

an update on
the work & progress at
IFDC—An International Center for Soil
Fertility and Agricultural Development

www.ifdc.org

Urea Deep Placement—A Win-Win Technology for Farmers and the Environment

Urea briquettes being manufactured in a Cambodian village.

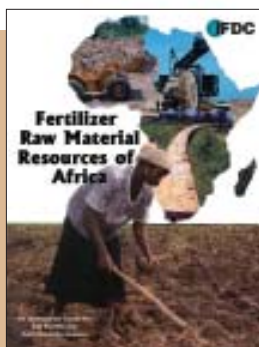


Millions of rice farmers in Asia depend on urea fertilizer to meet the nitrogen needs of modern high yielding varieties. Most farmers—including those in Bangladesh, Cambodia, and Vietnam—broadcast urea into the floodwater.

“Broadcasting is a highly inefficient application method because much of the nitrogen is lost and never makes its way to the roots of the growing plants,” says Dr. Walter Bowen, Resident Project Coordinator of the Adopting Nutrient Management Technologies (ANMAT II) project, based in Bangladesh. ANMAT II is funded by the International Fund for Agricultural Development (IFAD).

“Low plant use of applied urea nitrogen means a low return on investment for farmers,” Bowen continues. “Furthermore, the environment suffers because the release of nitrogen compounds pollutes water and contributes to global warming.”

(Continued on page 2)



IFDC Publishes Major Reference on Africa's Raw Material Resources for Fertilizer



IFDC published *Fertilizer Raw Material Resources of Africa*, a 435-page reference by Steven J. Van Kauwenbergh, IFDC Senior Geologist, in January 2007. The book is a collection of information that IFDC has gathered on Africa's mineral resources that could be used to manufacture fertilizer.

Much of the data is from Van Kauwenbergh's research during his 22-year IFDC career. “The book is the first to cover all fertilizer raw material resources in Africa,” he says. “Writing the book was a wonderful opportunity to bring this information together under one cover.”

(Continued on page 4)

In This Issue

Urea Deep Placement—A Win-Win Technology	1
IFDC Publishes Major Reference on Africa's Raw Material Resources for Fertilizer	1
Buy, Sell, Hold, Trade	3
IFDC Spotlighted in Togo and Mali Trade Fairs	4
IFDC Training Programs Grow in 2006	6
Borlaug Receives Congressional Gold Medal	7
Announcements	7

IFDC Report

Publisher:

IFDC—An International Center for Soil Fertility and Agricultural Development

Editor:

Thomas R. Hargrove

Layout/Design:

Donna W. Venable

IFDC Report is a quarterly publication of IFDC, Muscle Shoals, Alabama, U.S.A. Telephone: 256-381-6600, Telefax: 256-381-7408, E-Mail: general@ifdc.org, Web Site: www.ifdc.org. Unless otherwise noted, printed material published in the *IFDC Report* is in the public domain and may be freely reproduced. Source acknowledgment and a copy of any reproduction are requested. Subscriptions are free. A French language edition of the *IFDC Report* is available from IFDC.

IFDC is a public international organization (PIO), governed by an international board of directors with representation from developed and developing countries. The nonprofit Center is supported by various bilateral and multilateral aid agencies, private foundations, and national governments. IFDC focuses on increasing and sustaining food and agricultural productivity in developing countries through the development and transfer of effective and environmentally sound plant nutrient technology and agribusiness expertise.

IFDC President and Chief Executive Officer:

Amit H. Roy

Board of Directors:

M. Peter McPherson (U.S.A.),
Board Chair

Abdelmajid Slama (Tunisia),
Vice Chair

Margaret Catley-Carlson (Canada)

Soumaïla Cisse (Mali)

G. J. Doornbos (Netherlands)

John B. Hardman (U.S.A.)

Hiro Yoshi Ihara (Japan)

Fayez E. Khasawneh (Jordan)

Patrick J. Murphy (U.S.A.)

Mortimer Hugh Neufville (U.S.A.)

Ruth Oniang'o (Kenya)

Edward C.A. Runge (U.S.A.)

M. Ann Tutwiler (U.S.A.)

Change of Address:

To avoid missing copies, allow six weeks for change of address. Send details to: *IFDC Report*, P.O. Box 2040, Muscle Shoals, Alabama 35662, U.S.A.

(Continued from page 1)

Urea deep placement (UDP) is a more efficient way to manage urea fertilizer by placing large urea briquettes into the soil after transplanting rice. IFAD is disseminating the UDP technology to farmers through partners in Bangladesh, Cambodia, and Vietnam.

The UDP technology depends on production of urea briquettes in villages using locally manufactured briquette-making machines. Soon after transplanting, the briquettes are inserted 7 to 10 cm deep in the middle of every other four hills of

rice. UDP increases nitrogen use efficiency by keeping most of the urea nitrogen in the soil, close to plant roots and out of the floodwater.

In Bangladesh more than 550,000 farmers are using urea deep placement, Bowen says. In hundreds of on-farm trials, UDP technology has increased rice yields by an average of 22% when compared with broadcasting, and decreased urea use by 47%. Profits have increased by 24%. Ten Bangladeshi manufacturers have produced and sold more than 2,000 briquette-making machines.

The positive results have led the Department of Agricultural Extension to propose using Government of Bangladesh funds to support a special project to make UDP technology more widely available to farmers.

More than 6,700 farmers now use UDP in Vietnam. The country now has 4 machine manufacturers, 12 pellet producers, and 4 retailers.

UDP was only recently introduced to Cambodia, but more than 200 farmers are using it.

A vendor selling urea briquettes in Bangladesh.



Farmers applying urea briquettes in Bangladesh. Using the urea deep placement (UDP) system, a farmer inserts the briquettes 7 to 10 cm deep in the middle of every other four hills of rice. UDP increases nitrogen use efficiency by keeping most of the urea in the soil, close to plant roots and out of the floodwater.



BUY, CELL, HOLD, TRADE! **TradeNet Partnership Helps** **Traders Buy Better and Sell More**

TradeNet is a new service that uses SMS (short message service, or text messaging) to capitalize on the soaring use of mobile or cell phones to help establish a pan-African agricultural trade market. TradeNet (www.tradenet.biz) allows African farmers and traders to use their mobile phones to post free listings of offers to buy or sell produce or inputs.

In the Jan. 25 issue of *The Economist*, TradeNet was described as “a simple sort of eBay for agricultural products across a dozen countries in West Africa.”

TradeNet was initiated through a partnership of BusyLab, a Ghana-based software company, and IFDC’s Market Information Systems and Traders’ Organizations in West Africa (MISTOWA). MISTOWA uses the TradeNet service to help users quickly and affordably compare prices of food crops and to link buyers and sellers by posting bids via the web, by e-mail, and through text messaging. The U.S. Agency for International Development’s West Africa Program funds MISTOWA.

“TradeNet helps ensure that farmers are paid fair prices for produce, and that the produce is sold to consumers at affordable prices,” says Dr. Kofi Debrah, MISTOWA Chief of Party.

“Farm products typically change hands four or five times, with added costs at each transaction, before reaching the consumer,” says Elizabeth Ahinful, leader of the traders association for grains and garri (a processed form of cassava) in the Agbogloboshie Market of Accra, Ghana. “That sometimes makes locally produced food too expensive to compete with imports.”

Frustrated by poor access to markets in his area, Raphael Ahaligah, Parliament Member for Afram Plains South, Ghana, said, “The Saviour Church alone now has more than 50,000 bags of maize in stock, awaiting prospective buyers at ridicu-

lously low prices. If this trend continues, the government’s call for youth to venture into agriculture won’t work.”

Debrah says, “MISTOWA makes the market more transparent and efficient. It helps both farmers and traders decide what and how much to grow, who to trade with, when to sell, and for how much.” Only 2 years into the 3-year project, producers and traders in West Africa are learning to use new information technology for delivery of timely and accurate information.

“Users can compare prices or search for buyers and sellers, transporters, and other service providers in Techiman in Ghana, Kano in Nigeria, Sangalkam in Senegal, or even Amsterdam in the Netherlands—from virtually anywhere,” Debrah says.

Producer and trader associations across West Africa are using more than 150 AgriBusiness Information Points (ABIPs) with the TradeNet platform to exchange market information. The West African TradeNet page, www.wa-agritrade.net, receives more than 117,000 “hits” a year. MISTOWA has organized training, conferences, trade fairs, and study tours that have benefited about 10,000 West Africans in both the public and private sectors.



In the Dawanau Market in Kano, Nigeria, are Dr. Kofi Debrah, MISTOWA Chief of Party (center, holding camera) and Alhaji Yau Nuhu Tumfafi, Assistant Secretary General of the Dawanau Market Development Association (to Debrah’s left).

(Continued from page 1)

The book documents nitrogen, phosphate, potassium, and sulfur resources in Africa. The first four chapters give background information and serve as a basic textbook on fertilizers. The second half of the book is country descriptions—a general overview and geological description of each African country that has fertilizer raw materials.

“This publication is an IFDC contribution to meeting the objectives of the Comprehensive Africa Agriculture Development Program, or CAADP, and those of the Africa Fertilizer Summit,” says Dr. Amit Roy, IFDC President and Chief Executive Officer.

CAADP works to restore Africa’s agricultural growth and reduce food insecurity and poverty. In 2004,

African ministers of agriculture passed a resolution calling for the development of Africa’s fertilizer industry to support CAADP.

The Africa Fertilizer Summit, held in Abuja, Nigeria in June 2006, laid the groundwork for the African Green Revolution called for by UN Secretary General Kofi Annan. Steps are now being taken to make fertilizer more readily available to fuel that Green Revolution. The African Development Bank is establishing an African Fertilizer Development Financing Mechanism, recommended at the Summit, to support regional fertilizer procurement, credit for imports, and development of local fertilizer production.

Van Kauwenbergh points out that six African countries control about 41.5% of the world’s currently exploitable

phosphate rock reserves and 50.2% of the total global phosphate rock reserve base that may be exploitable in the future.

“Ironically, Africa exports large quantities of phosphate rock, while importing manufactured fertilizers at costs that small-scale farmers can’t afford,” Van Kauwenbergh says. “Development of indigenous fertilizer raw material resources and local or regional fertilizer production facilities are alternatives to supply the nutrients that African farmers must have to feed growing populations.

“We hope this document will stimulate the growth of Africa’s fertilizer industry.”

Fertilizer Raw Material Resources can be ordered from IFDC and is available on paper or on CD.

IFDC Spotlighted in Togo and Mali Trade Fairs

The importance of emerging private-public initiatives that support market-oriented agriculture in Africa was emphasized in two 2006 international events for technical, information, and commercial exchange. The International Agricultural Exhibition (SIAGRI) was held Nov. 17–23 in Mali, and the International Agriculture Trade Fair (FACI) was held Aug. 24–Sept. 2 in Togo. IFDC was a sponsor of both events.

“The trade fairs are in line with IFDC’s development strategy to provide incentives for farmers and traders by creating market environments that catalyze the entrepreneurial spirit and encourage private ventures,” says Dr. Kofi Debrah, Chief of Party



During his visit to the IFDC stand, President Amadou Toumani Touré of Mali is presented with an information folder by Ketline Adodo, Coordinator, IFDC Information and Communication for West Africa.

(Continued on page 5)

(Continued from page 4)

(COP) of Market Information Systems and Traders' Organizations in West Africa (MISTOWA), an IFDC project funded by the U.S. Agency for International Development.

The SIAGRI Experience

SIAGRI was a new initiative launched by the Permanent Assembly of Chambers of Agriculture of Mali and held in Bamako, Mali's capital city. IFDC sponsored a stand to demonstrate its capabilities and achievements through video projections, online demonstrations, posters, books, and brochures. The main focus was on the Competitive Agricultural Systems and Enterprises (CASE) approach, which is being implemented in West Africa through the Strategic Alliance for Agricultural Development in Africa (SAADA), an IFDC project based in Mali and funded by the Minister for Development Cooperation of the Netherlands.

The center of attraction was the AgriBusiness Information Points (ABIPs), a concept developed through MISTOWA. The ABIPs facilitate timely access to quality information that is strategic to develop agricultural markets and empower market operators, including farmers who need profitable markets for their produce.

"ABIPs can be set up within structures such as producer and trader organizations, agricultural agencies, and commerce and information centers," Debrah says. "The basic principle is that suppliers, vendors, and users of information are also the beneficiaries."

ABIPs use the Africa-wide Agricultural Trade platform (www.tradenet.biz), which makes prices and other information available on agricultural inputs and produce in real time and different languages via the Internet, e-mail, fax, short message services, and satellite radio. The IFDC stand included facilities for visitors to experiment in the use of such information and communication technology.

Daily prices of selected products were displayed on a bulletin board. Offers were posted for 800 tons of sesame, 600 tons of maize, 200 tons of white cowpea, 500 tons of red cowpea, and 70 tons of shea butter. Biogen S.A. and a member of the Network of Economic Operators in the Food Industry (ROESAO) are negotiating the sale of 10,000 tons of fertilizers.

IFDC also presented three lectures at SIAGRI. *Soil Fertilization in Cotton* was presented by Blaise Fadoegnon, Cotton Agronomist with IFDC's Marketing Inputs Regionally (MIR) project. *The Analysis of Agricultural Inputs Market* was by Yves Duplessis, SAADA Agribusiness



The IFDC team welcomes Prime Minister Ousmane Issoufi Maiga of Mali to the IFDC stand at SIAGRI.

Team Leader in Mali, and *The New ICTs at the Service of Agricultural Trade* was by Patrice Annequin, MISTOWA Deputy COP.

Mali's Prime Minister, M. Ousmane Issoufi Maiga, presided over the opening ceremony. Malian President M. Amadou Toumani Touré also visited.

The FACI Experience

The first International Agri-Culture Trade Fair, or FACI, was launched by World Business Enterprise, a private firm, and held in Kpalimé, Togo.

MISTOWA supported the participation of the Togolese Coordination of ROESAO (CT-ROESAO), which was represented by 26 exhibitors including farmer organizations, food processors, and traders. Fourteen were women.

During the 10-day trade fair, direct sales totaling CFA 1.3 million (US \$2,560) were made of 15 raw or processed agricultural products including maize, sorghum, rice, fruits, roots and tubers, fruit juices, and vegetable oils.

Other economic spinoffs are anticipated. For example, a Togolese cattle breeders group has ordered 420 cows from the Sahelian region for CFA 84 million (US \$165,000). A group selling aromatic rice and a CT-ROESAO member are negotiating a \$185,000 transaction. A Norwegian company has requested offers for 1,000 to 2,000 tons of

(Continued on page 6)

(Continued from page 5)



J. A. Diffily (left) representing USAID at the ROESAO stand.

shea butter monthly and may buy 1,200 tons of palm oil.

IFDC's open day was heightened by presentations by the U.S. Embassy's Chief of Mission, J. A. Diffily, representing USAID; Dr. Kofi Debrah; and Robert Groot, Director of the IFDC Africa Division.

IFDC Training Programs Grow in 2006

"Training is integral to all IFDC work," says Dan Waterman, Director of IFDC's Training and Workshop Coordination Department. "Training develops the technical and organizational capacity of our partners in the field."

IFDC conducts training in three ways: through *overseas projects*, through *advertised international programs and workshops*, and through *specialized programs upon request* of other organizations.

Most IFDC training is conducted through *overseas projects*. IFDC trained 13,077 people through overseas projects in 2006—about 6% more than in 2005.

Special efforts are made to include women; about 25% of the trainees are female.

The training numbers reflect the geographic concentration of IFDC projects—led by West Africa with 50% of overseas trainees; Central Asia, 27%; South and Southeast Asia, 16%; Central Europe, 4%; and other areas, 3%.

Another 208 participants were trained in 2006 through seven *advertised international programs and workshops* coordinated at IFDC headquarters.

Five advertised programs were in Africa and designed to help maintain the momentum generated at the Africa Fertilizer Summit in June, where more than 1,100 participants called for an African Green Revolution.

"The growth of programs and participants in Africa reflects the dramatic change in the focus of IFDC training," Waterman says. The portion of African trainees increased from 27% in 1993-1998 to 42% in 1999-2003 to more than 50% today.

The focus in recent years includes agro-input market development, dealer training, advances in fertilizer production, market information systems, integrated soil fertility management, strengthening of trade associations, and development of commodity value chains.

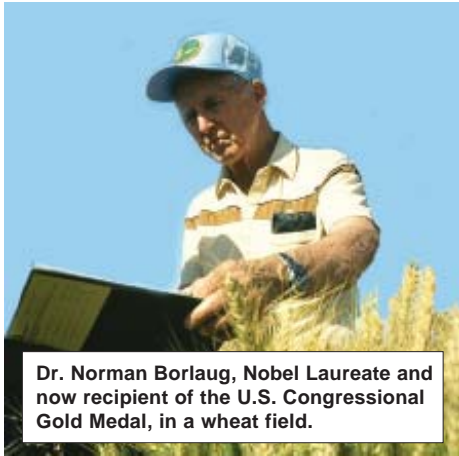
In 2006, IFDC also conducted three *specialized programs* for 84 trainees at the request of the Kenyan Ministry of Agriculture, the East Africa Farmers Federation, and others.

Since 1974, IFDC has conducted 675 international and specialized workshops, training programs, and study tours for 9,000 participants from 150 countries.



Graduates of the Ghana Agricultural Input Market Strengthening (GAIMS) program are presented certificates that proclaim I Serve The Farmer With Quality Inputs. GAIMS graduate Doris Delali Doe displays her framed certificate in her agro-input shop in Accra.

Borlaug Receives Congressional Gold Medal—the Highest U.S. Civilian Honor



Dr. Norman Borlaug, Nobel Laureate and now recipient of the U.S. Congressional Gold Medal, in a wheat field.

President George W. Bush signed into law a bill awarding the Congressional Gold Medal—the highest civilian honor in the United States—to Dr. Norman E. Borlaug on December 6, 2006.

Borlaug, often called the “father of the Green Revolution,” received the 1970 Nobel Peace Prize for developing improved wheat varieties that spread rapidly throughout Asia, Latin

America, and the Near and Middle East. In 1986 he founded the World Food Prize to recognize life-saving achievements that increase the quantity, quality, or availability of the world’s food. Now celebrating its 20th anniversary, the Prize is often called the “Nobel Prize of Food and Agriculture.”

Borlaug served on the IFDC Board of Directors from 1994 to 2003. He has called improved seeds the “catalyst that ignited the Green Revolution” and mineral fertilizer the “fuel” that powers it.

Borlaug, 92, is President of the Sasakawa Africa Association. He continues to work and travels extensively in Africa for Sasakawa and for the International Maize and Wheat Improvement Center, based in Mexico.

The Nobel Laureate is also a lecturer at the Academy for Future International Leaders at Texas A&M University and a host for the Borlaug Fellows Program, which the U.S. Department of Agriculture established in his honor in 2004. In September 2006 Texas A&M established the

Norman E. Borlaug Institute for International Agriculture, which replaces the previous Office of International Agriculture.

“I am humbled and honored to be considered for the Congressional Gold Medal for my work in building peace through feeding the hungry,” Borlaug said shortly before the award.

“I have always said that peace cannot be built on empty stomachs.”

U.S. Representative Tom Latham of Iowa, Borlaug’s native state, said, “Dr. Borlaug is responsible for saving a billion lives around the world. It is extraordinarily important that we recognize this great humanitarian. Dr. Norman Borlaug...completely altered agriculture as we know it.”

The first Congressional Gold Medal was awarded in 1776 to General George Washington. Other recipients include Thomas Edison, Pope John Paul II, Martin Luther King Jr., and U.S. President Ronald Reagan.

The United States Mint will create a one-of-a-kind Gold Medal to symbolize Borlaug’s lifetime of achievement.

Announcements

Dr. Vas D. Aggarwal accepted employment with IFDC effective February 1, 2007, as Agriculture/Input Supply Specialist for the Accelerating Sustainable Agriculture Program (ASAP), with posting to Kabul, Afghanistan. Aggarwal received his Ph.D. in agronomy/crop science from the University of Missouri in 1976. He has more than 25 years of crops research, development, and project management experience in all three main geographic regions (Western, Southern, and Eastern) of sub-Saharan Africa and in Asia (Afghanistan, Bangladesh, and India). This experience includes alternative livelihoods; natural resources management; food security; rural development; crop improvement; agronomy; seed systems; and promotion and awareness of technology and information. His email address is vaggarwal@ifdc.org.

Dr. Sarah Gavian accepted employment with IFDC effective January 4, 2007, as Chief of Party, West Africa Cotton Improvement Program (WACIP), Africa Division, with posting to Bamako, Mali. Gavian received her Ph.D. from Stanford University in 1993. Her fields of study included international agricultural policy, nutrition and consumption economics, and production economics. Gavian’s professional experience includes: Senior Research Fellow, Democracy Strategy and Governance Division, IFPRI, Washington, DC; Practice Manager, Environment, Trade and Agricultural Area, Abt Associates, Bethesda, Maryland; Deputy Director, Famine Early Warning System Project (FEWS/USAID), Associates in Rural Development, based in Rosslyn, Virginia; and Associate Scientist and Rockefeller Social Science Fellow, ILRI, Addis Ababa, Ethiopia. Gavian’s email address is sgavian@ifdc.org.

Mr. Christopher B. Holt accepted employment with IFDC effective January 8, 2007, as Associate Budget Officer in the Finance and Administration Department (FAD). In May 2006, Holt graduated Cum Laude from Culverhouse School of Accounting, The University of Alabama, Tuscaloosa, Alabama, with a Bachelor of Science in commerce and business administration. He previously served as Associate Accounting Controller for JobCenter Inc., Florence, Alabama. Holt’s office is in Room 246 and his telephone extension is 292. His email address is cholt@ifdc.org.

Dr. Steven P. Kovach joined IFDC January 2, 2007, as Program Leader—Soil and Nutrient Dynamics Program, Research and Market Development Division. His professional experience includes working as an IFDC consultant for the

(Continued on page 8)

**IFDC—An International Center for Soil
Fertility and Agricultural Development
P.O. Box 2040
Muscle Shoals, Alabama, U.S.A. 35662**

PRINTED MATTER

NONPROFIT
ORG.
U.S. POSTAGE
PAID
FLORENCE, AL
PERMIT #525

(Continued from page 7)

FARMS Project in Kabul, Afghanistan; the Citizens' Network for Foreign Affairs (CNFA), Washington D.C., working in Afghanistan; and the World Food Logistics Organization (WFLO), Alexandria, Virginia, working in Central America. He also worked for Sheladia Associates, Rockville, Maryland, in Pakistan on the United States Agency for International Development (USAID) On-Farm Water Management Project. Kovach was research agronomist with Dole in Hawaii and Honduras and vegetable extension/research specialist with Auburn University and the University of Florida. He served with the American Peace Corps in Iran as an agricultural extension agent. Kovach received his Ph.D. in horticulture and vegetable crops from Virginia Tech University, Blacksburg, U.S.A. His office is in Room 151, his telephone extension is 284, and his email address is skovach@ifdc.org.

Mr. Geoffrey Livingston joined IFDC February 5, 2007, as Chief of Party for the Catalyzing Acceleration of Agricultural Intensification for Stability and Sustainability (CATALIST) project, posted to Kigali, Rwanda. He was previously Director, Africa Region, Chemonics International; Chief of Party, Agribusiness Development Assistance to Rwanda project, Chemonics, Kigali, Rwanda; Coordinator, Commercial Development Unit, Sustainable Economic Growth Project, Fintrac, Inc., under subcontract to Chemonics in Bamako, Mali; Senior Agricultural Economist and Southern Africa Regional Manager, Louis Berger International; and has completed consultancies in Egypt, Russia, and Senegal. Livingston received his M.S. in agricultural economics from Michigan State University in 1985. His email address is glivingston@ifdc.org.

Deceased. **Mr. David Rutland**, Senior Specialist—Fertilizer Technology, Research and Market Development Division, died on October 31, 2006. Rutland was employed by IFDC for almost 28 years. He completed assignments in more than 20 countries on technical issues related to fertilizer manufacture and regulatory system design. Rutland was recently Program Manager for the Food for Progress program in Afghanistan. He designed and implemented the monetization program for the sale of 5,200 tons of soybean oil in Afghanistan.