

Puggina Passes the Gavel to Van Brunt

At the conclusion of the IFA Annual General Meeting held on 29 May 2003 in Philadelphia, Wladimir A. Puggina (Fertibras, Brazil) handed the reins of the International Fertilizer Industry Association (IFA) to John Van Brunt. Mr. Puggina will continue to serve the Association for the next year as IFA's Immediate Past President.

John Van Brunt is Vice Chairman and CEO of Agrium Inc. in Canada. He graduated from Queen's University in Kingston, Ontario, where he earned a degree in chemical engineering. His entire career has been spent at the Cominco/Agrium organization of

which he is also a Director.

Mr. Van Brunt has a long record of service to the fertilizer industry, having previously been IFA's Senior Vice President and Finance Committee Chairman. In North America, he is a Director and Past Chairman of Canpotex Ltd, Director and Past Chairman of the Potash and Phosphate Institute (PPI), Director and Chairman of The Fertilizer Institute (TFI), Past Chairman of the Canadian Fertilizer Institute (CFI) and Past Chairman of the Foundation for Agronomic Research (FAR).

The term of office for IFA's President is two years, in this case, through May 2005. ●



Wladimir Puggina (right) congratulates his successor John Van Brunt on becoming IFA's latest President

Conference Speakers Highlight Food Security and Trade

During the 71st Annual Conference, IFA members had the opportunity to hear new perspectives on some of the most pressing issues facing agriculture and the fertilizer industry today.

In addition to the crop nutrition award presentation, the Opening Session included two keynote speeches, one by Joachim von Braun, Director General of the International Food Policy Research Institute

(IFPRI), and the other by Bob Friesen, President of the Canadian Federation of Agriculture.

Joachim von Braun presented IFPRI's strategy for contributing to global food security. He drew attention to the obstacles and opportunities facing governments, farmers, industry and other partners in the fight to end hunger.

Farmers around the world share many concerns about their future in the global agricultural market, but their situations and needs are extremely diverse as pointed out by Bob Friesen when he addressed agricultural trade policies and related topics.

Speakers in other sessions during the week covered themes including the sustainable development programme at Rio Tinto Borax; the crop protection industry's experiences with product stewardship; the potential impact of biotechnology on fertilizer demand; the relationship between agriculture and the



Joachim von Braun (IFPRI) spoke on food security.

nitrogen cycle; the United States' perspective on China's accession to the WTO, particularly with regard to fertilizers; recent developments in the Australian fertilizer industry and the fertilizer demand situation in a variety of countries. The IFA Secretariat presented the annual reports on "The Global Agricultural Situation and Fertilizer Demand" and "Fertilizers and Raw Materials Supply and Supply/Demand Balances".

IFA members can obtain copies of the papers and visuals presented by visiting the password-protected "Members Only" web site. ●



Bob Friesen (Canadian Federation of Agriculture) presented farmers' perspectives on agricultural trade.



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IFPRI Conference to Focus on Africa

Food and nutrition security remain Africa's most fundamental challenge. About 200 million people on the continent are undernourished, their numbers having increased by 15 per cent since the early 1990s and virtually doubling since the late 1960s. However, recent signs indicate that Africa has climbed back onto the international policy agenda. New political initiatives are gaining momentum both inside and outside the region.

The International Food Policy Research Institute (IFPRI), under the auspices of its 2020 Vision Initiative, will facilitate an international conference in Kampala, Uganda from 1 to 3 April 2004 in partnership with the Government of Uganda and with the strong support of H.E. President Museveni, Chairman of the IFPRI 2020 International Advisory Council. This all-Africa conference will bring together the traditional and new actors and stakeholders to deliberate on how to bring about change and action to assure food and nutrition security. This conference will be unique in that it will be all-Africa, multi-disciplinary, multi-sectoral and multi-actor.

The conference will be conducted in both plenary and parallel sessions. It will have



three major parts: (i) taking stock and responding to driving forces; (ii) identifying technical, institutional, and political solutions for bringing about change and action in priority areas of intervention; and (iii) examining how key actors can be strengthened and partnerships between/among them facilitated for influencing change and catalyzing action. The programme is being developed in close consultation with the Conference Advisory Committee, made up of distinguished African policymakers, researchers, and civil society leaders as well

as representatives of partner/co-sponsor institutions, under the chairmanship of Dr. J. J. Otim, special advisor to President Museveni.

Participation

The conference's organizers are seeking perspectives and experiences from major disciplines and sectors from across Africa, spanning key stakeholder groups, including government, parliament, NGOs, farmers, business and industry, research, media and donor institutions. In order to assure balanced and broad participation in terms of the various stakeholder groups, issues to be covered, disciplines, and geographic regions, participation will be by invitation only. Expressions of interest (including a short description of yourself and/or your organization as well as full contact information) should be **sent to:**

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Taking a Closer Look at Fertilizers

Mention the word "fertilizer" and many people either wrinkle their nose at the memory of a manure-spread field or think of nutrient-enriched waterways. But the fertilizer story is more complex than that.

Earlier this year, the Potash & Phosphate Institute (PPI) and The Fertilizer Institute (TFI) teamed up to publish a special issue of PPI's *Better Crops with Plant Food* that explains the role played by fertilizers in agricultural production, including links with environmental issues and food quality. Destined for a non-expert audience, this special edition covers a number of questions that concern today's consumers in a series of short articles.

The Importance of Fertilizers

"Nutrients in Soil and Nutrients for Food Production" presents some of the basic concepts of crop nutrition in simple language.

Although it imports a variety of goods, North America is largely self-reliant with regard to many basic agricultural products. "Why North America Imports Few Food or Fiber Staples" explains how this is possible

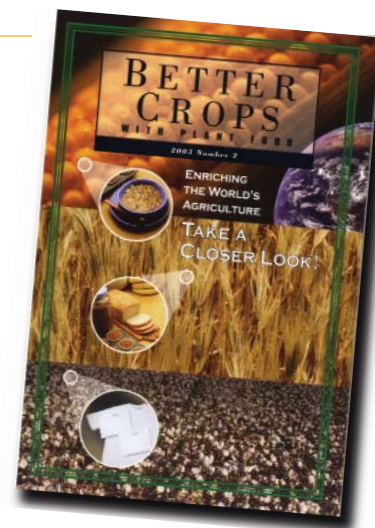
in a largely urbanized society. The article gives an overview of modern farming practices.

Managing the Environment

In "Agriculture's Balancing Act", the author discusses some of the challenges when applying crop nutrients to achieve abundant high-quality yields while protecting the environment. "Water Quality in the Gulf" considers the impact of run-off into the Mississippi River Basin on marine conditions in the Gulf of Mexico and the efforts undertaken by the wider agricultural community to improve the situation.

Food quality

"Fertilizer for Better Bread" explains the importance of nitrogen, a necessary precursor of protein, using raw material wheat and its final product bread as an example. In a similar vein, "Fertilizer and Tofu" shows how proper plant nutrition can increase the presence of naturally occurring substances that positively influence human health, such as isoflavones and antioxidants. "The



"Fertilizer in Your Salt Shaker" focuses on potassium and its basic health benefits.

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Fertilizer Industry Meets Historic Society



Left to right: Walter B. Wurster, PSPA; Craig Naasz, TFI; Wladimir A. Puggina, Fertibras/IFA and Luc M. Maene, IFA

In 1785, a group of distinguished residents, including Benjamin Franklin, established the Philadelphia Society for Promoting Agriculture (PSPA). Originally set up for the purpose of exchanging crop and animal pro-

duction information, the Society still exists today. Over the years, PSPA's mission has changed slightly and today consists of helping its members and the general public develop well informed opinions with respect to

the policies, achievements and concerns of US agriculture.

Two hundred and eighteen years after the creation of the oldest functioning agricultural society in America, IFA was honoured to welcome PSPA's current President, Walter B. Wurster, to the Opening Session of IFA's 71st Annual Conference.

World Food Programme Work Wins World Food Prize

Catherine Bertini, Under Secretary General of the United Nations, was named the 2003

World Food Prize Laureate on 16 July, during the World Congress of Food Science and Technology.

Ms. Bertini will receive the honour on the occasion of the 2003 World

Food Prize International Symposium in Des Moines, Iowa on 16 and 17 October. The event is held annually in conjunction with World Food Day and this year focuses on "Building Alliances to Defeat Hunger and Famine".

The 2003 Prize, worth USD 250,000 will be granted to Ms. Bertini in recognition of the work she carried out during her ten-year tenure at the helm of the UN's World Food Programme (WFP). Through the transformation of the organization that she effected between 1992 and 2002, she has been credited with helping save over 50 million people, mostly women and children, from famine and death by starvation and with reducing the suffering of many mil-

lions more. Ms. Bertini's vision altered the nature of WFP, which had previously focused on development assistance, by making it an exceptionally efficient logistical machine for the delivery of humanitarian food aid at short notice.

Her innovations include channeling food aid through women, resulting in a more widespread distribution within families and communities. More than 60 per cent of WFP assistance is now delivered in this way.

The changes wrought under Ms. Bertini have proved to be systemic, outlasting her departure from WFP last year. The Programme currently ships 1000 metric tonnes of food each hour, 24 hours a day, seven days a week.

The World Food Programme is funded exclusively by voluntary donations from United Nations member states and individuals.

Before assuming her WFP role in Rome, Ms. Bertini focused on improving the food security of poor Americans as part of the US administration. Her leadership of the World Food Programme was supported by two US presidents from both major political parties.

The World Food Prize was created in 1986 by Dr. Norman E. Borlaug, who himself had received the Nobel Peace Prize for his work to fight hunger across the globe.

Crop Nutrients Council Established in Canada

At the initiative of the Canadian Fertilizer Institute (CFI), a Crop Nutrients Council was recently created in order to foster cooperation and partnerships on non-regulatory approaches to crop nutrient management in Canada.

"We need to bring together everyone who uses or produces crop nutrients. I believe this Council will help ensure that crop nutrients will continue to play a vital role in crop production in Canada and in providing people around the world with safe and wholesome food", said Gary Snyder, Chairman of CFI.

The Council will be a forum to promote a better understanding of best management practices for crop nutrients based on sound scientific and risk management principles that are voluntary, effective, and financially sustainable. The Council will complement existing industry support for the Certified Crop Adviser programme and ongoing leading-edge research.

The Council came into being on 22 May, when a broad range of agricultural industry partners including growers, crop producer and livestock groups, fertilizer retailers, distributors and manufacturers met. These stakeholders together developed the Council's mission statement and objectives, and appointed an acting executive to steer further development. The acting executive currently includes environmental, livestock, grain, retail, general farm and CFI representation.

CFI received a grant under the Canadian Adaptation and Rural Development (CARD) Program to help establish this Council.

For more information on the Crop Nutrients Council visit www.cfi.ca.




from principle to practice

This article is the second in a series that explores how IFA members are integrating concepts like sustainable development into their business strategy and daily activities.

GPIC's Management Concept Pays Dividends Across the Board

Gulf Petrochemical Industries Co. (GPIC) has developed a unique management style that has contributed significantly to its position as a leading petrochemical and fertilizer manufacturer. Its management process, MOSIE, carries the company through the definition of its mission and vision (M), setting objectives and goals (O), strategic planning (S), implementation and monitoring of the realization of the strategy (I) and feedback to evaluate performance and make adjustments (F).

What sets this process apart is its marriage with the combined effects of workforce creativity, motivation and a new organizational culture, known collectively in the company as CREAMOC. This approach, which combines effective strategic management and the human element in creating a motivated and creative workforce within a healthy working environment, is explained in a newly published book called *The Key to Organisational Success* by Dr. Mustafa Al Sayed, GPIC's General Manager.

GPIC stands firmly behind the importance of economic, environmental and social progress as key elements of the company's definition of success.

"People are our greatest asset"

Worldwide, many employers intone some variation on the phrase that people are the most important resource upon which the company can draw. In order to make these words ring true, GPIC invests in its workers' health, safety, professional development and communities.

Up to August 2003, the company has registered nearly five million accident-free

working hours. This achievement was rewarded by the Chemical Sector Award from the Royal Society for the Prevention of Accidents. GPIC uses its annual "Safety, Health and Environment Week" to raise employee and community awareness of accident prevention and the company's engagement vis-à-vis the environment.

Health issues are addressed by maintaining high standards in the workplace and by running a health campaign that provides information to employees on topics as seemingly unrelated to their daily jobs as oral healthcare. GPIC's management believes that a commitment to the overall health of its workforce will result in better performance and higher productivity.

The company has been honoured with the Shaikh Mohammed Bin Rashid Al Maktoum Award for Arab Management as well as the Prime Minister Shaikh Khalifa bin Salman Al Khalifa Award for excellence in a major industrial sector.

The company shows a dedication to the personal development of employees from the shop floor to the corridors of the executive suites. In 2002, GPIC became the first company in Bahrain with an organized trade union. Employees elected their representatives in October, and this group is considered a key element in helping workers make the most of their potential to contribute to the company's performance, especially in areas of safety and environmental protection.

GPIC's management has also made it a priority to foster the development of the local workforce rather than importing educated expatriates. The "Bahrainization" level in the company has reached 75 per cent, a particularly significant figure in a technology-based industry. As part of its efforts to improve working conditions and prepare employees to assume management tasks, the company supports young executive recruits as they seek additional training or undertake advanced studies. For example, when employees complete Masters degrees with company support, GPIC organizes a special ceremony to mark the occasion.



Dr. Mustafa Al Sayed (left), General Manager of GPIC and contributor of this article, receives the Prime Minister's Award for excellence in a major industrial sector from His Highness the Prime Minister (right).

The Environment Counts Too

GPIC has worked to make its industrial site a showcase of good environmental management. Extra land was converted into a bird sanctuary to accommodate both resident and migrant birds, of which some 3800 visit each year. The company also maintains a fish farm and vegetable garden, which testify to the efforts made to keep the area around the facility in a good ecological condition.

To help foster a culture of high environmental standards, GPIC welcomes educational visits. Last year, the Children's Science Centre of the General Organization for Youth and Sports brought a group of young people to the company to learn about GPIC's programmes for marine life and environmental protection. As a framework for discussions about the environment, the children learned about the company's operations, including production, employee training, exports and programmes to protect health and safety. A presentation on environmental protection dealt with the practical applications of scientific projects.

Sustained Development

GPIC considers the preservation of the environment to be a national duty and a service to the local community. To bring this message home and inspire others to follow the company's example, GPIC cooperated with the University of Bahrain on a book entitled *Sustained Development*. The document was prepared by GPIC staff and underlines the close relationship between industrial development, enhancement of human resources and preserving the environment. The title hints that the company is not ready to rest on its laurels and will continue to raise its standards for social and environmental success as a foundation for sound economic performance.

For more information, please **contact** GPIC - Gulf Petrochemical Industries Co. P.O. Box 26730, Manama, Bahrain Tel: +973 731777 Fax: +973 731047 gpic@gpic.com www.gpic.com



GPIC's annual family day celebrations promote safety, health and environmental awareness among employees' families.

Industry Leadership Changes at the Annual Conference

President

J. Van Brunt, Agrium Inc. (Canada)

Immediate Past President

W. Puggina, Fertibras S.A. (Brazil)

Senior Vice President

S. Wu, Sino-Arab Chemical Fertilizers Co. Ltd (China)

Vice President, Member of the Executive Management Group

M. Cherif, Office Chérifien des Phosphates (Morocco)

Chairman of the Finance Committee

T. Enger, Norsk Hydro ASA (Norway)

Director General (ex officio)

L. Maene, IFA

Vice President for Africa

E. Makonese, Chemplex Corp. Ltd (Zimbabwe)

Vice President for Brazil

N. Pereira dos Reis, Copebras, Ltda

Vice President for Central and East Europe

A. Gorbachev, Phosagro (Russia)

Vice President for China

L. Chen, China National Chemical Construction Corporation

Vice President for Hispano-America

E. Ponce, Sociedad Quimica y Minera de Chile S.A. (Chile)

Vice President for the Middle East

E. Gökan, Toros Fertilizer and Chemical Ind. Co., Inc. (Turkey)

Vice President for East Asia

A. Hassanudin A. Kamaluddin, Asean Bintulu Fertilizers Sdn Bhd (Malaysia)

Vice President for North America

D. Pertz, IMC Global Inc. (USA)

Vice President for Oceania

G. Davis, Incitec, Ltd (Australia)

Vice President for South Asia

P.S. Gahlaut, Indian Potash Ltd (India)

Vice President for West Europe

J.-L. Besson, Grande Paroisse S.A. (France)

Chairman of the Agriculture Committee

A.S. Shriram, DCM Shriram Consolidated, Ltd (India)

Chairman of the Production and International Trade Committee

W.J. Doyle, PotashCorp (Canada)

Chairman of the Technical Committee

S. Al-Ghafli, FERTIL-Ruwais Fertilizer Industries (UAE)

EXECUTIVE MANAGEMENT GROUP
(EMG)

The IFA Secretariat would like to take this opportunity to express its appreciation to the many company volunteers who contribute to the activities of the Association. Special thanks go to those who have finished their term in recent months.

At the Annual Conference, it was decided to combine the vice presidencies for North-east and South-east Asia into a new office covering all of East Asia. At the same time, a dedicated vice presidency for China was established.

Vice Chairman of the Agriculture Committee

B. Stenroed, Norsk Hydro ASA (Norway)

Convenor of the Crop Nutrition Biotech Watch Group

R. Rennie, Agrium Inc. (Canada)

Convenor of the Task Force on Fertilizer Use Constraints

M. Nielsen, Kemira GrowHow Oy (Denmark)

Convenor of the Working Group on Fertilizer Demand Forecasts

G. Buckley, CF Industries, Inc. (USA)

Convenor of the Task Force on Micronutrients

M. Gutierrez, Rio Tinto Borax (USA)

Convenor of the Working Party on Ammonia and Derived Products

T. Bakken, Hydro Belgium SA

Convenor of the Working Party on Phosphates

C. Ricard, Cargill Fertilizer, Inc. (USA)

Convenor of the Working Party on Potash

B. Wiechens, K + S Kali GmbH (Germany)

Convenor of the Working Party on Sulphur

W. Kennedy, Shell Canada Ltd

Vice Chairman of the Technical Committee

B. Christensen, Kemira GrowHow Oy (Denmark)

Convenor of the Emissions Task Force

T. Jenssen, Norsk Hydro ASA (Norway)

Convenor of the Safety in Production Task Force

O. Morris, Cargill Fertilizer, Inc. (USA)

Convenor of the Energy Task Force

F. Al-Ansari, GPIC (Bahrain)

Convenor of the Task Force on Sustainability Reporting (Comms)

Bhanu Swaminathan, Fertiliser Association of India

AGRICULTURE COMMITTEE
(AC)

PRODUCTION & INTERNATIONAL
TRADE COMMITTEE (PIT)

TECHNICAL COMMITTEE
(TC)

EXECUTIVE COMMITTEE

Enhancing Phosphatic Fertilizer–Use Efficiency in Sub-Tropical Regions

Milkha S. Aulakh – 2001 IFA International Crop Nutrition Laureate
 Punjab Agricultural University, Ludhiana, India 141004 – msaulakh@satyam.net.in

Phosphorus (P), an essential nutrient for plant growth, plays a major role in the existence of all living creatures. Among other things, it ensures the transfer and storage of energy and permits the conservation and transmission of genetic characteristics in plants, humans and animals. Living creatures need phosphorus, and plants are the primary providers of this indispensable element. It is therefore imperative to develop and promote agricultural prac-

tices that enhance phosphatic fertilizer-use efficiency and minimize its potential unwanted effects on the environment.

In South and East Asia, subtropical regions have summer crop-growing seasons characterized by high temperature and rainfall. The winter is often dry with low temperatures. Irrigated areas are under annual double cropping systems where summer crops such as rice, maize, groundnut, and soybean are followed

by wheat, maize, rapeseed, mustard or vegetables in winter.

P deficiency has been identified as one of the major constraints in crop production on these soils. Farmers in the region are largely cash-limited, restricting their capacity to buy fertilizers. Several field experiments have been conducted with predominant cropping systems to develop efficient nutrient-use management practices and to reduce environmental risks. The results are summarized below.

Phosphorus for improvement in crop yields

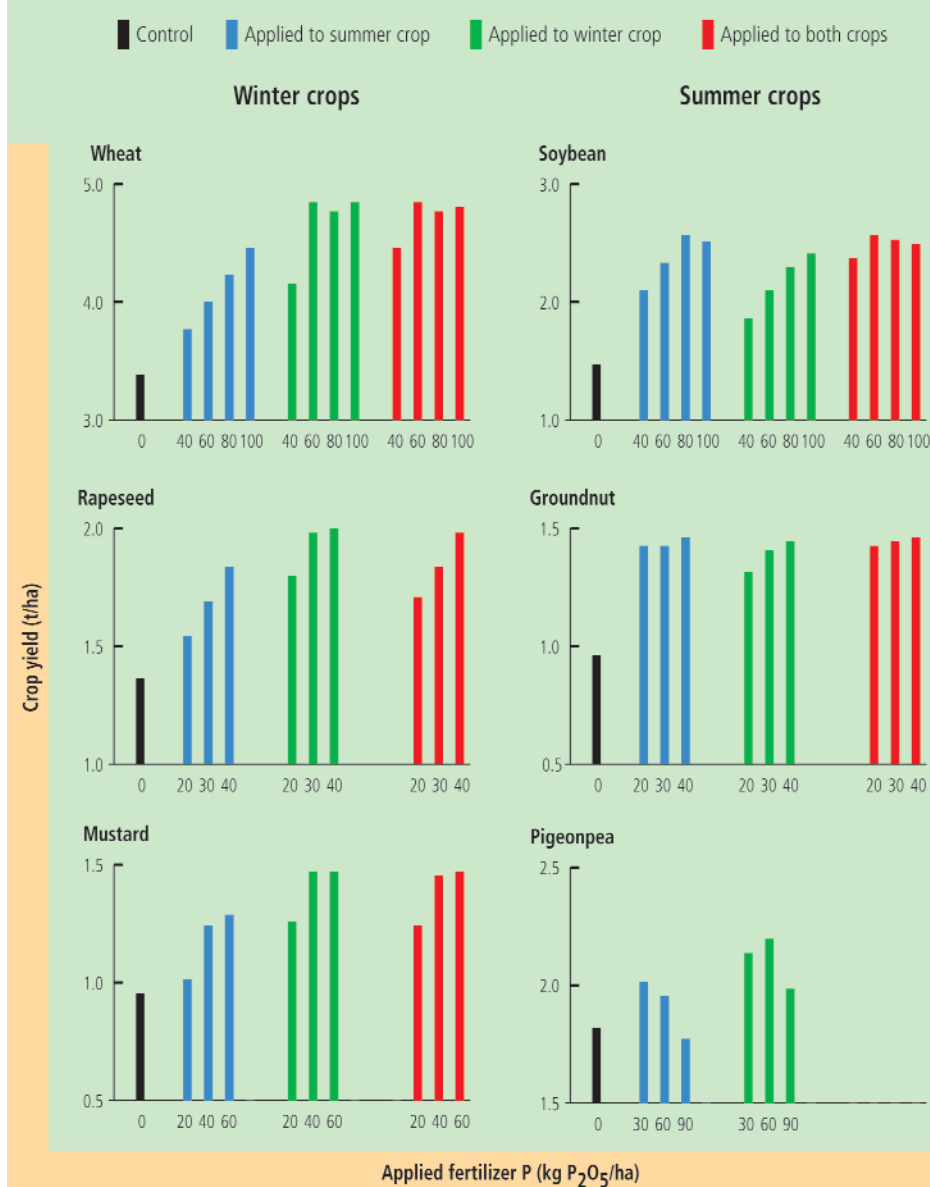
Crop species and their cultivars/varieties vary in P requirements for optimum production. Long-term field experiments under the conditions mentioned above showed significant crop yield responses to P-fertilizer application in combination with other major plant nutrients. Most of the winter crops responded consistently to P application, suggesting that 60 kg P₂O₅ per hectare (ha) is adequate for wheat and 40 kg P₂O₅ per ha for rapeseed and mustard. Similarly, linseed, lentil and chickpea require 40 kg P₂O₅ per ha, while sunflower needs 30 kg P₂O₅ per ha. The responses of these crops to residual P, which was applied to preceding summer crops, were significantly lower than to directly winter-applied P. However, no significant differences were observed between applications only in winter and applications in both winter and summer.

In the case of summer-grown legume crops, groundnut, pigeonpea and soybean responded significantly to directly summer-applied P up to 20, 40 and 80 kg P₂O₅ per ha, respectively where the preceding winter crops did not receive any fertilizer P. These investigations with different cropping systems confirmed that groundnut, pigeonpea and mungbean grown in the summer season could solubilize residual soil P to meet their full P requirements. Nevertheless, residual P only partially fulfills the high demand of soybean. For instance, where wheat received 60 kg P₂O₅ per ha, the succeeding soybean crop began responding at 60 kg P₂O₅ per ha instead of 80 kg P₂O₅ per ha.

The differential response of winter and summer crops is due to two factors. First, during summer, the temperature is relatively high (26 - 45 °C), compared to 5 - 20 °C in winter. This, coupled with high soil moisture status in

Figure 1

Crop yields obtained with fertilizer P applied either to winter-grown, summer-grown or both crops in the cropping sequences.



the rainy season (74 to 85 per cent of the annual 600 to 1200 mm rainfall occurs from July to September), enhances the solubility of native soil P and residual fertilizer P. Second, in the slightly alkaline semiarid subtropical soils, most of the inorganic P exists as calcium-bound P; legumes use less-soluble calcium phosphates and residual soil P more effectively than non-leguminous plants. This is presumably due to certain genetic characteristics of legumes.

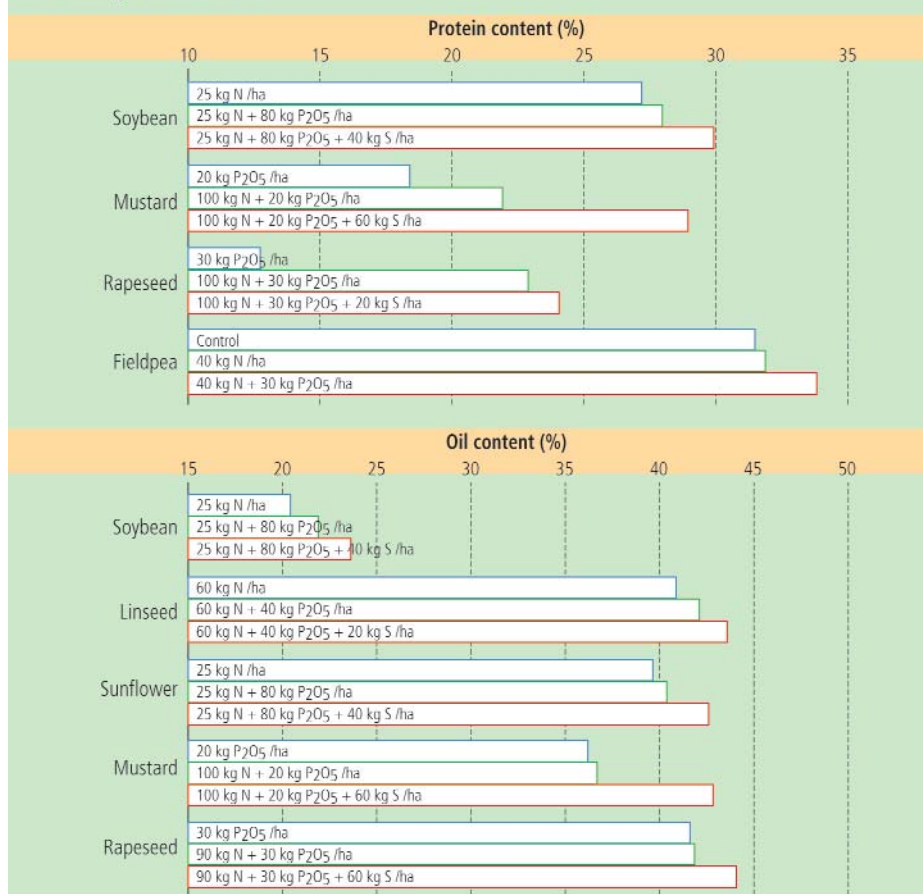
Phosphorus can improve food quality

When appropriate amounts of P fertilizer were applied, in conjunction with nitrogen and sulphur, the protein content of crops increased 2 to 14 per cent and oil content 3 to 7 per cent.

The relative concentration of different fatty acids in oilseeds determines their usefulness and quality. Linseed oil with high linolenic acid is best suited for use in the manufacture of paints, oilcloth and linoleum. The research revealed that balanced and optimum nutrient supplies to linseed accelerated synthesis of linolenic acid. Similarly, soybean and sunflower crops that received adequate amounts of phosphorus produced higher proportions of polyunsaturated fatty acids, thereby improving their contribution to human health.

Figure 2

Protein and oil content in different pulses and oilseeds as influenced by balanced use of P along with N and S.



Phosphorus use efficiency of crops and cropping systems

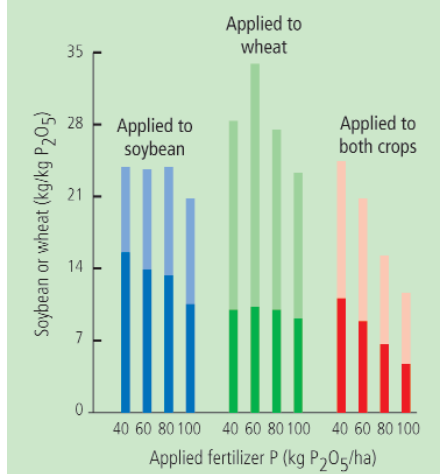
For phosphorus, use efficiency greatly varied with different rates and frequencies of applied P. Efficiency was greater at each P rate when P was given only to the winter crop than when given only to the summer crop; efficiency was lowest when both winter and summer crops were fertilized. For example, an application of 60 kg P₂O₅ per ha in winter produced 23.5 kg of wheat and 10.5 kg of soybean per kg P₂O₅ applied, with a total yearly P fertilizer use efficiency of 34 kg yield per kg P₂O₅. When 60 kg P₂O₅ per ha was applied only to soybean (in summer), the total yearly fertilizer P use-efficiency declined to 24 kg yield per kg P₂O₅. The highest P-use efficiencies obtained in other cropping systems, such as groundnut/rapeseed and pigeon pea/wheat, corroborated these observations. This suggests that the application of P fertilizer to winter-grown crops is the best option in these agroclimatic conditions.

Depleting or building the phosphorus in soils

After 25 years of cropping, plant-available phosphorus (Olsen-P) decreased slightly in the control plots that did not receive phosphorus

Figure 3

Phosphorus fertilizer use-efficiency of soybean (dark colour bars) and wheat (light colour bars) from different rates of P applied to soybean, wheat and both crops in soybean-wheat system.



fertilization, while organic P (a form that only becomes available to crops after mineralization) declined by 50 per cent. In fertilizer-treated plots, organic P increased by 15 to 37 per cent and Olsen-P increased from an initial 26 kg P₂O₅ per ha to between 33 and 77 kg P₂O₅ per ha after three years. After eight years, Olsen-P levels were between 36 and 132 kg P₂O₅ per ha, but no further increase was detected thereafter. Of the total fertilizer P added over 25 years, crops removed 21 to 54 per cent, whereas 33 to 64 per cent accumulated in the ploughed layer of soil, leaving 10 to 32 per cent unaccounted for, which was probably leached to the lower soil layers. Furthermore, the combination of optimum rates for P fertilization and application only to winter crops significantly reduced the conversion of P fertilizer to forms of the nutrient that crops cannot use.

Conclusions

These results suggest that in subtropical regions, the application of P fertilizer once a year to winter crops (a) may suffice to meet the P needs of both winter and summer crops; (b) could tremendously enhance the P fertilizer-use efficiency and P recovery, optimizing cost effectiveness; (c) might drastically reduce excessive accumulation of residual fertilizer P in soil, as well as its conversion to non-labile P pools, thus minimizing the potential risk of P translocation and contamination of groundwater.

The benefits of good P fertilizer management demonstrated in this project include:

- enhanced nutritional value of crops;
- better returns on investment for farmers;
- reduced unwanted environmental impacts.

Highlights from the Agriculture Committee



The IFA Agriculture Committee in May 2003 at its yearly meeting

The Agriculture Service has issued the cd-rom of the IFA-FAO Agriculture Conference that was held in Rome from 26 to 28 March 2003. The cd contains all the papers that were presented, as well as abstracts of the posters that were displayed on this occasion. All conference participants have received a copy of the cd-rom, and additional copies are available from

the IFA Secretariat on request.

At its yearly meeting held on the occasion of the 71st IFA Annual Conference, the Agriculture Committee discussed a number of issues and

confirmed the programme of work for the next twelve months.

During the Philadelphia conference, the Secretariat of the Agriculture Committee presented its annual report on the medium-term outlook for the global agricultural situation and fertilizer demand. In addition, the IFA Council adopted the position paper "Use of Fertilizers in Organic Farming", which is now posted on the IFA web site.

The Task Force on Micronutrients is preparing a symposium that will address agronomic, health, economic and market aspects of the use of micronutrients. This event will take place in New Delhi, India from 23 to 25 February 2004. A first announcement will be circulated to IFA members after the summer holidays.

The 2004 IFA International Crop Nutrition Award will be open to scientists from international agricultural research centres and to researchers based in industrialized countries or countries with economies in transition. We encourage IFA members to nominate qualified scientists, as a

consistently strong field of candidates is a key factor in maintaining a high profile for the award. More information on the nomination process is available in the separate leaflet inserted in this issue of Fertilizers & Agriculture. ●

IFA Director General L. M. Maene (left) and then IFA President W. A. Puggina (right) congratulate Dr. V. T. Balasubramanian, 2003 IFA Crop Nutrition Laureate, and Mrs. Balasubramanian.



Highlights from the Conference Service

The autumn conference programme starts on 22 September 2003 in St. Petersburg, Russia with the IFA Production and International Trade Conference and Regional Conference for Eastern Europe and Central Asia. This year, invitations have been extended outside the IFA membership in the region. A visit to the Baltic Bulk Carrier Terminal is scheduled at the end of the event.



The St. Petersburg meetings have benefitted greatly from the support of IFA's members in Russia, namely the International Potash Company Ltd (IPC), JSC Acron, MCC-Eurochem, Phosagro and OAO Uralkaly.

The IFA Technical Committee then convenes in Abu Dhabi, UAE from 30 September to 2 October 2003. Ruwais Fertilizer Industries (FERTIL) has generously sponsored the

organization of the meeting, which will be followed by a visit to FERTIL's facilities.

The IFA Regional Conference for Asia and the Pacific is

scheduled from 6 to 8 October 2003 on Cheju Island, Republic of Korea and starts with the traditional IFA Golf Competition. Namhae Chemical Corporation has kindly contributed to the regional conference and its preparations.

The season will close in Bangkok, Thailand with the 29th IFA Enlarged Council Meeting from 9 to 11 December 2003.

For details on these events, please visit www.fertilizer.org.

IFA Production and International Trade Conference and Regional Conference

22-26 September
St. Petersburg, Russia
Open to non-IFA members by invitation

Registration deadline: 20 August 2003

IFA Technical Committee Meeting

30 September - 2 October
Abu Dhabi, United Arab Emirates

Limited to IFA members.

Registration deadline: 27 August 2003

IFA Regional Conference for Asia and the Pacific

6-8 October
Cheju Island, Republic of Korea
Open to non-members of IFA.

Registration deadline: 1 September 2003

29th Enlarged Council Meeting

9-11 December
Bangkok, Thailand
Limited to IFA members.

Registration deadline: 5 November 2003 ●

Highlights from the Technical Committee



Participants at the June Nitrogen Fertilizer Production Technology Workshop

Following a very successful Nitrogen Workshop in June with more than 30 participants from 18 countries, a similar workshop on the production of phosphates will be held from 15 to 19 September 2003 in Brussels. This workshop will examine the status and most recent developments of phosphate fertilizer production technologies. It will also provide an opportunity to exchange ideas and share information through discussion of the various economic, safety, environmental and technical issues.

The fertilizer production workshops are conducted by IFDC-An International Center for Soil Fertility and Agricultural Development, on behalf of the Association. For more information, **contact** IFDC's Director of the Training and Workshop Coordination Department at telephone +1 256 381 6600, fax +1 256 381 7408 or e-mail hrd@ifdc.org.

IFA is inviting papers on innovative production techniques for its next Technical Conference, to be held in Beijing, China from 20 to 23 April 2004. A list of topics of interest to the expected participants has been prepared with the cooperation of our members and can be obtained by **contacting** Valerie Pascual at vpascual@fertilizer.org or fax +33 1 53 93 05 47. The closing date for offers of papers is 15 September 2003. During the event, a visit will be organized to the facilities of the host company, Sino-Arab

Chemical Fertilizers Co. Ltd (SACF).

The Energy Task Force met for the first time on 4 June in Brussels. During the meeting the members of the Task Force established its work programme and decided to focus the first benchmarking survey in 2004 on energy efficiency in ammonia production. Details on the outcome of the meeting can be consulted on the Technical Committee pages of IFA's Members Only web site.

On the same day, the Task Force on Safety in Fertilizer Production also convened to review the results of the 2002 safety benchmarking survey. Although the number of participants was similar to last year, the number of working hours covered has risen significantly and contract workers have been included in this year's evaluation. The safety performance of the industry in 2002 is comparable to what was reported for 2001. The report and its summary are expected to be released some time in September.

The Emissions Task Force met in Paris on 18 July to review the draft 2002 Environmental Report. The number of participating companies increased to 64 from 52 the previous year, with a corresponding rise in the tonnage of products under consideration. The Task Force is near the end of its three-year mandate and will evolve into a permanent Environment Working Group. ●

Highlights from the Production and International Trade Committee

Terje Bakken, Vice President, Head of Ammonia Trade and Shipping at Hydro Belgium SA has kindly accepted the invitation to become the new Convenor of the Ammonia and Derived Products Working Party, which reports to the Production and International Trade Committee. He assumed his role for the first time on the occasion of the IFA Annual Conference in Philadelphia.

In May, the Secretariat gave its annual "Report on Global Fertilizers and Raw Materials Supply and Supply/Demand Balances". It was presented by Michel Prud'homme and, following consultation with the PIT Committee's four working parties, the finalized document is now available in the Members Only section of the IFA web site.

In recent months, numerous updated statistics and surveys have been released by the PIT Committee. These reports are available only to IFA members and may be obtained by **contacting**:

Sylvie Marcel at smarcel@fertilizer.org or fax +33 1 53 93 05 47.

Annual Statistics 2002

Ammonia, ammonium nitrate, ammonium sulphate, phosphate rock, sulphur and sulphuric acid (preliminary), urea and the cd-rom compilation of all 2002 annual statistics

Quarterly Statistics: 1Q and 2Q 2003

Ammonia, phosphate rock, processed phosphates, sulphur and urea

Survey of Capacities 2003 (Summary report)

Ammonia and urea ●

Acknowledgement

The International Fertilizer Industry Association (IFA) would like to thank the following members in North America who jointly hosted the final evening at this year's Annual Conference in Philadelphia: A.J. Sackett & Sons Co., Agrifos Fertilizer L.P., Agrium Inc., Bay Sulfur Company, BP Canada Energy Company, Cargill Crop Nutrition, ConAgra International Fertilizer Co., Great Salt Lake Minerals Corp., H.J. Baker & Bro. Inc., International Commodities Export Corporation; IMC Global Inc., International Raw Materials Ltd., J.R. Simplot Co., Monsanto Environmental Systems Inc., PotashCorp, Prism Sulphur Corporation, Rio Tinto Borax, Terra Industries Inc., Royster-Clark, Inc., Transammonia Inc., U.S. Agri-Chemicals Corporation, with support from Chas S. Lewis & Co. Inc., Nitron International Corporation and Primary Resources Inc.

Information resources

IFA/FAO/IMPHOS Publications

Now available in French and Arabic

Les engrais et leur utilisation

Précis à l'usage des agents de vulgarisation agricole.



IFA/FAO/IMPHOS. 4ème édition. Rome, Italie, 2003. ISBN 92-5-104414-7. 77 pp. Cette brochure présente des orientations sur l'utilisation des engrais pour les agents de vulgarisation. Elle traite du rôle de la fertilisation des cultures basée sur la caractéristiques du sol. Elle donne des recommandations générales en matière de fertilisation minérale de certaines cultures et contient des informations sur les analyses de sols et de plantes. Quelques suggestions pratiques sont également présentées sur les dispositifs pour conduire des démonstrations sur l'utilisation des engrais, et d'une façon générale, sont présentées des techniques pour la mise en oeuvre d'actions de vulgarisation agricole.

**ARABIC VERSION
Fertilizers and their Use.
(A Pocket Guide for Extension Officers)**

IMPHOS, FAO, IFA, 4th edition, Rome, Italy, 2003. 53 pp.

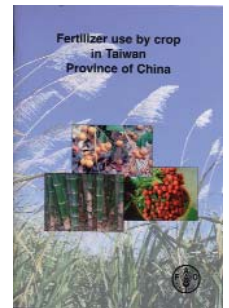
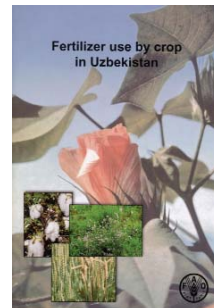
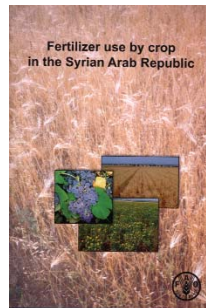
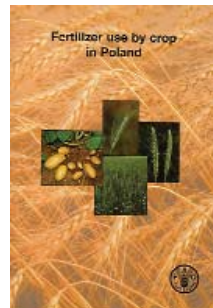
This booklet presents guidelines for extension staff on the use of fertilizers. The booklet addresses the role of fertilization in relation to soil characteristics. It provides general fertilizer recommendations for selected crops and contains information on soil and plant tissue testing. Practical suggestions are also offered regarding the design of fertilizer use demonstrations and extension techniques in general.



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

FAO and FAO/IFA Publications

New countries in the Fertilizer Use by Crop series



Fertilizer Use by Crop in Uzbekistan

FAO, 1st edition, Rome, Italy, 2003. 31 pp. Prior to Uzbekistan's independence, the monoculture of cotton led to serious problems of land degradation and to the environmental catastrophe of the Aral Sea. Since independence, priority has been given to the diversification of agricultural production and self-sufficiency in cereals has now been achieved. Farming, although not land ownership, has been privatized. This study describes the agro-ecological and farming conditions of the country, cropping, and the use of fertilizers and manures.

Fertilizer Use by Crop in the Syrian Arab Republic

FAO, 1st edition, Rome, Italy, 2003. 33 pp. About half of the population of the Syrian Arab Republic depends primarily on agriculture for its livelihood and agricultural exports are a major source of foreign currency for the country. Since the 1980s, agricultural production in the Syrian Arab Republic has not been sufficient to meet domestic demand, which is increasing as a result

of population growth, generally rising incomes and urbanization. Increased fertilizer use is expected as a result of the expansion of irrigation, the development of fertilizer use on fodder crops and increased use on fruit crops.

Fertilizer Use by Crop in Poland

FAO, IFA, 1st edition, Rome, Italy, 2003. 44 pp. This study examines the use of plant nutrients on individual crops in different regions of Poland, in the context of the agro-ecological conditions, the structure of agriculture, the production and consumption of mineral and organic plant nutrients, the relationship between nutrient inputs and outputs, the need for mineral nutrients and the economics of fertilization.

Some copies are available from IFA (see order form page 12). For FAO contact details, see below.

Fertilizer Use by Crop in Taiwan, Province of China

FAO, IFA, Rome, Italy, 2002. 56 pp. Copies are still available from IFA.

Economie de l'agriculture de conservation

FAO, Rome, Italy, 2003. 67 pp.

ISBN 92 5 204687-9

L'agriculture de conservation est une approche pour améliorer l'utilisation des ressources pour une production durable. Ses avantages incluent une réduction des intrants, une meilleure stabilité des rendements et une augmentation de la rentabilité à long terme. Cette étude examine les facteurs finan-



ciers et autres qui affectent l'adoption et le succès de l'agriculture de conservation que ce soit au niveau national ou mondial.

Contact for all the FAO publications:

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

Publications in French and English can be downloaded from FAO's AGL on-line database at www.fao.org/ag/agl/oldocs.jsp

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

Inclusion does not constitute an endorsement by IFA.



Calendar

IFA - 2003

22 - 26 September

IFA Production and International Trade Conference and Regional Conference

St. Petersburg, Russia

Open to non-IFA members by invitation

Registration deadline: 20 August 2003

30 September - 2 October

IFA Technical Committee Meeting

Abu Dhabi, United Arab Emirates #

Registration deadline: 27 August 2003

6 - 8 October

IFA Regional Conference for Asia and the Pacific

Cheju Island, Republic of Korea

Registration deadline: 1 September 2003

9 - 11 December

29th Enlarged Council Meeting

Bangkok, Thailand #

Registration deadline: 5 November 2003

IFA - 2004

22 - 26 May

IFA Annual Conference

Marrakech, Morocco #

Restricted to IFA members

Non-IFA - 2003

4 - 8 September

4th Fertigation Training Course

Yangling, China

Fax: + 972 8 6280995 hillel.magen@idfertilizers.com

Fax: + 86 10 64194532 natesc_tu@agri.gov.cn

www.ipipotash.org www.ipichina.org

8 - 10 September

8th International Conference on Environmental Science and Technology

Lemnos Island, Greece

Fax: +30 210 6492199 cest@gnest.org www.gnest.org/cest

15 - 19 September

IFA and IFDC* - Phosphate Fertilizer Production Technology Workshop

Brussels, Belgium

17 - 20 September

IPPE 2003 - International Petroleum and Petrochemical Exhibition

Shanghai, China

Fax: + 86 10 82030116 dotnose@163.net

21 - 24 September

12th N Workshop on Controlling N Flows and Losses

Devon, UK

Fax: +44 1837 82139 anne.roker@bbsrc.ac.uk

www.iger.bbsrc.ac.uk/igerweb/confs/N_Workshop/Index.htm

30 September - 1 October

IPI-LIA-LUA Regional Workshop on Balanced Fertilization in Contemporary Plant Production

Kaunas, Lithuania

Fax: +370 347 37096 ausra@izi.lt

5 - 10 October

2003 ANNA Conference (ANPSG / Nitric Acid Producers' Meeting)

Robinsonville, Mississippi, USA

Fax: + 1 613 348 3043 rodriguez@nitrochemcorp.com

www3.sympatico.ca/rod_mon/2003Meet.htm

16 October

IFS Technical Meeting

London, UK

Fax: + 44 1904 492700 secretary@fertiliser-society.org

www.fertiliser-society.org

16 - 17 October

2003 World Food Prize International Symposium

Des Moines, Iowa, USA

Fax: + 1 515 245 3785 wfp@worldfoodprize.org

www.worldfoodprize.org/Symposium/index.htm

20 - 24 October

17th FMB European Fertilizer Conference and Exhibition

Munich, Germany

Fax: + 44 208 979 4573 fmb@fmb-group.co.uk www.fmb-group.co.uk

2 - 5 November

Sulphur 2003 Conference

Alberta, Canada

Fax: + 44 20 79032432 matty.diaz@crugroup.com

www.britishtsulphur.com

6 November

IFS Agronomic Meeting

London, UK

Fax: + 44 1904 492700 secretary@fertiliser-society.org

www.fertiliser-society.org

17 - 21 November

3rd International Methane and Nitrous Oxide Mitigation Conference

Beijing, China

Tel: + 1 202 564 8969 talkington.clark@epa.gov

Tel: + 86 10 8461 2010 cbmc@public.bta.net.cn

www.ergweb.com/methane_china/

18 - 19 November

6èmes Rencontres de la fertilisation raisonnée et de l'analyse de terre COMIFER-GEMAS

Blois, France

Tel: + 33 1 47 20 10 59 comifer@arvalisinstitutduvegetal.fr

www.comifer.asso.fr

19 - 21 November

8èmes Rencontres internationales de l'AFCOME

Strasbourg, France

Tel: +33 5 59 92 38 56 contact@afcome.org

www.afcome.org

1 - 12 December

IFDC* - International Training Program on Fertilizer Marketing Management

Mauritius

7 - 11 December

Dahlia Greidinger Symposium 2003: Nutrient, Substrate and Water Management in Protected Cropping Systems

Izmir, Turkey

Fax: + 44 1904 492700 secretary@fertiliser-society.org

www.fertiliser-society.org

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

The Value of an Association

As a general rule, associations are formed because members believe that certain tasks can be carried out more efficiently and effectively by pooling resources than by a number of individuals acting in isolation. Such a belief led to the creation of the International



Fertilizer Industry Association (IFA). It was established to collect data on the industry, to promote responsible and efficient use of fertilizer products and to improve the image and operating environment of the sector.

Collecting and disseminating global statistics on the industry itself is one of the longest running activities undertaken by IFA. These figures provide a valuable history of our sector while furnishing the basis of detailed forecasts on likely developments affecting the fertilizer industry.

Such outlooks enrich the information that members use to make strategic decisions. They also give financial analysts a fair picture of our sector.

Members may be tempted to share this data and IFA's interpretation with other business contacts who are not IFA members. However, the right of access to the information that companies obtain as one of the benefits of membership in the Association is non-transferable and does not constitute the right to recirculate the data outside the member company.

The Secretariat considers each request to share statistics with non-members on a case-by-case basis. Often, government officials and financial analysts do receive the requested information, because doing so is considered to be in the best interest of the industry. But the Secretariat still reserves the right to make the decision on who can access its copyrighted material. The philosophy is quite simple: a too liberal flow of information to non-members undermines one of the major benefits that comes from belonging to the Association. Sharing this information reduces members' return on their dues investment and decreases

the incentive for new members to join IFA.

The same argument can be made for the use that fertilizer companies make of events organized and reports published by third parties. As a general rule, conferences and reports from the Association are more cost-effective for the simple reason that IFA does not include a profit margin in the prices it sets. As a not-for-profit organization, IFA works on the basis of cost recovery, a principle that is strictly controlled.

Although many third-party studies of our sector reflect a significant amount of original work on the part of the authors, there are also a disturbing number that regurgitate the Association's data with very little value added by the publisher. By purchasing this type of publication, members condone the inappropriate use of IFA's copyrighted material and pay a second time to obtain the same information to which they already have access through IFA membership.

One reason for this seemingly irrational behaviour may be inadequate internal communication within member companies about the benefits of belonging to IFA. In many cases, the Association is in contact with senior management, but not all companies systematically inform the bulk of their employees about the advantages offered by the Association, including new publications and forthcoming events. Yet these employees clearly need information to perform well in their jobs. Since IFA does not have a large promotional budget, they are much more likely to see the glossy advertisements prepared by the commercial sector.

Therefore, each member company has a vital interest to ensure the wide internal distribution of news from IFA, so that its employees can optimize the company's investment in membership. This action will also help ensure that the Association remains the primary source of authoritative information on the production, trade and use of fertilizers and their raw materials. In this way, IFA will remain vibrant and the value of membership will be safeguarded.

-  **International Fertilizer Industry Association (IFA)**
-  28, rue Marbeuf
-  75008 Paris, France
-  Tel: +33 1 53 93 05 00
-  Fax: +33 1 53 93 05 45 / 47
-  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

John Van Brunt, President
Agrium, Canada

IFA Director General

L.M. Maene

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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- Layout: Claudine Aholou-Pütz
- Graphs: Hélène Ginet
- Design: Dora Maltz

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IFA Request Form agriculture September 2003

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

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

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| <input type="checkbox"/> Fertilizer Use by Crop in Poland | <input type="checkbox"/> Fertilizer Use by Crop in Uzbekistan |
| <input type="checkbox"/> Fertilizer Use by Crop in the Syrian Arab Republic | <input type="checkbox"/> Fertilizer Use by Crop in Taiwan |
| <input type="checkbox"/> IFA Annual Conference papers <i>restricted to IFA member companies</i> | |

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