

Food and Fertilizer Prices Raise Concerns

Headlines around the world continue to report high prices for agricultural commodities. While this may be good news for market-linked farmers, the situation is increasingly difficult for poor people, including many small-holder farmers, who already spend a large portion of their incomes on food.

In this context, policy makers have taken a new interest in fertilizers. The appropriate use of fertilizers can help agricultural production meet growing demand. Fertilizer Best Management Practices will be critical to achieve

optimal crop nutrition efficiency, which reduces nutrient losses to the environment, improves farmer profitability and effectively stretches fertilizer availability to satisfy robust demand.

IFA has recently had exchanges with organizations such as the Australian Senate, the Indian Ministry of Chemicals and Fertilisers, and the Food and Agriculture Organization (FAO) of the United Nations on the role fertilizers can play in alleviating the current situation.



Photo: IFA / K. Sukalac

A ministerial delegation from India recently visited IFA. From left to right: U.S. Jha, Chairman and Managing Director, Rashtriya Chemicals & Fertilizers Ltd; J.S. Sarma, Secretary (Fertilizers), Government of India; H.E. Ram Vilas Paswan, Minister of Chemicals & Fertilizers and Steel, Government of India; IFA Director General Luc M. Maene; H.E. Ranjan Mathai, Ambassador of India to France.

2008 IFA Crop Nutrition Laureate Tackles Rice Sustainability

Achim Dobermann is recognized for raising yields and reducing nutrient losses

Achim Dobermann, Deputy Director General for Research of the International Rice Research Institute (IRRI), is the recipient of the 2008 IFA International Crop Nutrition Award. The award recognizes Dr Dobermann's pioneering research on the fine-tuning of fertilizer and crop management practices in order to promote the ecological intensification of rice, maize and soybean production systems in many countries.

Rice is the primary staple crop of roughly two-thirds of the world population. It accounts for 15 per cent of global fertilizer use; improving crop nutrient use efficiency in rice production is therefore central to meeting growing food demand sustainably. Raising rice yields per kilogram of fertilizer applied increases farmer profitability, reduces nutrient losses to the environment and eases pressure on natural resources.

Eighty per cent of the world's rice is grown by small-scale farmers, which means that efficient and productive rice farming can help improve the economic prospects and quality of life of many of the world's poor.

As a Soil Nutrient Specialist and Project Team Leader at IRRI (1992-2000), Dr Dobermann led the development of a new approach to site-specific nutrient management in small-scale rice production. One of his most important contributions has been the innovative crop-driven management of plant nutrients for cereal crops. This approach is more flexible than traditional recommendations for soil fertility and fertilizer management. At IRRI he spearheaded work concerned with on-farm research strategies that set new standards for long-term involvement of farmers in the research process. His efforts led to closer collaboration between scientists, extension workers and the private sector in many countries.

Subsequently, while based at the University of Nebraska (2000-07), Dr Dobermann led research programmes on the ecological intensification of maize and soybean production; greenhouse gas emissions and carbon sequestration; new farming recommenda-



tions for high-yield maize production systems; and precision farming technologies for site-specific crop management. His work has demonstrated how fertilizer best management practices can create significant mutual benefits for farmers and society in some of the world's most intensive cropping systems.

Dr Dobermann was nominated for the 2008 IFA International Crop Nutrition Award by K+S KALI GmbH, which was impressed by his dedication to the principle that high food production, profitability, high nutrient use efficiency and minimal environmental impact are compatible and can be achieved through finely tuned crop management practices.



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from principle to practice

Pakistan: Fauji Fertilizer Company Limited's Farmer Support Services

By Munir Hafiez, Chief Executive and Managing Director, Fauji Fertilizer Company Ltd

Pakistan's economy is essentially agrarian but while farmers play a pivotal role in society, most of them have little education and limited access to information about more profitable farming methods. Fauji Fertilizer Company Limited (FFCL) has a customer-oriented marketing strategy in place that backs its quality products with support services, above all practical and innovative farmer education.

Through the company's Farm Advisory Services, trained agricultural experts work with growers in many parts of the country. Advice is offered in the form of agronomic and extension activities, including crop seminars, farmer meetings, field days, group discussions, crop demonstration plots, blitz programmes (a concentration within a short period of time of several meetings focused on a particular issue of local interest for groups of 40-50 farmers) and farm visits. By helping farmers to optimize their resources (and therefore increase production), FFCL makes it possible for them to improve their incomes.

Fertilizer use in Pakistan reached 169 kg/ha in 2005-06. However, the NPK use ratio is highly imbalanced at 3.44:1:0.032 (the "ideal" ratio is about 2:1:0.35). Imbalanced fertilizer use is one of the main constraints on higher crop yields. Through its farmer education programme, FFCL emphasizes the importance of balanced fertilizer use. The most important prerequisite for balanced fertilizer use and profitable farming is soil testing, which is provided by the com-

pany. Computer-generated fertilizer recommendation reports also guide growers on timing, method and rate of fertilizer use.

FFCL's Farm Advisory Centres

As part of its outreach work, FFCL has set up training and advisory units called Farm Advisory Centres (FACs) that offer services to growers, farmers' associations, co-operatives and government departments. The FAC concept is unique in the South Asian region. Five FACs are currently being operated by the company; each is equipped with a computerized soil and water testing laboratory, a demonstration van with audio-visual aids and a team of agricultural experts.

The impact of these FACs is enhanced by rendering intensive services within a designated area over a given period. A unit may operate in an area for three to four years, focusing on the transfer of complete production technology related to area-specific crops. To help achieve higher yields, attention is given to both soil and climate determinants. As micronutrient deficiencies are becoming yield-limiting factors in Pakistan, the company has initiated a free-of-cost micronutrient testing facility for use by the farming community.

Sharing valuable knowledge widely

FFCL wants to equip Pakistan's farmers with knowledge of the best farming methods, as well as efficient fertilizer use. It assists the government and non-governmental organizations with training, networking and publications. Its vast collection of data on Pakistan's soils serves as a reference for the company itself and for research organizations in developing area-specific fertilizer recommendations. FFCL has collected and analyzed more than 300,000 soil/water samples.



FFCL Soil and Water Testing Laboratory

Photos: FFCL

The company's publications include agri-newsletters, fertilizer guides/recommendations and detailed information on the cultivation of cereals, vegetables and fruits. The company also uses documentary films on crop production. These are broadcast on TV or shown to farmers engaged in various field activities. No other entity has the same quality or range of such films.

FFCL has organized international seminars on topics such as Fertilizer Use Efficiency, Dry Land Agriculture in Pakistan, Seed, and Productivity through Agricultural Extension. These seminars have attracted Pakistani and international scientists, researchers, experts and other stakeholders.

The establishment of effective farm advisory services in Pakistan by FFCL has created a link between general knowledge and information that is more technical, as well as illustrating how to apply fertilizers in the field. This link is crucial if the poverty of farming households is to be reduced.

FFCL takes pride in its contribution to the growth of Pakistan's agriculture sector. SONA, the company's premium brand, is associated with good quality and is considered trustworthy by farmers.

Extending FFCL's advisory services to other countries

Building on the rich experience it has gained in Pakistan, FFCL is poised to offer advisory services to agriculture-related organizations in other developing countries. These services would include on-site training, information sharing and guidance on the various types of farm advisory services, as well as the creation of Farm Advisory Centres. Assistance could also be provided with setting up soil/water testing laboratories and with software for developing fertilizer recommendations.



Crop seminar for progressive growers

BCInsight and IFA Recognize a Consummate P Engineer

By Mark Evans, BCInsight

A sunny Sunday afternoon in Paris was the glorious backdrop for celebrating the memory of Pierre Becker and his contribution to the well-being of mankind. The occasion was the presentation on 17 February of the 2007 Pierre Becker Memorial Award to Robert De Coster, a man who enjoys the highest esteem in the field of phosphate fertilizer technology.

In recognition of your outstanding contribution to the understanding, exploitation and application of phosphate resources, the Directors and Staff of Fertilizer International Magazine honour Robert De Coster. The quality of your research, originality and practical application has justly earned the lasting admiration of your

many friends in the fertilizer world.

This is the citation on the award. At the presentation BCInsight, publisher of *Fertilizer International*, was honoured to welcome Luc Maene, Director General of IFA (which co-sponsors the award) and John French of British Sulphur Events, the former publisher of *Fertilizer International*, who first conceived the idea of commemorating Pierre Becker's life and achievements. The presentation was further enhanced by the attendance of Marie Louise Becker, Pierre's widow.

The 2007 Pierre Becker Memorial Award sought specifically to honour an engineer who had achieved advances in the efficient and economic processing of phosphate raw materials and in the production of phosphate downstream products. Robert De Coster meets these criteria perfectly. Graduating in 1965 from the Université du Travail in Charleroi, Belgium, as an Industrial Engineer, Chemical Industry, he joined Prayon S.A. in Engis. Robert's entire career has been with this company. He rose from Commissioning Engineer for Prayon's phosphoric acid plants and tilting pan filter technology to become Process Engineer and then Senior Process Engineer. In this capacity, his responsibilities included establishing basic project engineering and assisting with subsequent commissioning.

Between 1965 and 1982, Robert helped commission many phosphate plants employing Prayon technology. These included around a dozen plants in Canada, Mexico and the United States, as well as others in Belgium, France, Italy, Japan, Poland, South Africa, the Republic of Korea, the former Soviet Union and the United Kingdom.

In 1982, Robert was appointed Business Development Manager of Prayon's Process Licensing Activities. Another promotion followed two years later when he became Corporate Development Manager, a post he held until 2000. In this post Robert's responsibilities included co-ordinating the development projects of Prayon S.A. and its subsidiaries.



IFA Director General (left) and Fertilizer International Editor Mark Evans (right) congratulate Robert de Coster.

Photo: IFA / K. Sukalac

Further promotions came in 2000 and 2002, initially to Executive Vice President for Prayon Inc. in Augusta, Georgia, USA, where he managed the technical and food-grade phosphates plant that the company had recently acquired from Solutia. This was a temporary assignment; in 2002, he became Managing Director of Prayon Technologies S.A, the licensing arm of Prayon S.A. He held this post until his retirement in 2005. While Robert can now enjoy a more relaxed workload, he has not withdrawn completely from the phosphates business. He remains an active consultant on behalf of Prayon S.A.

Robert expressed his surprise and pleasure in receiving the 2007 award, considering it an honour not only for himself but for everyone at Prayon S.A. Noting Pierre Becker's towering reputation, he said that his copy of Pierre's magnum opus on phosphates and phosphoric acid raw materials and technology, first published in 1983, is well-thumbed – and in constant demand by his colleagues.

Luc Maene also paid tribute to Pierre Becker's achievements. "Pierre was someone very close to IFA's heart," he said. "He was my mentor." Marie Louise Becker expressed her delight that the memory of her husband is being perpetuated by the award. "It is a feast for me and my family," she told those present. "To meet Pierre was the most beautiful thing in my life. To BCInsight, IFA and John French, thank you for keeping the flame burning."

For more information, read the interview in which Robert De Coster discusses the challenges, changes and innovations that have shaped the phosphate industry during his career in *Fertilizer International* No. 423 (March/April 2008), pp. 37-38.

Fauji Fertilizer Company Limited

Established in 1978, Fauji Fertilizer Company Limited (FFCL) has grown from a single urea manufacturing facility to a company with three urea plants and an annual production capacity of 2.3 million tonnes. It is Pakistan's only producer of DAP and urea (granular) fertilizers, through its subsidiary Fauji Fertilizer Bin Qasim Limited. Besides marketing its own manufactured products, FFCL imports and markets phosphatic (DAP and TSP), potassic (SOP) and micronutrient (borax) fertilizers. The company has 14 sales regions, a broad dealers' network and widespread warehousing facilities. FFCL has fertilizer sales of 4 million tonnes per year, with a market share of about 60 per cent in the domestic urea market.

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Efficiency and SHE Management Top Symposium Agenda

The 32nd IFA Technical Symposium and the Technical Committee meeting took place in São Paulo, Brazil, from 10 to 14 March. Some 180 delegates attended, representing 63 companies in 31 countries. The theme of this year's meeting was "Food, Fuel and Climate Change: Challenges for the Fertilizer Industry". Key agro-energy issues were addressed during the special opening session, which concentrated on developments in global bio-fuels and on measuring their impact on the fertilizer sector.

This non-technical session was designed to provide participants with a biofuel market perspective, positioning their industry and enhancing their understanding of the market forces that impact the sector. Speakers from Brazil included Marcos Jank, Managing Director of the São Paulo Sugarcane Producers Union (UNICA), and José Zilio of Alf International, both of whom covered major biofuel developments in their country. Christian Pallière of the European Fertilizer Manufacturers Association (EFMA) offered

an in-depth overview of biofuel trends in Europe. Klaus Jorgensen of BioGasol Denmark provided insights into new technology developments in second-generation ethanol production.

Following the opening session, the production leaders present in São Paulo took part in a two and a half day technical programme focusing on technology and sustainability issues in fertilizer production. A total of 23 technical papers were presented on a range of subjects, including de-bottlenecking, energy efficiency improvements, carbon dioxide recovery projects and SHE best management practices during turnaround.

The week was capped with technical visits to Vale's potash mine and port facility in Sergipe, as well as Fosfertil's ammonia-urea plant in Curitiba and its phosphatic fertilizer facility in Uberaba.

The Technical Committee's next meeting will take place in Bahrain in March 2009, in conjunction with the IFA Global Safety Summit.



Abdul Rahman Jawahery (left) and Luc Maene (right) thank Bjarne Christensen for having served as the Vice-Chairman of the IFA Technical Committee from 1997 to 2008.



Visit to the TSP / MAP production units of Fosfertil in Uberaba

Agronomy Expert Joins IFA

IFA is pleased to welcome Angela Bunoan-Olegario, who has joined the Association as Senior Agronomist. Angela has worked for



more than 20 years at the Fertilizer and Pesticide Authority (Department of Agriculture) in the Philippines. She has extensive experience in the monitoring and regulation of the fertilizer and pesticide industries, particularly with regard to project development,

trade statistics and training. After receiving a Bachelor of Science in Agriculture from the University of the Philippines, she obtained a Masters in Agricultural Science-Soil Science and a Postgraduate Diploma in Agricultural Science-Soil Science from Massey University in New Zealand.

Beginning her career at the Fertilizer

and Pesticide Authority as a Market Analyst, Angela became a Senior Market Analyst, Supervising Market Analyst and, (from 1992), Division Chief/Chief Trade Industry Development Specialist. Among her other achievements, she was the Project Coordinator for a JICA (Japan International Cooperation Agency) Pesticide Monitoring System Development Project in 1999 and the leader of a FADINAP (Fertilizer Advisory, Development and Information Network for Asia and the Pacific) Project for Implementation of an Integrated Plant Nutrient Management System (IPNS) in the Philippines in 2001.

As a member of the IFA staff, Angela will focus on agronomic matters, including the analysis of agronomic trends, technical publications, the FUBC database, fertilizer regulations, scientific review and database (e.g. on human health), conference organization (e.g. conferences and workshops) and editing of country reports and papers.

2009 Global Safety Summit

The IFA Global Safety Summit is scheduled to be held in Manama, Bahrain, from 14 to 18 March 2009 under the patronage of H.E. Dr Abdul Hussain Bin Ali Mirza, Minister of Oil and Gas Affairs and Chairman of the National Oil & Gas Authority of the Kingdom of Bahrain. CEOs and production and safety managers from IFA member companies are expected to attend this event, which will be wholly dedicated to key innovations in the areas of safety and site security in the fertilizer industry.

For more information, please visit the Technical Committee section of the IFA web site (www.fertilizer.org/ifa/memberarea/mo_tech.asp).



Designed by the IFA Production and International Trade Committee for all IFA Members

This 29th annual edition of the IFA Production and International Trade Conference offers an excellent opportunity for interacting with senior industry representatives from the main international fertilizer producing and trading companies. Special emphasis will be placed on India, a country which is a leading consumer and importer of fertilizers, intermediates and raw materials.

The programme will consist of three half-day plenary sessions open to all participants, starting in the afternoon of Wednesday, 22 October and continuing all day Thursday, 23 October 2008.

The plenary sessions will cover supply and trade developments. Keynote addresses in the first session will focus on dry bulk shipping, environmental related issues and energy mix and feedstock costs in ammonia production. A session dedicated to raw materials and fertilizer supply strategies will look at emerging supply and short-term balances. Trade aspects will figure prominently with coverage of trends in the global and

regional trade of nitrogen and phosphate-based products.

Participants can opt to join a technical tour of the Thal Fertilizer Complex of RCF on Friday, 24 October.

As usual, functions will be organized to facilitate contacts and stimulate discussions among participants.

In addition to the plenary sessions, the Production and International Trade Committee will hold its annual meeting at the end of Wednesday morning (22 October), preceded by the meetings of the four Working Parties of the Committee (by invitation only) on Tuesday, 21 October and the morning of Wednesday, 22 October.

The detailed programme and more information about the venue of the meeting will be available shortly. Please check the IFA web site for regular updates.

For further information, contact Michel Prud'homme, Executive Secretary PIT Committee, mprudhomme@fertilizer.org

New Fertilizer Map Shows Fertilizer Markets and Trade at a Glance

In 2007, the IFA Production and International Trade Committee cooperated with ICIS to publish a global fertilizer trade-flow map. Based on data provided by IFA, the map shows the 2006 fertilizer



trade flows above the threshold of 400,000 product tonnes. The 115 cm x 75 cm wall map, produced by ICIS, also provides information on major fertilizer producing and consuming countries and historical trends in prices. The main countries with reserves of natural gas, phosphate rock and potash are shown in pie charts. An inset graphic highlights the major countries producing fertilizer products and raw materials in 2006. A bar chart compares key country consumers of fertilizers in 2006 with projections for 2011. Graphics prepared by ICIS show historical prices for sulphur, potash (MOP), ammonia, urea and DAP.

The map has been on display at IFA events since October 2007. IFA members and ICIS subscribers can request copies of the 2007 map at no charge by contacting Kellie Alcock, Tel: + 44 208 652 3350, Fertilizers@icis.com

Production and International Trade Committee Publications

Statistical reports restricted to IFA members

Since January 2008, the following series of statistics on the production and trade of fertilizers, intermediates and raw materials have been released:

Quarterly Production and Trade Statistics: January-December 2007

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

Quarterly Production and Trade Statistics: January-March 2008

- Ammonia
- Urea
- Phosphate rock
- Processed phosphates

- Sulphur
- #### Annual Statistics
- Ammonia 2007
 - Urea 2007
 - Phosphate rock 2007
 - Potash 2007
 - Single superphosphate (summary report) 2004-2006
 - Final sulphur and sulphuric acid statistics 2005-2006
 - Preliminary sulphur and sulphuric acid statistics 2006-2007

This year, the statistical programme includes several initiatives:

- The launching of the first global survey of UAN production and deliveries. A draft report is expected to be finalized in September 2008.

- The first update of the MOP/NOP/SOP capacities since the initial launch in 2003. A summary report for all IFA members was made available in January.
- The update of the global detailed SSP capacity report with contributions from all major SSP producers. This was the first update since the initial launch in 2003. A summary report for all IFA members was released in April.
- The launching of the third world survey of SSP production and deliveries. A summary report for all IFA members was released in April.

The 2008 publication schedule is available on the web site. For further information please contact Sylvie Marcel-Monnier, smarcel@fertilizer.org

**word: Association**

A Refresher Course in Market Economics, or Why Fertilizer Prices Are Currently High

In recent months, numerous headlines have bemoaned the sharp rise of food prices around the globe. One of the most common scapegoats is the rapid increase in biofuel production, particularly maize-based ethanol, but fertilizers have been among the suspects. The logic is the following: since fertilizers are a major input in producing agricultural commodities, then surely rising fertilizer prices are causing higher commodity prices. The reality is much more complicated.



Luc M. Maene
IFA Director General

One of the key drivers of higher fertilizer prices is growing demand. Studies have shown that expectations of crop prices are one of the most important factors determining how much fertilizer farmers choose to purchase. When they are pessimistic about their likely profits, they cut back on fertilizer use; on the flipside, when they think they will receive a good price for their crops, they are more willing to invest in fertilizers. This means that high agricultural commodity prices may actually be pushing fertilizer prices upward, rather than the contrary.

Although biofuel production contributes to higher fertilizer demand – maize requires

higher levels of fertilizer, especially nitrogen, than many other crops – this additional demand is marginal compared to the underlying long-term trend. Strongly emerging developing countries – notably Brazil, China and India – have steadily increased their fertilizer use since the turn of the century. Population growth is one reason for this trend, as are rising incomes, which allow more people to eat meat, fruit and vegetables as they diversify their diets.

Supply-side issues have also affected the price of fertilizers. Global production is running at or near capacity for all three of the major fertilizer nutrients: nitrogen, phosphate and potash. Projects are underway to build new production sites, but the markets will remain tight until this potential is realized.

Low fertilizer prices in previous years are one reason for this time lag. Building a new nitrogen complex takes at least three years. A minimum of three to four years is required to open a new phosphate fertilizer plant and about seven to develop a new potash mine. Opening a potash mine costs some USD 2.5 billion. Seven years (or more) is a long time for investors to wait before seeing any return. Today, the situation is further complicated by competition for building materials and equipment: steel is subject to the same high levels of demand from emerging markets as are fertilizers; this has already led to some

planned fertilizer capacity expansions being delayed.

Fertilizer production takes place where affordable energy sources (particularly natural gas) or mineral deposits are available. This means that large quantities of bulky materials must be shipped over long distances, making fertilizer prices vulnerable to variations in freight costs. Robust international trade (again with the emerging economies playing an influential role) combined with sustained high fuel costs have raised freight rates, adding to the final farmgate price for fertilizers.

Under these conditions, it is imperative to increase fertilizer use efficiency for economic reasons as well as for the environmental ones that are usually cited. Using crop nutrients more efficiently reduces a farmer's overall fertilizer bill and increases farm profitability. Raising the global level of fertilizer use efficiency would create a new "virtual" source of nutrients, i.e. improving efficiency by ten per cent would be the equivalent of producing roughly ten per cent more fertilizers. Greater efficiency would also have knock-on effects with regard to transport and other logistical costs, as they would decrease proportionately.

Looking at the challenges facing agriculture and the fertilizer markets in particular, it is easy to understand why economists argue that efficiency is generally a good thing.

Update on Special Product Activities

The following key points were covered when members of the IFA Working Group on Special Products met in New Delhi, India, on 2 April:

- Participants shared their concern about the current unfavourable market context for specialty products due to low fruit and vegetable prices compared to grain prices, a situation that has depressed the market for specialty fertilizers. As a result, the Working Group agreed to give priority to better understanding the prospects for the fruit and vegetable sector and the implications for the specialty fertilizer market.
- Members of the Working Group requested the Secretariat to update the database on the market for special products in order to improve the understanding of the key drivers.
- Activities relating to zinc were reviewed, notably the successful Zinc Crops conference held in May 2007 in Istanbul, Turkey and the subsequent partnership between IFA and the International Zinc Association (IZA) to issue an updated version of *Zinc in Soils and Plant Nutrition* by Brian Alloway (forthcoming).
- The group also took note of developments with regard to publications being prepared on enhanced-efficiency fertilizers, on micronutrients and on fertigation (the application of nutrients through irrigation water).

Join us for the 76th IFA Annual Conference

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





Calendar

IFA - 2008

19 – 21 May
76th IFA Annual Conference #
 Vienna, Austria

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

13 – 17 May
7th Workshop on Sulfur Metabolism in Plants Warsaw, Poland
 Fax: +48 22 6584804 asirko@ibb.waw.pl <http://7sw.ibb.waw.pl/>

8 and 10 July 2008
IZA – Zinc Crop and Nutrition Seminars Canberra, Australia (8 July 2008) and Perth, Australia (10 July 2008)
 Fax: +32 2 776 0089 info@iza.com www.iza.com

9 – 11 July
FMB – 6th East European Conference Odessa, Ukraine
 Fax: +44 208 979 4573 fmb@fmb-group.co.uk www.fmb-group.co.uk

14 – 23 July
IFDC* – International Training Program and Study Tour on Fertilizer Production Muscle Shoals, AL and 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 www.icpaonline.org

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

11 – 15 August
IFDC* – Agro-Input Dealer Development in Africa Arusha, Tanzania

3 – 5 September
2008 African Congress Kampala, Uganda
 Fax: +1 314 206 3222 lbartko@stlrcga.org www.worldagforum.org

28 September – 3 October
2008 ANNA Conference Kelowna, BC, Canada
 Fax: +1 403 936 5966 david.hind@orica.com
www.members.shaw.ca/david.hind/2008.html

6 – 17 October
IFDC* – Application of Decision Support Tools for Fertilizer Recommendations and ISFM Accra, Ghana

8 – 10 October
FMB – 2nd Ammonia/Urea Conference and Exhibition Dubai, UAE
 Fax: +44 20 8979 4573 fmb@fmb-group.co.uk www.fmb-group.co.uk

26 – 31 October
4th International Conference on Silicon in Agriculture
 KwaZulu-Natal, South Africa
jmeyer@netactive.co.za www.siliconconference.org.za

29 – 31 October
FMB – 22nd European Conference Lisbon, Portugal
 Fax: +44 208 979 4573 fmb@fmb-group.co.uk www.fmb-group.co.uk

2 – 5 November
BSC – Sulphur 2008 International Conference Rome, Italy
 Fax: +44 207 903 2432 rania.biggs@crugroup.com
www.britishtsulphurevents.com

3 – 7 November
IFDC* – Fertilizer Granulation Processes and Micronutrients
 Bangkok, Thailand

10 – 12 November
AFA – 21st Fertilizer International Technical Conference
 Jeddah, Saudi Arabia
 Fax: +20 2 2417 3721 info@afa.com.eg www.afa.com.eg

24 – 27 November
CIEC – Plant Nutrient Management Under Stress Conditions
 Cairo, Egypt
 Fax: +20 237610850 foeabk@yahoo.com

*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.

information resources

Efficiency of Soil and Fertilizer Phosphorus Use Reconciling changing concepts of soil phosphorus behaviour with agronomic information

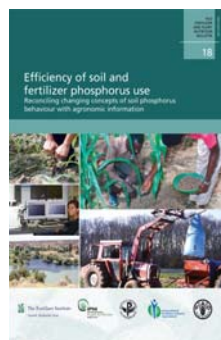
FAO Fertilizer and Plant Nutrition Bulletin No. 18, Rome, Italy, 2008. ISSN 0259-6180
The efficient use of phosphorus (P) is essential to many agricultural and environmental issues. These include maintaining or improving the P fertility of soils by the judicious use of P fertilizers and other sources of P, such as animal manures, composts and biosolids. There is also the need to conserve the finite global P resource. This bulletin reviews, analyzes and synthesizes information on the efficient use of soil and fertilizer P. It presents information on the plant availability of soil and fertilizer P, with an emphasis on soil-plant interactions. The focus is on the changing concepts of the behaviour of both soil and fertilizer P and on the need to define and assess their recovery and thus P-use efficiency more appropriately. The bulletin also outlines strategies for improving P-use efficiency.

Strategies for improving the efficiency of use of soil and fertilizer P include: (i) modifying surface soil properties; (ii) managing surface soil; (iii) managing P sources; and (iv) optimizing P use through economically appropriate rates and timing. The main

conclusion of this bulletin is that the efficiency of fertilizer P use is often high when evaluated over an adequate timescale using the balance method.

Contact

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Fax: +39 06 570 53360
publications-sales@fao.org
The publication can be downloaded at:
www.fao.org/ag/agl/oldocs.jsp

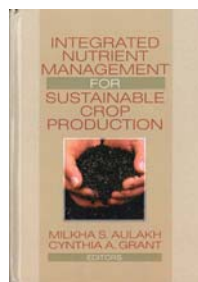


Integrated Nutrient Management for Sustainable Crop Production

M. S. Aulakh, C.A. Grant, February 2008. 600 pp.
ISBN 978 1 56022 304 7
Price: USD 179.95

Contact

The Haworth Press, Binghamton, NY, USA
orders@haworthpress.com
www.haworthpress.com



NEW FROM IFA

Technical Symposium Food, Fuel and Climate Change: Challenges for the Fertilizer Industry Sao Paulo, Brazil, 10-14 March 2008

IFA, cd-rom, April 2008.
The conference proceedings can be downloaded from the members' area of IFA's web site. A cd-rom is available to members on request.

Contact

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sgoll@fertilizer.org



Production and International Trade Conference Vancouver, Canada, 23-26 October 2007

IFA, cd-rom, October 2007.
The conference proceedings can be downloaded from the members' area of IFA's web site. A cd-rom is available to members on request.

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smarcel@fertilizer.org



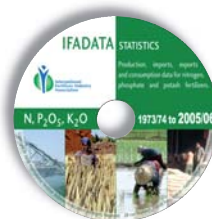
IFADATA Statistics from 1973/74 to 2005/06

Cd-rom, February 2008.
The cd-rom includes production, imports, exports and consumption statistics for nitrogen, phosphate and potassium fertilizers. The cd-rom is restricted to IFA members.

Consumption statistics are available to the general public on the IFA web site in the section "Statistics".

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Fertilizers and Climate Change

IFA, January 2008. 4P.
The brochure can be downloaded at:
www.fertilizer.org/ifa/topics/climate_change/fertilizers_climate_change.asp
This leaflet and online module provide an overview of the links between fertilizers and climate change.

International Fertilizer Industry Association (IFA)

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IFA comprises around 475 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

Thorleif Enger
Yara, Norway

IFA Director General

Luc M. Maene

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