects

M. Hamell, IFS, Proceedings No. 563, York, UK, December 2005. 24 pp.

Heavy Metals in Fertilisers: Their Effect on Soil and Plant Health

J.J. Mortvedt, IFS, Proceedings No. 575, York, UK, December 2005. 24 pp.

Contact

The International Fertiliser Society (IFS), York, UK
Fax: +44 1904 492700
secretary@fertiliser-society.org
To view the whole list of proceedings:
www.fertiliser-society.org

Phosphorus in Agriculture and in Relation to Water Quality

A.E. Johnston, C.J. Dawson, AIC, UK, November 2005. 72 pp.

Contact

Agricultural Industries Confederation (AIC), Peterborough, UK
Tel: +44 1733 385272
jane.salter@agindustries.org.uk
www.fma.org.uk



Items are included on this page as a matter of information.

Inclusion does not constitute an endorsement by IFA.

Fertilizer Dealer Handbook: Products, Storage and Handling

D. Rutland, J. Polo, IFDC, Muscle Shoals, AL, USA, October 2005. 37 pp.

The handbook contains information on various types of fertilizers, their properties, their use, labels, bags, handling and storage.



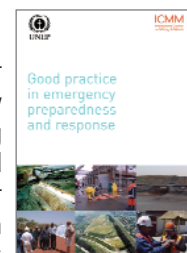
Contact

IFDC, Muscle Shoals, AL, USA
general@ifdc.org
www.ifdc.org

Good Practice in Emergency Preparedness and Response

ICMM, UNEP, September 2005. 93 pp

Key requirements for more effective emergency planning in the mining sector are highlighted and particularly the need for better communication with local communities about roles and responsibilities in the event of an incident. Case studies are included.

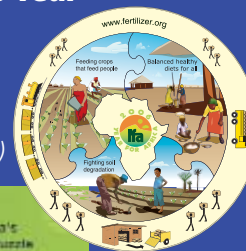


Contact

International Council on Mining and Metals (ICMM), London, UK
Victoria.Howse@icmm.com
The publication can be downloaded at
www.icmm.com/library_pub_detail.php?rcd=184

Solving Africa's Development Puzzle from the Ground Up 2006 - IFA's Year for Africa

IFA, November 2005. Booklet, 6 pp. Magnets. (see cover page)



Copies are available from IFA, see order form page 12.



word: Association

Solving the Puzzle of African Development

When they sit down to solve a jigsaw puzzle, most people begin by separating the pieces that have straight edges from the irregular inner pieces. Once the frame is in place, they can work inwards, matching colours and designs.



*Luc M. Maene
IFA Director General*

Economic development is not as easy to sort out. In the 1960s, when the Green Revolution was launched, we optimistically believed that hunger would be eradicated by modern agricultural technologies. This strategy was largely successful in many parts of the world. However, there are places where the Green Revolution did not take root, including most of Africa. Moreover, the Green Revolution has had some unintended consequences that should be addressed. Clearly an updated, more nuanced approach is needed if we are to eradicate hunger.

The first question that needs to be asked is: Where do we begin? That is, where are the straight edges? In retrospect we can see that providing fertilizers, high-yielding seeds and crop protection products was not in reality the starting point. These tools were only successfully deployed where enabling factors already existed. One of the most important of those is transport infrastructure: Asia's agricultural sector was fairly well served by transport when the Green Revolution was launched, whereas inadequate infrastructure is still one of the main obstacles to agricultural development in Africa today.

Supported by an enabling framework, fertilizers can help to address a number of Africa's problems:

- By contributing to greater soil fertility, fertilizers help farmers produce more food, feed, fibre and bioenergy per unit of land and per worker;
- Targeted fertilization can help increase the content of some of the micronutrients that are essential for optimal human health in food crops;

- By making robust crop cover possible, fertilizers help protect fragile soils from erosion. Higher yields and more plentiful crop residues gradually increase the organic matter in soils, so that they are better able to retain moisture.

Africa is the only continent where per capita food production continues to decline. Its soils are too poor to meet the needs of its rapidly growing population. Nutrients worth four billion US dollars are lost every year through harvest, erosion and leaching.

Ideally, all sources of nutrients are combined to improve soil fertility. Farmers start with on-farm sources such as manures, crop residues and legumes. These resources are supplemented with fertilizers, as needed. In

Nutrients worth \$4 billion are lost from African soils every year.

Africa not only are available organic materials limited, but there is often a competing demand for these materials for other uses including fuel for cooking fires. Fertilizers can be used to improve the balance among the required elements, thus enhancing plant uptake of nutrients from existing organic sources.

No region has ever shaken off poverty without fertilizers. By dedicating 2006 to Africa, the fertilizer industry wants to rise to the challenge set by the United Nations and African leaders to fight hunger and poverty. IFA believes that, given the right tools, knowledge and opportunities, Africa's farmers can feed their families and communities sustainably. Fertilizers are one of the essential pieces needed to solve Africa's development puzzle "from the ground up". ●



Africa Fertilizer Summit

9-13 June 2006
Abuja, Nigeria

The Summit will be held under the auspices of the New Partnership for Africa's Development (NEPAD).

For more information:

www.AfricaFertilizerSummit.org

continued from page 1

2005 IFA Singapore Meeting

The Regional Conference will be relaunched in 2006 as the IFA Asia-Pacific Crossroads. If the entire Pacific rim is considered, this region has indeed become the global crossroads of the fertilizer industry.

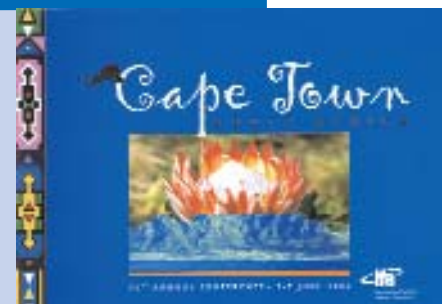
The first edition of the renamed event, to be held on 13-16 November 2006 in Chiang Mai, Thailand, will be specially designed to integrate the annual IFA Production and International Trade Conference with the traditional focus on issues pertaining to the market in Asia and the Pacific.

This event will be organized under the guidance of the Regional Vice Presidents and the Production and International Trade Committee for all members with an interest in Asia and the Pacific, as well as newcomers who wish to acquaint themselves with the Association in view of potential membership. ●

2006 IFA Annual Conference

The 2006 IFA Annual Conference will be held in Cape Town from 5 to 7 June, with the support of its members in South Africa.

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 - 2006

27 February - 2 March

IFA Agriculture Conference "Optimizing Resource Use Efficiency for Sustainable Intensification of Agriculture"

Organized in cooperation with the China National Chemical Construction Corporation (CNCCC)

Kunming, China

Registration closes 23 January 2006

25 - 28 April

2006 IFA Technical Symposium # "Innovation and Core Technologies for Sustainable Growth. Technical Developments in Fertilizer Production for Greater Efficiency and Environmental Stewardship"

Vilnius, Lithuania

Registration closes 22 March 2006

5 - 7 June

74th IFA Annual Conference #

Cape Town, South Africa

Registration closes 28 April 2006

13 - 16 November

IFA Asia-Pacific Crossroads 2006 # "Growing Markets, Nurturing Success"

Chiang Mai, Thailand

Registration opens in July 2006

5 - 7 December

32nd IFA Enlarged Council Meeting #

Buenos Aires, Argentina

Registration opens in July 2006

Restricted to IFA members

Non-IFA - 2006

6 - 8 February

AFA - 12th International Annual Fertilizer Conference & Exhibition

Cairo, Egypt

Fax : +20 2 4172347 info@afa.com.eg www.afa.com.eg

22 - 24 February

FMB - 3rd Asia Fertilizer Conference & Exhibition

Shanghai, China

Fax: +44 208 979 7866 fmb@fmb-group.co.uk www.fmb-group.co.uk

27 - 28 February

FFC - 2nd International Seminar on Ammonia and Urea Technology

Rawalpindi/Islamabad, Pakistan

Fax: +92 51 9272345 ffcseminar2005@ffc.com.pk

www.ffc.com.pk/seminar2005.htm

12 - 15 March

BSC - Nitrogen 2006

Vienna, Austria

Fax: +44 20 7903 2432 conferences@crugroup.com

www.britishtsulphurconferences.com

13 - 16 March 2006

Soil Science Society of Pakistan - 11th Congress on Soil Science

Islamabad, Pakistan

Fax: +92 91 9216520 zahirsh@brain.net.pk www.sss-pakistan.org

3 - 5 April

4th New Ag International Conference and Exhibition

Guadalajara, Mexico

Fax: +44 20 8744 1075 advertising@newaginternational.com

www.newaginternational.com/conference/conference.html

3 - 7 April

IFDC* - The CASE Approach

Sogakope, Ghana

4 - 6 April

TSI - Sulphur Markets Symposium

Beijing, China

Fax: +1 202 331 9660 symposia@sulphurinstitute.org

www.sulphurinstitute.org

18 - 20 April

AFA - 19th International Technical Conference & Exhibition

Doha, Qatar

Fax: +20 2 4172347 info@afa.com.eg www.afa.com.eg

23 - 25 April

BSC - Phosphates 2006 International Conference and Exhibition

Brussels, Belgium

Fax: +44 20 7903 2432 conferences@crugroup.com

www.britishtsulphurconferences.com

3 - 5 May

BSC - Fertilizer Latin America 2006 Conference

Miami, Florida, USA

Fax: +44 20 7903 2444 conferences@crugroup.com

www.britishtsulphurconferences.com

15 - 16 May

IFDC* - Strengthening Market Information Systems

Abuja, Nigeria

9 - 13 June

IFDC, NEPAD - Africa Fertilizer Summit

Abuja, Nigeria

Fax: +1 256 381 7408 Fax: +27 11 313 3778

AFS.secretariat@ifdc.org fertilizersummit@nepad.org

www.AfricaFertilizerSummit.org

19 - 21 June

AFA Workshop "Turn Around & Maintenance Management"

Aqaba, Jordan

Fax: +20 2 4172347 info@afa.com.eg www.afa.com.eg

19 - 23 June

IFDC* - Strengthening Agricultural Trade Organizations

Bamako, Mali

16 July - 6 August

Sustainable Development - Environmental Protection & Agricultural Innovation

Kuching, Malaysia

Fax: +45 61655688 mette@malaysia2006.dk www.malaysia2006.dk

*IFDC - An International Center for Soil Fertility and Agricultural Development
Fax: +1 256 381 7408 hrd@ifdc.org www.ifdc.org

To view a more exhaustive list of conferences click on "Conferences and Events" on IFA's web site.

continued from page 2 **International Student Association**

Society needs to understand that agriculture is a high-tech industry that can make a difference to millions of people. It is just as important, and should be as prestigious, to major in an agricultural field as it is to major in engineering or medicine. We need to continue to find ways to create a more sustainable agricultural sector. This will be possible if people understand the worldwide importance of the food-producing sector. If its image alone were improved, more top students would be attracted and the top level of society would not perceive agriculture as just a "necessary evil".

What are the objectives of the 2006 World Congress?

The topic of the 2006 World Congress is "Sustainable Development, Environmental Protection and Agricultural Innovation". Our vision is "to promote understanding and enhance student participation in the ongoing debate on sustainability, agriculture and the environment, with special emphasis on how knowledge can be implemented in diverse social and industrial sectors worldwide". We aim to do this by increasing awareness of problems related to sustainability in the agricultural sector, and of the relationship between the agricultural, food-producing sector and the environment. Both of these key issues need to be addressed to give our members up-to-date knowledge about what is being done in the world regarding sustainability. Finding out where research and policy-making are today is crucial if students are to play a more active role in the debate on sustainable development.

We want to create relations between IAAS students and agribusiness and continue to develop this relationship after the completion of our studies. We want to show our members where the industry is today, what is happening and what is expected of us. We want the industry to get to know us, to see who we are and what we can do. We would also like involvement in IAAS to be seen



IAAS members visit a dairy factory in Greece.

as a competitive advantage, encouraging the development of internationally minded graduates with organizational skills. These are just some of the things to be gained from being active in an international association.

The 2006 IAAS World Congress will be the biggest student conference ever held in the field of agricultural and related sciences. We plan to use it to spread knowledge of IAAS and, in particular, to increase the number of member countries in Asia. We also plan to involve the media as much as possible and to allow members to present their home universities - all as a way of promoting agricultural education worldwide. We also wish to improve awareness of IAAS in general, the projects run by IAAS and the opportunities the association offers through student communities in Denmark and Malaysia as well as internationally.

Finally, to make best use of what will be learned during the seminar, participants will create teaching material concerned with sustainable development for dissemination at secondary school level.

Contact

Mette Hessel
Vice President of Public Relations
IAAS Denmark
Denmark
Fax: +45 35 28 21 52
mette@malaysia2006.dk
www.malaysia2006.dk

IFA Request Form [fertilizers !\[\]\(90e284840efe64d77b8883cabbb0c3f8_img.jpg\) agriculture](http://fertilizersagriculture.com) **January 2006**

Please tick the box below and return to IFA by fax: +33 1 53 93 05 45 / 47

or send an e-mail to publications@fertilizer.org

Note: most IFA materials are available via the web site at www.fertilizer.org

- Fertilizer Use by Crop in the Islamic Republic of Iran
- Fertilizer Use by Crop in Ukraine
- IFA Asia Meeting, Singapore. Cd-rom
- IFA Council Meeting, Sevilla. Cd-rom *restricted to IFA members*
- Solving Africa's Development Puzzle from the Ground Up. Booklet and magnets. *copies*

Name

Company/Organization

Address

E-mail Web



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ifa@fertilizer.org
www.fertilizer.org

IFA comprises around 450 member companies in more than 80 countries and includes manufacturers of fertilizers, raw material suppliers, regional and national associations, research institutes, traders and engineering companies.

IFA collects, compiles and disseminates information on the production and consumption of fertilizers and acts as a forum for its members and others to meet and address technical, agronomic, supply and environmental issues.

IFA also sponsors research related to the efficient use of plant nutrients in agriculture, and liaises closely with relevant international organizations, such as the World Bank, FAO, UNEP and other UN agencies.

IFA President

Sihai Wu, President
SACF, China

IFA Director General

L.M. Maena

Mailing list

Subscription to F&A is free of charge. Send full address details to be added to the mailing list. Additional copies may be supplied to organizations to circulate on behalf of IFA.

Letters

We invite your contributions of letters, documents, articles, photographs, etc.

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