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## IZA Launches Zinc Fertilizer Training Program

IZA has launched its new Zinc Fertilizer Training Program. The Zinc Fertilizer Training Program is a practical workshop that has been specifically designed to assist fertilizer companies in developing, marketing and selling zinc fertilizers and zinc fortified fertilizers. It can also be used by extension or other groups to learn more about the impacts of zinc deficiency and how to address it.

The Zinc Fertilizer Training Program is professionally facilitated by IZA's zinc fertilizer experts. The workshop takes one half day to complete, at the end of which each participant is presented with an official IZA certificate of completion and a practical workbook.



### Some topics covered in the workshop include:

- Why zinc is essential for plants
- Zinc deficiency and how it occurs in plants
- Zinc toxicity in plants
- Zinc deficiency in soils, globally and regionally
- The importance of zinc to human health
- How to correct zinc deficiency with zinc fertilizers
- Response of crops to applied zinc
- Zinc fertilizer availability in-country
- Country-specific fertilizer policy and regulatory issues
- Zinc fertilizer production and marketing
- Role of the International Zinc Association (IZA) and the Zinc Nutrient Initiative (ZNI)



The Zinc Fertilizer Training Program is now offered in China and India and will soon be offered in Brazil. Please contact IZA to schedule a training session for your company.

## **1st IZA-FAI Institutional Award Presented by the Union Minister for Chemicals and Fertilizers during the FAI Annual Seminar 2010 at New Delhi**

The first IZA-FAI Institutional Award on “Promoting the Use of Zinc in Indian Agriculture” was awarded to the All India Coordinated Research Project (AICRP) on Micronutrients, a national level project under the **Indian Council of Agricultural Research (ICAR)** based at the **Indian Institute of Soil Science (IIS)**, Bhopal, India. The award of INR 100,000, along with a plaque and certificate, was presented to Dr. M.V. Singh, Project Coordinator (Micronutrients) by the Union Cabinet Minister for Chemicals and Fertilizers, Mr. M.K. Alagiri, in the Inaugural Ceremony of the FAI Annual Seminar on 29 November 2010.

Those in attendance included key dignitaries such as the Minister of State for Chemical and Fertilizers, Mr. M.K. Alagiri; FAI Chairman, Mr. A. Vellayan; and FAI Director General, Mr. Satish Chander. Over 1,500 delegates including 200 overseas delegates from 40 countries attended the event.

This Institutional Award was organized in collaboration with FAI to increase the awareness of the importance of zinc fertilizers within these groups in view of the high level of zinc deficiency in crops and humans in India. In 2011, there will be a similar award for an individual who has made a significant contribution in “Promoting the Use of Zinc in Indian Agriculture”.



**Dr. M.V. Singh receiving the award from the Minister of Chemicals and Fertilizers, Mr. M.K. Alagiri.**

## **The Success of Customized Fertilizers in India**

There has been much enthusiasm among stakeholders in the zinc sector since the Government of India implemented its Nutrient Based Subsidy Scheme (NBSS) in 2010. India is concerned with the imbalanced use of plant nutrients, which causes declining crop response ratios, stagnant crop productivity and a rising subsidy bill. Switching to NBSS provides the platform for fertilizer policies to address these concerns.



NBSS encourages the development of Customized Fertilizers, which include a combination of nutrients based on the soil and crop requirements. The formulations consist of primary, secondary and micronutrients, including zinc. These fertilizers promote site-specific nutrient management to achieve the maximum fertilizer use efficiency of the applied nutrients in a cost-effective manner. Because soil zinc deficiency is so pervasive throughout India, it is expected that most Customized Fertilizers will be fortified with zinc.



Manufacturers of Customized Fertilizers are also eligible to source subsidized fertilizers as inputs for manufacturing Customized Fertilizers. Consequently, several large fertilizer players have started bringing new Customized Fertilizers to the market, including: **Nagarjuna Fertilizers and Chemicals Ltd.**, **Tata Chemicals Ltd.**, **Coromandel International Ltd.** and **Deepak Fertilisers & Petrochemicals Corporation**. Many more location-specific grades are being planned for launch in different states of the country.

With some of the larger fertilizer companies entering into the zinc fertilizer business, new opportunities will occur in the field of zinc fertilizer manufacturing, marketing and usage.



### Sinofert Joins IZA in Support of the Zinc Nutrient Initiative



The Sinofert Group, has joined IZA as an Affiliate Member. As China's largest fertilizer supplier and distributor, Sinofert produces and distributes premium fertilizers throughout China, the world's largest agricultural market.

Mr. Feng Zhibin, Chief Executive Officer, stated that he looks forward to actively participating in IZA's programs. "Sinofert is committed to delivering value to China's fertilizer industry and farmers through production and distribution of

high quality and efficiency fertilizer products and technologies. We recognize the benefits of IZA's programs and members, and support the organization's work."

Sinofert is the second Chinese fertilizer company to become a member of IZA. Stephen Wilkinson, Executive Director of IZA, noted the importance of China to the zinc and fertilizer industries. Highlighting China's role, he remarked, "Zinc deficiency is becoming the most widespread nutrient deficiency in soil, affecting severely both Chinese agriculture and human health. Sinofert is well-established in the Chinese fertilizer industry and has a strong focus on exploring new fertilizer technologies and markets. They recognize that IZA can provide value and many benefits to its members."

### Promotion of Zinc Fertilizer in China

China is one of the largest agricultural countries in the world and has experienced very rapid growth in agricultural production in the last two decades, following its economic reforms. It is a great challenge to use 9% of the world's arable area to meet the increasing demands of 1.3 billion people (about 22% of the world's population) for food, fiber and fuel.

The intensification of agricultural production per unit area, coupled with large amounts of using macronutrient fertilizers - such as nitrogen (N), phosphate (P) and potassium (K), is causing zinc deficiency to spread rapidly throughout China. Recent research findings indicate that zinc deficiency is the most widespread micronutrient deficiency in China. Nearly 50% of arable soils are low in plant available zinc, limiting further sustainable increases in agricultural production and improvements in human nutrition.

Since 2010, IZA, in collaboration with **China Agricultural University(CAU)**, P.R. China, conducted a nationwide research project evaluating the effect zinc fertilizer has on crop yield and nutrition values in different cropping systems. The results showed that applying zinc fertilizer at an average

rate of 10 kg/ha significantly increased crop yield for rice, corn and wheat by 6-18%. Zinc fertilization also improved crop quality, especially zinc and protein contents of crop products, and economic returns for farmers.



In 2011, IZA and CAU will conduct a nationwide promotion project on increasing zinc fertilizer production and use in China through intensive research, demonstration, education and promotional programs. The major objectives are to increase awareness of the importance of zinc in agriculture and human health; and to increase zinc requirements and zinc fertilizer use in agriculture by developing a fertilizer recommendation system for higher yield, quality and economic return. A total of 18 field trials combining 18 demonstration plots will be conducted in six provinces to evaluate crop response to zinc fertilizer application rates and methods in major grain cropping systems; this will be used to determine the optimum rate and method for zinc fertilizer recommendations.

The promotion and education programs include publications; website communication; training classes and workshops; disseminating the latest research, achievements and knowledge on zinc fertilizer use in agriculture and on the latest zinc fertilizer technology; and promoting zinc fertilizer production and use in China. It is projected that the success of the project would lead to significant increases of zinc fertilizer use in China, contributing to the improvements of both crop production and human nutrition.

## **New Videos**

Four new videos in support of the Zinc Nutrient Initiative have been released on IZA's website, with two more coming in early 2011.

The first is a five-minute video about the importance of zinc fertilizer use in India. The video, specifically produced for the Indian market, highlights the benefits and importance of zinc fertilizers. Several professionals from local fertilizer associations and scientific organizations speak about the current crop situation in India and why zinc fertilizer use is essential to improving crop quality and productivity, as well as human health and nutrition.

The other three videos make up a series and were produced by Dr. Ismail Cakmak of Sabanci University. This series shows how severely the growth of maize, rice and wheat crops is impacted by zinc deficiency. The videos show time-elapsed images taken of the crops in the laboratory and field demonstrate what happens when crops grow in zinc deficient soils.

These videos are available for viewing at <http://zinc-crops.org>.



**The Fertiliser Society of South Africa and the International Zinc Association of Southern Africa Combined Symposium**

**The Fertiliser Society of South Africa** and the **International Zinc Association of Southern Africa (IZASA)** held a combined symposium entitled



"Fertilizers, Food Production and Human Health" in August in Pretoria, South Africa. Main topics of discussion included the growing importance of nutrition security versus food security and debate on the best and most sustainable method of managing food fortification versus crop fortification. The impact of zinc deficiency on crop production and nutritional value was highlighted as part of a presentation on the Zinc Nutrient Initiative.

Over 120 local and international delegates attended the conference. Speakers included professors and directors from universities and organizations (including IZA) from several different countries.

### IZA Participates in World Economic Forum Meeting in India



In November 2010, the World Economic Forum (WEF) organized a special session on Agriculture and Food Security as part of the India Economic Summit in New Delhi, India. The session theme was "The Next Green Revolution - Catalysing Sustainable Livelihoods for Indian Farmers". The meeting was represented by about 60 participants from global and domestic businesses, state and national governments, farmer and civil society organizations and others. IZA was represented by Dr. Soumitra Das, Director, India Programme - Zinc Nutrient Initiative.

The interactive session was moderated by Mr. Arun Maira, Member Planning Commission, Government of India. Discussions were centered on the key challenges facing India's agriculture sector and how those challenges can be addressed through market-based approaches. Ideas generated included: public-private partnership, the Agricultural Produce Market Committees (APMC) Act abolition, Crop Producers Company by the farmers,

land defragmentation and strengthening agri-extension services.

Sustainable improvements in agricultural productivity and markets are needed to ensure national food security and to provide sustainable livelihoods for farming communities. Changing the course of Indian agriculture from food security challenges into a driver of commercial and social opportunities will require bold leadership and a new form of collaborations between farmers, business leaders and governments.

### Micronutrient Symposium Held in Brazil



A symposium, "Seminário sobre Micronutrientes Aplicados à Agricultura", was held in November 2010 in São Paulo, Brazil to discuss the essentiality of zinc in crop production and human health. More than 100 people participated in the event, which was organized in collaboration with **Associação Nacional para Difusão de Adubos (ANDA)**, IZA, Instituto de Metais Não Ferrosos (ICZ), A Coordenadoria de Desenvolvimento dos Agronegócios (CODEAGRO) and Secretaria da Agricultura e Abastecimento.



## **zinc in fertilizers**

International and national speakers made presentations on the importance of micronutrient fertilizers to achieve better yielding and more nutritious crops in Brazil. This included a presentation by Greg Brouwer, IZA on the Zinc Nutrient Initiative and the importance of zinc as a micronutrient fertilizer. In addition, merchandise was sold to raise funds for the Zinc Saves Kids initiative.



### **IZA Booth a Major Attraction at the 2010 FAI Annual Seminar in New Delhi**



IZA organized a Zinc Nutrient Initiative booth at the 2010 **Fertilizer Association of India (FAI)** Annual Seminar in New Delhi, India in December 2010. As part of the display, various activities under the Initiative were highlighted. There was an overwhelming response by delegates and participants of the FAI Seminar to the IZA booth.

The seminar was attended by over 1,500 delegates, including 200 overseas delegates from 40 countries. Hundreds of delegates visited the IZA booth, including fertilizer industry personnel from India and abroad, national and international scientists, national and state government officials and representatives from national and international associations and organizations.



Zinc deficiency's impact on human health was an eye-opener for most of the booth visitors. The deficiency of zinc in soils and crops as well as in humans was highlighted, and zinc application through different fertilizer products available in the country was advocated. There were several inquiries received from fertilizer companies on establishing new zinc fertilizer plants, the development of new products containing zinc and the marketing of zinc fertilizers.

### **Upcoming Events**

**October 10-13, 2011:** IZA, FAI, IFA and **HarvestPlus** will host the 3rd International Zinc Symposium: "Improving Crop Production and Human Health" in Hyderabad, India. Please visit <http://www.zinccrops2011.org> for more information.



#### **International Zinc Association**

The International Zinc Association is a non-profit organization with offices/representatives in:

Belgium - Peru - P.R. China - South Africa - U.S.A.

*Zinc in Fertilizers* is a newsletter published by IZA covering issues pertaining to zinc in fertilizers. To learn more about zinc's benefits for crop nutrition, please visit [www.zinc-crops.org](http://www.zinc-crops.org).

#### **Contributions**

We invite your submissions of articles, letters and images.

Director, ESD: [Andrew Green](#)

Managing Editor: [Greg Brouwer](#)

Layout/Design: [Erin Archambault](#)

For more information on IZA, please visit <http://www.zinc.org>.

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