I am a little obsessed with fertilizer. I mean I’m fascinated with its role, not with using it. Two out of every five people on Earth today owe their lives to the higher crop outputs that fertilizer has made possible. It helped fuel the Green Revolution, an explosion of agricultural productivity that lifted hundreds of millions of people around the world out of poverty.”

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Uganda
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For a complete list of countries in which IFDC has worked, visit www.ifdc.org/About/Map_IFDC_in_the_World.
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A Message to Our Partners

In 2013, IFDC made significant progress in efforts to increase nutrient use efficiency, environmental protection, resource management, fertilizer policy, gender equity and human health and nutrition. With a U.S. $78 million budget, we delivered for our stakeholders with more than 40 international development projects and research initiatives.

We began the year commemorating 35 years of continuous development in Bangladesh. In that time, Bangladeshis have effectively doubled rice production on the same amount of land using advanced water management, seeds and fertilizers. From 2011 to 2013 the 2.5 million farmers using IFDC’s fertilizer deep placement doubled their rice production. Their gross margin per hectare increased from $431 in 2012 to $587 in 2013 due to lower fertilizer costs and higher yields. Local entrepreneurs are manufacturing and retailing fertilizer briquettes, thus adding to the local economy.

Fertilizer deep placement continues to migrate from Asia into sub-Saharan Africa. It is being integrated into the agricultural systems of 17 African countries. In June, U.S. President Barack Obama visited a Feed the Future agricultural event in Senegal and was provided a demonstration on the technology.

This fertilizer technology has environmental, social and health dimensions. Early data from a 2013-2014 IFDC field experiment illustrate that fertilizer deep placement can play a role in mitigating greenhouse gas emissions in rice cultivation and also reduce nutrient runoff and leaching. Within our USAID-funded project in Bangladesh, IFDC and the Walmart Foundation are training 40,000 women on use of the technology in vegetable farming. This effort is helping increase incomes and creating more nutritious diets.

Our integrated soil management techniques are working to improve soil fertility while using resources. The practice of alternate wetting and drying helps conserve water in rice production. Our nutrient use efficiency initiatives continue to seek greater fertilizer efficiency and less waste.

However, fertilizer access and quality control remain challenges around the world. IFDC engaged in a number of studies that assessed fertilizer supply and quality, particularly in Africa. Thus we recommended policy changes necessary to make superior fertilizer more accessible within national and regional market systems. We continue to provide women farmers with greater access to technologies and training. In 2013, we trained more than 890,000 participants; 43 percent were women.

Innovation drives IFDC and will set the stage for significant advances in the future. IFDC’s Virtual Fertilizer Research Center is leading the way in the rapid development of innovative new fertilizer technologies and techniques. This IFDC initiative is a platform for virtual collaboration among scientists, researchers and entrepreneurs around the world. These innovations will be highly efficient, scalable and affordable to the smallholder farmer. In 2013, we issued grants to review studies of promising directions in research.

As we commemorate our 40th anniversary in 2014, we reflect on the millions of lives that we have had the privilege and responsibility to serve. We will engage more farmers, dealers, processors, traders, governments, regional economic communities and private businesses. And we will continue to advance environmental protection and nutrition security.

Thank you to our many donors and partners who have supported us. Your continued confidence in our ability to build regional agribusiness and reshape national economies has helped bring prosperity to the smallholder farmer. We also recognize the unwavering efforts of our hundreds of employees whose dedication continues to inspire.
Amidst Evolution, Focus on Smallholder Farmers Remains
From the very first day, IFDC’s focus has been the hundreds of millions of small farmers around the world. Making them successful defines our entire history. Regardless of how IFDC evolves, enhancing the livelihoods of these farmers will be foremost.

In 1974, IFDC was created to develop more efficient fertilizer technologies for the developing world. Over the next 40 years, IFDC changed tens of millions of lives with its innovations. We introduced fertilizer deep placement to farmers in Bangladesh in 1986, where it has helped triple rice production. In 1990, IFDC introduced a set of soil fertility and resource conservation practices to Africa. By 1992, IFDC was reviving national agriculture sectors, beginning with Albania.

When Albania became a sovereign nation, its immediate concern was timely and affordable farmer access to fertilizer. If the farmers could grow the food, they could rebuild their economy. And they did. IFDC’s agricultural market development touched every point, from the farmer’s field to the national market. Within three years, Albania had a fully functioning economy.

Year after year, IFDC tapped into the inherent resiliency of farmers and their families, giving them the training and technology to become profitable small enterprises.

Still, not all farmers had access to life-changing fertilizers and seeds. This basic necessity led IFDC to create the revolutionary smallholder fertilizer voucher program,
ensuring farmers’ full access to low-cost fertilizers. Our first program, in Afghanistan in 2002, was a model for future efforts. Today, these farmer support programs are considered one of the most effective ways to increase farmers’ access to fertilizer.

But perhaps one of IFDC’s most significant events in the last decade was the organization of the 2006 Africa Fertilizer Summit. Focusing on smallholders, it offered a new opportunity for national and regional agencies to address fertilizer’s critical role in food security. The outcome was the historic Abuja Declaration on Fertilizer for an African Green Revolution, which called for a fivefold increase in smallholder farmers’ fertilizer use over the next 10 years.

Today, our nearly 900 staff members include agronomists, geologists, soil scientists, economists, technicians, engineers, marketers, researchers and analysts. They are sharing the latest scientific and technological tools with farmers around the globe.

While substantial progress has been achieved, more must be done. As IFDC president and CEO Dr. Amit Roy recently noted, “In the midst of these achievements, we must resolve to contemplate the future of food security. The challenges are greater than ever, and the stakes grow higher with each passing year. IFDC believes that innovation will write the next chapter of this story.”

We continue to strive for improvements that make smallholder farmers more productive. IFDC’s Virtual Fertilizer Research Center is developing better fertilizers. The Global TraPs initiative is influencing sustainable phosphorus use. Our Nutrient Use Efficiency programs continue to develop solutions to increase plant nutrient intake. And innovative software tools are key to reducing farmers’ risks as they adopt new technologies.

The challenges are great, but we are meeting them head on, championing the cause of the smallholder farmer—and in the process, working to bring the world closer to nutrition security and poverty alleviation.
HIGHLIGHTS

• The Center commemorated the 35th anniversary of its permanent office and continuous on-the-ground development in Bangladesh.

• Five new projects were launched during 2013, including the Walmart Foundation component of the U.S. Agency for International Development (USAID) Accelerating Agriculture Productivity Improvement (AAPI) project that has a full focus on women.

• IFDC showcased fertilizer deep placement (FDP) technology for U.S. President Barack Obama and USAID Administrator Rajiv Shah at the USAID Technology Marketplace event in Senegal, West Africa.

• IFDC and partners held the First Global TraPs World Conference in Beijing, China.

• A number of country fertilizer assessments, regional fertilizer quality studies and policy studies were conducted on behalf of partners and stakeholders such as the African Union/New Partnership for Africa’s Development (NEPAD), Alliance for a Green Revolution in Africa (AGRA), African Fertilizer and Agribusiness Partnership (AFAP), Economic Community of West African States (ECOWAS) and Food and Agriculture Organization (FAO) of the United Nations.

• The Office of Programs continued to develop more efficient, micronutrient-rich fertilizers that increase plant and human health while reducing environmental impact.

• The Center successfully developed and is producing a new mechanized, self-loading FDP applicator for the Bangladesh market.

• Dr. Prem Bindraban was appointed Executive Director of the Virtual Fertilizer Research Center (VFRC). In 2013, the VFRC issued 11 grants for review studies.
Annual Activities
Align With Strategic Plan
Overview – Over the past 40 years, IFDC's holistic, sustainable solutions have changed farmers' lives while building robust markets. Each pillar of our strategic plan guides our continued efforts to address the world’s food, nutrition and economic challenges.

A cornerstone of our work is the development of more efficient fertilizers. For example, 2.5 million farmers in Bangladesh are using fertilizer deep placement to increase rice yields while using less fertilizer. Under the AAPI project, farmer incomes are increasing. Entrepreneurs are finding success as fertilizer briquetting machine owners. Mothers and children are healthier due to the project’s Walmart Foundation component on vegetable production. Similarly, the use of fertilizer deep placement has taken hold in 17 countries in sub-Saharan Africa.

Our Virtual Fertilizer Research Center is pioneering future advances in fertilizer science. The Center acts as a virtual research hub, marshaling the brightest minds of universities, research laboratories and global fertilizer and agribusiness industries. The goal is to develop affordable fertilizers that are environmentally sustainable and “instantly” used by plants.

In addition to technology, farmers require training in farm practices that increase yields while conserving resources. In 2013, IFDC projects trained more than 890,000 farmers, agro-dealers and others. The AAPI project in Bangladesh, the CATALIST-2 project in Central Africa and the WACIP project in West Africa led the way. Combined, the three projects trained 67 percent of beneficiaries.

Farmers also need timely access to affordable fertilizers and seeds. Our holistic strategy for building fertilizer markets includes promoting policies that support private sector growth and helping farmers access loans and market information. Projects such as AIMS III, CATALIST, PReFER and USAID WAFP continue to spur business investment.
The Growth Enhancement Support program in Nigeria, for example, is giving millions access to fertilizer. Initiatives such as AfricaFertilizer.org and AMITSA are bringing critical market data directly to mobile phones.

IFDC training in business management is helping farmers reshape their small farms into profitable businesses. Projects like AIMS III in Mozambique, AVCMP in Ghana, USAID KAED in Kyrgyzstan and 2SCALE, among others, are connecting farmers with one another as well as financial institutions, dealers and markets. As a result, farmers have a stronger collective voice in the market.

We are also preparing farmers to grow products that meet buyers’ strict quality standards. To foster farm competitiveness, 2SCALE, for example, is developing a portfolio of 500 agribusiness groups and product value chains in 12 African countries. The project will ultimately link 1.15 million farms and double their productivity. Similarly, the CFC-KIT project in Mali is improving sesame production and processing.

Pro-fertilizer policies permeate agribusiness. Our MIR Plus project improved regulatory environments in 15 West African nations. We are now leading the coordination of the West Africa Committee for Fertilizer Control to support a comprehensive regional fertilizer regulation. In addition, the Katalyst II project in Bangladesh helped build an investor-friendly organic fertilizer market. IFDC has conducted a number of country fertilizer assessments and regional fertilizer quality studies – all with policy implications – for partners like NEPAD, AGRA, AFAP and FAO.

IFDC’s proven market development tools have empowered farmers to improve their lives. With our strategic plan as a guide, IFDC will continue its mission toward a world free from hunger.
2013 Strategy Workshops

In September, IFDC hosted its annual board of directors meeting at the Center’s headquarters in Muscle Shoals, Alabama, USA. Prior to the meeting, high-level workshops were held on nutrient management and fertilizer policy, two areas of expertise for the Center. The revision of IFDC’s strategic plan in 2012 and the creation of the Office of Programs in 2013 were the context for review of strategies in these domains. Dr. Vo-Tong Xuan, chair of the IFDC board of directors Program Committee, led these institution-wide reviews. The outcomes are new consolidated implementation strategies within IFDC’s portfolio of projects.

Nutrient Management Workshop

The workshop titled “Effective Nutrient Management Strategies for Enhanced Productive and Nutritive Agriculture” created a platform to develop a unified vision for IFDC’s nutrient management research and implementation efforts. Particular focus was given to nutrient use efficiency, integrated soil fertility management (ISFM) and biofortification. Nutrient management is an important aspect of global agricultural development. It has economic, environmental and social implications. In developing regions, soils are severely degraded, fertilizer is often out of reach and organic nutrients are rarely applied to the soil. The Center’s nutrient management strategies not only improve productivity but also include methodologies that support soil fertility, protect the environment and increase human health and nutrition. Under its long-running nutrient efficiency initiatives, IFDC has developed technologies that substantially improve nutrient use. Fertilizer deep placement and ISFM are two examples.
ISFM is a set of soil fertility management practices that combine the use of organic nutrients, synthetic fertilizer, improved seeds, irrigation and products/techniques to control pests and weeds. Specific ISFM solutions are customized to local soil conditions, climates and crops. When combined properly, these techniques increase soil quality, improve nutrient efficiency, conserve natural resources and boost crop productivity. But many issues hamper farmer adoption of ISFM: limited access to fertilizers and organic inputs, lack of knowledge to complement the approach and the question of overall profitability. Further, the adoption of ISFM depends highly on farmers’ willingness to invest in improvements, often on land that they do not own.

Participants noted that farmers are unlikely to invest in products and practices that improve soil fertility unless there is an acceptable rate of return. During the workshop, participants emphasized IFDC’s ongoing efforts that reach beyond the traditional agronomic approach of ISFM to incorporate economic returns. By considering how much profit a farmer can make under existing market conditions (fertilizer and seed prices, crop sale prices, etc.), a more informed decision can be made. Thus, for ISFM to be most successful, it must be embedded in this broader economic strategy. IFDC’s approach is to create profitable, scalable and environmentally sound farming systems that enhance soil fertility. Emphasizing this approach institution-wide is expected to drive a dramatic increase in farmer adoption.
Policy Workshop

A progressive agriculture sector requires enabling policies conducive to market development and private sector participation. The right policies foster greater efficiency and better equity for all involved – from the port to the farmer, and on to output markets. Without enabling policy environments, fertilizer supply is undependable and market infrastructure is sub-standard. Fertilizer and seed prices can be high and fluctuate wildly due to abrupt changes in government policies, and availability can be uncertain. National subsidy programs are often inefficient in targeting farmers. Timely distribution of fertilizer is poor, and farmer payment for the unsubsidized portion is low. All the while, the private sector is disincentivized to invest in such markets because of uncertainty surrounding policy and competition with the government.

IFDC’s advocacy over the years positions the Center as a leader in policy development and implementation. Our team of economists continually analyzes ways to increase farmer productivity – from the ground up with new technologies, and from the top down with fertilizer policy reform. Whether it is a value chain study, the identification and design of enabling policies or the economic analysis of new technologies, IFDC is addressing the barriers to reducing farm-level costs. Our worldwide network stretches from Africa to Eurasia and is ideally placed to identify promising opportunities on behalf of developing nations, regional economic communities (RECs) and donors.
The workshop, “Capitalizing on Unique Capabilities to Inform Input Sector Policies,” was held to develop a consensus for maximizing the Center’s contribution to sustainable agricultural productivity growth for smallholder farmers. The synthesized approach harnesses the Center’s unique capacity to fuse economics, science and field implementation to create market-friendly solutions.

The event reflected the Center’s ongoing efforts to advocate for enabling policy environments for fertilizer import, distribution and use. Three topics were the primary areas of focus: increasing access to fertilizer through farmer subsidy programs; the economic implications of technological advances such as FDP and ISFM; and increasing the efficiency of national and regional input markets.

During the workshop, IFDC staff renewed their commitment to find new ways to consolidate the Center’s vast information and experience into useful forms. Effectively communicating this knowledge to policymakers and stakeholders was viewed as a priority. These efforts capitalize on IFDC’s expertise and real-world data in a powerful way and will continue to benefit stakeholders across the agricultural value chain.

IFDC Sharpens Focus on Top Areas of Expertise

During the 2013 workshops, senior IFDC staff discussed the areas of expertise that the Center will continue to pursue.

- Fertilizer Deep Placement
- Fertilizer Recommendations
- Integrated Soil Fertility Management
- New Product Blends
- Regulatory and Quality Control
- Targeted Subsidies (Agro-input Vouchers)
- Agricultural Training
- Agro-Dealer Development
- Fertilizer Finance Mechanisms
- Public-Private Partnerships
- Farmer Cluster Formation
- Characterization of Raw Materials
- Market Information Systems

Examples of Partners in Policy

There are many factors that affect fertilizer use around the world. The lack of well-functioning markets is a key constraint in many developing countries. As this map demonstrates, the Americas, Asia, Europe and the Middle East show the highest use of fertilizer, reflecting agro-climatic conditions suitable to intensive grain production in these regions, extensive investment in the research and infrastructure required to support agricultural productivity and well-functioning markets. Sub-Saharan Africa experiences the most widespread deficit in use. According to IFDC economists, policies that focus resources on productivity-enhancing technologies along with infrastructure investments and an enabling environment for private sector-led market development are required to address this deficit.
2013 Special Initiatives

African Fertilizer and Agribusiness Partnership
AFAP is a partnership among the Agricultural Market Development Trust (AGMARK), AGRA, IFDC and NEPAD to promote the development of competitive and sustainable fertilizer markets in SSA. Rather than rely on traditional development paradigms, AFAP believes that a united public and private sector can strengthen the marketplace and encourage consistent and responsible fertilizer use. IFDC’s role is to provide technical and marketing support needed to develop fertilizer value chains by identifying technical and marketing opportunities for fertilizer companies. IFDC provides technical assistance through secondment of a technical expert to AFAP and through fertilizer technology experts in the IFDC Office of Programs.

IFDC support to AFAP in 2013 included providing fertilizer market data and analysis to international fertilizer companies and program management services and technical support to the Ministry of Agriculture in Ethiopia for their fertilizer blending program. In addition, IFDC conducted market consultancies for the Growth Enhancement Support (GES) program in Nigeria and linked private sector participants to the program.

AfricaFertilizer.org
Launched by IFDC in 2010, the goal of AfricaFertilizer.org (AFO) is to contribute to the development of a sustainable and profitable agriculture sector in Africa. The initiative encourages and coordinates partnerships and data-sharing mechanisms that provide information on fertilizer statistics and market intelligence. AFO sources, aggregates, filters and shares information on fertilizer through a web-based portal – www.africaftertilizer.org. AFO partners include IFDC, the International Fertilizer Industry Association (IFA), AFAP, FAO’s CountrySTAT program, the African Union Commission (AUC) and NEPAD.

In order to improve the quality of African fertilizer statistics and the number of countries covered, IFA expanded financial support to AFO in 2013 and provided human resources to train African statistical agencies. During 2013, AFO focused on improving the collection and dissemination of consumption statistics per product, and training workshops were held with FAO’s CountrySTAT programs.

Association of International Research and Development Centers for Agriculture
AIRCA was created by a consortium of nine research and development institutions (including IFDC) as a platform for the organizations to make a combined impact on the United Nations Development Program’s Millennium Development Goals (MDGs), particularly Goal 1: the eradication of extreme hunger and poverty. AIRCA is dedicated to sustainable agricultural intensification by tackling the challenges of food security and poverty at the “landscape level,” that is, creating solutions that take into account the diversity of interactions between people and environment, agricultural and non-agricultural systems and other factors in the entire context of agriculture.

In October 2013, AIRCA released a white paper, “Transforming Rural Livelihoods and Landscapes: Sustainable Improvements to Incomes, Food Security and the Environment.” The paper represents AIRCA’s foray into the post-MDG discussion, looking past MDGs that expire in 2015, toward the currently proposed Sustainable Development Goals.
Regional Agricultural Input Market Information and Transparency System

Launched in 2010 to provide timely data and information on agricultural input markets in East and southern Africa, AMITSA was developed as an information technology decision support tool to increase the use of fertilizer and contribute to the region’s food security. The web- and mobile phone-based AMITSA system utilizes both private and public sector agro-input stakeholders to collect and process market data and information. Agro-dealers, the primary users of AMITSA, can then compare the prices of inputs from different distributors, negotiate with suppliers for better prices and obtain information that better serves their farmer-customers. AMITSA is a collaboration among IFDC, the East Africa Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA).

In 2013, AMITSA updated its data platforms to include mobile access for agro-dealers and other stakeholders. The platform not only facilitates information-sharing but also surveys data collection, monitoring and evaluation, supply chain management and other decision support tools. AMITSA staff conducted extensive agro-dealer training on the new platform and provided MIS services to various IFDC projects.

Global Transdisciplinary Processes for Sustainable Phosphorus Management

The Global TraPs project is studying phosphorus use, management and sustainability from a supply chain perspective through a transdisciplinary process (science-practice) involving experts from academia, industry, governments, non-governmental organizations (NGOs) and others. The goal of Global TraPs is to build knowledge about how humans can make transitions toward more sustainable phosphorus use.


Global TraPs partners have recently released the publication Sustainable Phosphorus Management - A Global Transdisciplinary Roadmap. The book provides a comprehensive, supply-demand chain-based analysis of phosphorus flows, use, trade and finance. It also describes options for improving phosphorus management, identifies case studies and proposes a research agenda.

Virtual Fertilizer Research Center

The VFRC was created in 2010, as a semi-autonomous unit of IFDC, to fast-track the development of a new generation of rapidly deployable technologies that will enable responsible and sustainable food security, particularly in the world’s developing regions. Utilizing the most advanced knowledge and technology available, the Center is partnering with a global network of scientists, research institutions, private enterprises and entrepreneurs to conduct coordinated research under a unified technology agenda.

In 2013, Dr. Prem Bindraban was named VFRC Executive Director. Prior to joining the VFRC, Bindraban served as the director of ISRIC World Soil Information at Wageningen University and Research Centre (WUR) in the Netherlands. During the year, the VFRC issued 11 grants for review studies of promising new technologies.

The VFRC recently partnered with the Indian Agricultural Research Institute (IARI), among others, to begin development of a comprehensive overview of plant and nutrient processes as the basis for future research. In addition, the VFRC and its partners have released five VFRC Reports that begin to form a foundation for the Center’s research and development efforts.
Overview
The EurAsia Division (EAD) focuses on improving food security and rural incomes through improved agriculture sector performance, including expansion and improvements in agribusiness. In 2013 the division targeted countries in Central and South Asia, including Bangladesh, Kyrgyzstan and Tajikistan.

The division engages in a wide periphery of activities related to crop and livestock agriculture and associated agribusinesses. Improving soil fertility management and crop and livestock development systems that support sustainability epitomizes EAD programs.

Among others, activity priorities include: technology development and diffusion; improved farmer access (to agro-inputs and advisory services) through more efficient agro-input value chains; linking farmers to markets; and agro-processing/trade opportunity development. Institutional development and human capacity building (emphasizing stimulating private sector investment) are included in all EAD activities. Gender sensitivity and environmental protection remain key objectives in EAD.

Accelerating Agriculture Productivity Improvement (AAPI) in Bangladesh 2010-2015
Overview – The AAPI project is strengthening and re-orienting agricultural production systems in Bangladesh. The project is improving food security and accelerating income growth in rural areas by increasing agricultural productivity on a sustainable basis. The project emphasizes technology diffusion and development of support systems to achieve sustainability. The primary technology is FDP, which is well-suited to rice production. FDP technology is being extended to other crops, often at the initiative of smallholder farmers with impressive results. To a lesser extent, AAPI supports diffusion of the Alternate Wetting and Drying (AWD) water use management technology. An environmental component of the project was added in 2012 to quantify the impact of FDP technology on GHG emissions. Tests up to this point show FDP use reduces GHG emissions from nitrogen fertilizer when compared with conventional surface application of fertilizers. This year, a new Walmart Foundation Activity component targeted an extra 40,000 women to train in FDP use for vegetable production. An estimated 160,000 women farmers are expected to adopt the technology, leading to increased family incomes and access to more diverse, nutritionally rich foods.

Collaborators – Bangladesh Ministry of Agriculture (MoA), Bangladesh Department of Agricultural Extension (DAE), Bangladesh Fertilizer Association (BFA), Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Bangladesh Agricultural University (BAU) and the Bangladesh Agricultural Research Council (BARC)

Donors – USAID and the Walmart Foundation

Location – Bangladesh

Fertilizer Compost Licensing Project (Katalyst II) 2012-2013
Overview – Swisscontact-Katalyst and IFDC acted as co-facilitators of the Katalyst Business Enabling Group to facilitate an investor-friendly organic fertilizer market through efficient licensing procedures. The project was implemented for 11 months (April 2012 through February 2013). The project staff planned, designed and implemented interventions to facilitate the MoA initiation of a policy review of organic fertilizer licensing, developed and presented recommendations for a policy amendment, and
lobbied to incorporate recommendations in the policy. The project faced critical challenges in attempting to reform an established policy, including following institutional norms while presenting policies for reforms. The project achieved a milestone when a committee to review organic fertilizer-related policies at the MoA was established. In addition, two external members from the Soil, Water and Environment Department of Dhaka University were included on the MoA technical committee to ensure objectivity and practicality of decisions. This was a major improvement on efforts by the first Katalyst project; most were short-lived due to the inability to channel initiatives through a sustainable mechanism.

A number of important issues were presented to the technical committee on soil fertility and were discussed to determine realistic and market-appropriate solutions. A second project achievement was the technical committee’s approval of a waiver for organic fertilizer field tests. Another milestone was the decision to present the issue for final adjudication to the National Fertilizer Standardization Committee.

Collaborators – MoA, BARC, Bangladesh Soil Resource Development Institute (SRDI), BFA, DAE and private sector organic fertilizer producers

Donors – United Kingdom’s Department for International Development (DFID), Swiss Agency for Development and Cooperation (SDC), Canadian International Development Agency (CIDA) and the Embassy of the Kingdom of the Netherlands

Location – Bangladesh

Kyrgyzstan Local Economic Development Project (KLDP) 2010-2013

Overview – KLDP stimulated rapid, diversified and sustained agro-economic growth at the local level through advancements in Kyrgyzstan’s business and investment environment. KLDP increased municipal finance and capital investment and improved competitiveness of sectors with the most economic potential, specifically agriculture and processing. KLDP issued grants to 55 small and medium enterprise (SME) beneficiaries with cost-sharing investments. Support was provided in the form of new equipment, marketing assistance and in-house extension services for fruit and vegetable processors, cold storage facilities, grading/sizing/packing lines, dried apricot handlers, kidney bean cleaners, livestock and fish feed mills, four mills and milk collection and cooling points. This support enabled outreach to 70,000 smallholder farmers and suppliers of raw materials and targeted regional and international markets with products that exhibited improvements in quality, packaging and labeling.

Lead Implementer – Chemonics International

Donor – USAID

Location – Kyrgyzstan

USAID Kyrgyz Agro-Input Enterprise Development (KAED) Follow-On Project 2010-2014

Overview – The USAID KAED Follow-On project extends the impact of KAED on improving food security and rural incomes. The project has enhanced food security through expanded adoption of improved production technologies, value chain linkages and PPPs. This year KAED Follow-On helped diffuse livestock sector capital investment under the Economic Development Fund Phase III (EDF III), continued its PPP with Oasis Agro in poultry production and worked with Kumtor Gold Company in rehabilitating 1,250 ha of land. The USAID-funded EDF III, launched in late 2013, is assisting the livestock sector to increase the productivity and profitability of livestock farming in Kyrgyzstan. EDF III imported high-performing cattle breeds and upgraded production systems, equipment, herd genetics and management systems for nine professional and competitive livestock farms.

Collaborators – Kumtor Gold Company and Oasis Agro

Donor – USAID

Location – Kyrgyzstan

The destiny of world civilization depends upon providing a decent standard of living for all mankind.”

– Dr. Norman Borlaug, Nobel laureate and former IFDC board member
USAID Productive Agriculture in Tajikistan 2009-2013

Overview – The USAID Productive Agriculture in Tajikistan project targets strategic development of commercial non-cotton agriculture in Tajikistan. A USAID Feed the Future (FTF) initiative project, activities are linked with producers located in the 12 districts of western Khatlon Province. A value chain approach is used that works from markets back to farmers and targets commercial businesses critical to supporting the overall project goal of increasing farmers’ income opportunities. There are two primary objectives. The first objective is market development – to identify and promote products in high demand, catalyze investment in the infrastructure necessary to add value as products are brought to market, facilitate the inter-business linkages that will move product from farms to market and enable access to the financing necessary for sustainable industry growth. The second objective, which IFDC was involved in from 2009 to 2013, is to increase agricultural productivity – increasing the supply of certified agro-inputs, improving the policy environment for registering inputs in the country, ensuring that farmers have the production knowledge they need to successfully utilize these inputs and encouraging farmers to invest in the machinery they need to produce efficiently. Project activities led by ACDI/VOCA will continue into 2014 and will focus on developing market linkages and facilitating investments that have the largest impact on the development of the targeted value chains in Khatlon.

Lead Implementer – ACDI/VOCA
Donor – USAID
Location – Tajikistan

FDP Continues Growth in Bangladesh

In Bangladesh, FDP use has grown exponentially in recent years, bringing over 2.5 million Bangladeshi farmers higher profits and greater yields. In 2013, the technology made two great strides forward: the development of an improved mechanical FDP applicator for mass distribution and the beginning of the Walmart Foundation component of the USAID AAPI project – a development that will enhance the productivity and health of a projected 160,000 Bangladeshi women and their families.

An AAPI project agricultural engineer developed the new mechanical FDP applicator, which is substantially outperforming previous models. The single-row applicator has a 60-briquette capacity that gives farmers the ability to apply FDP to their paddies 25 percent faster than by hand. According to one farmer, the applicator enables him to apply FDP three days faster than before. He, like so many other Bangladeshi smallholders, is pleased that he no longer has to bend over continuously to place the briquettes. The debilitating back pain experienced by this farmer, and others like him who have adopted FDP, is no longer exacerbated due to the new applicator. Thousands of farmers in Bangladesh have adopted the applicator, and IFDC believes that adoption will continue to rapidly increase.

Later in 2013, AAPI began a partnership with the Walmart Foundation to train 40,000 women in FDP use in vegetable production. The gender parity-focused project is empowering these women by giving them the tools they need to cultivate successful home gardens (seen as being fully in the domain of women in Bangladesh). These women, through their improved gardens, are diversifying family diets and increasing nutrition for their households. The sale of surplus production is also bringing additional income to these farming families. The project is training each of these women farmers to share their knowledge with at least four other women, increasing the project reach to 160,000 women or more. Greater knowledge and access to technologies like FDP for higher production will increase gender equality, which is shown to increase quality of life both locally and on a national scale.
Overview

The East and Southern Africa Division (ESAFD) works to increase agricultural productivity and farmer incomes. These goals are accomplished by improving farmers’ knowledge of best agricultural practices, such as ISFM, and by improving their access to quality agro-inputs and to output markets.

Through collaboration with national and regional partner organizations, governments and donors, ESAFD supports initiatives to develop competitive and sustainable agricultural value chains and to create an enabling environment for agricultural intensification and private sector development.

Other activities include farmer professionalization, association building, policy development, disseminating market information via modern information and communication technologies (ICT) and decreasing the competition between energy production and agricultural production. ESAFD’s goal is to reach millions of farmers in the region, increasing their productivity by 50-100 percent and family incomes by 30-50 percent.


Overview – ASHC provides services to clients spanning public, private and academic organizations whose daily work involves assimilating ISFM technologies into practice at local levels. IFDC provides monitoring and evaluation (M&E) services to ASHC. Services include leading assessments of the processes, collecting observations from stakeholders and conducting formal evaluations to assess the value of the communications products and the manner in which the products contribute to outcomes in the ongoing development initiatives.

Lead Implementer – Center for Agricultural Bioscience International (CABI)

Collaborators – Advanced Research Institutes, AGRA, African Soil Information Service (AfSIS), Information and Communications Technology and Knowledge Management (ICT-KM) Program, International Plant Nutrition Institute (IPNI), National Agricultural Research and Extension Systems (NARES) and Soil Health Program Technical Advisory Group

Donor – Bill & Melinda Gates Foundation

Location – SSA

Agricultural Growth Program – Agribusiness and Market Development in Ethiopia (AGP-AMDe) 2011-2016

Overview – AGP-AMDe seeks the long-term reduction of poverty and hunger through improvements in the productivity and competitiveness of value chains that offer income opportunities for rural households. As a member of the ACDI/VOCA Support for Food Security Activities (SFSA) team, IFDC is helping build agro-input supply and distribution systems and facilitating farmers’ access to and use of agro-inputs. IFDC is also supporting the development of private sector agribusinesses to produce and market seeds.

Lead Implementer – ACDI/VOCA

Collaborators – Coffee Quality Institute, Crown Agents USA, Danya International, John Mellor Associates, Kimetrica, farmer-based organizations and private sector agribusinesses

Donor – USAID

Location – Ethiopia

Agricultural Input Market Strengthening (AIMS) III 2012-2014

Overview – AIMS III is an integrated program focused on the development and transfer of agricultural technology to benefit Mozambique’s smallholder farmers. This is being accomplished through improved public research and development (R&D) capacities and continued support to build a skilled private agriculture sector to achieve sustainable targets for food security and agricultural development. AIMS III is a continuation of the AIMS and AIMS II programs, which ran from 2006 to 2009 and 2009 to 2012, respectively.
Collaborators – National Directorate of Agricultural Extension (DNEA), Mozambique Institute for Agrarian Research (IIAM), Platform for Agricultural Research and Innovation in Mozambique (PIAIT) and SNV Netherlands Development Organisation
Donor – USAID
Location – Mozambique

A Study of the Relationship Between Farmer Savings and Sustainable Food Security (BASIS) 2009-2013
Overview – This field experiment in Mozambique studied the impact of fertilizer subsidies, the interaction of fertilizer subsidies and savings; and the impact of savings facilities and savings matches. Key assessments included farm output, household consumption and other household indicators (e.g., nutrition, health, child schooling) in the short- and long-term resulting from subsidies, savings and savings matches.
Implementing Partners – University of Michigan and University of Wisconsin
Donor – USAID
Location – Mozambique

CATALIST-2 2012-2015
Overview – CATALIST-2 promotes agribusiness cluster development, market integration and agricultural intensification. The objective is to significantly improve food security in Central Africa’s Great Lakes Region by focusing on effective agribusiness clusters, high-demand commodities, existing agro-dealer networks and infrastructure. Using the ‘market’ as the key driver for agricultural intensification, scarce development resources will be maximized through the use of PPPs. By project-end, an estimated 700,000 smallholder farmers will have seen their incomes increase by 50 percent; together, they will have produced an additional 1 million metric tons (mt) of marketable cereal equivalents, contributing to food security in the project’s target areas.
Collaborators – National and international NGOs, Burundi Ministry of Agriculture and Livestock, DRC Ministry of Agriculture and Rural Development, Rwanda Ministry of Agriculture and Animal Resources (MINAGRI) and the Centre for Development Innovation of Wageningen University and Research Centre (WUR-CDI)

Donor – The Netherlands’ Ministry of Foreign Affairs through the embassies of the Kingdom of the Netherlands in Burundi, Democratic Republic of Congo (DRC) and Rwanda and the Swiss Agency for Development and Cooperation
Locations – Burundi, DRC and Rwanda

CATALIST-Uganda 2012-2016
Overview – CATALIST-Uganda is helping to sustainably commercialize smallholder farmer agriculture through improved productivity and market development, resulting in marketable surpluses that raise farm incomes and food security in Uganda. The project employs a systems approach to develop integrated cropping systems around Irish potatoes, cassava, oil seeds (sunflowers and soybeans) and rice, combined with accelerated agribusiness cluster development. Attention is also focused on seed and fertilizer market development, output marketing, linkages to agribusinesses and an improved policy environment. By project-end, 100,000 smallholders will have doubled yields and increased their incomes by 50 percent.

“...agriculture remains the backbone of the survival and sustenance of our households, communities and nations.”

– H.E. Rhoda Peace Tumusiime, Commissioner for Rural Economy and Agriculture at the African Union and IFDC board member
Collaborators – National and international NGOs and the Uganda Ministry of Agriculture, Animal Industry and Fisheries
Donor – The Netherlands’ Ministry of Foreign Affairs through the Embassy of the Kingdom of the Netherlands in Uganda
Location – Uganda

**Food Processing and Marketing Activity 2011-2014**
Overview – The project uses the farmer field school approach to build local capacity to access and correctly use fertilizers and other agro-inputs. The project comprises three components: 1) increasing agricultural productivity for tens of thousands of smallholders in Bandundu, Bas-Congo and Kinshasa provinces; 2) making markets work for smallholders; and 3) improving the capacity of community-based organizations, associations, cooperatives and small and medium enterprises along the value chains to respond to market opportunities.

Lead Implementer – DAI
Donor – USAID
Location – DRC

**Helping Farmers Produce Cassava for Profit (Cassava+) 2009-2013**
Overview – Cassava+ was a PPP between DADTCO and IFDC that revolutionized cassava production, moving the tuber from a subsistence crop to a commercial crop for targeted smallholder farmers. IFDC worked with farm groups to facilitate cassava planting, harvesting and processing. IFDC also provided access to agro-inputs, training and new technologies. DADTCO’s mobile processing unit eliminated crop loss caused by rapid post-harvest deterioration by processing the cassava into cassava cake (which can last for months) near where it was harvested.

Implementing Partner – DADTCO
Donor – DGIS/Schokland Fund
Locations – Ghana, Mozambique and Nigeria

**Mozambique Voucher Program 2013-2014**
Overview – IFDC is assisting the government of Mozambique in the implementation of a fertilizer and seed voucher program. The program is helping smallholder farmers access seeds and fertilizer while building a sustainable input supply network.
Collaborator – FAO
Donor – European Union
Location – Mozambique

**Privatization of Rwanda’s Fertilizer Import and Distribution System (PReFER) 2010-2015**
Overview – PReFER is helping to develop an efficient, effective and competitive private sector fertilizer procurement and distribution system in Rwanda. The project’s primary objective is to accomplish the government’s orderly transition out of nationalized fertilizer procurement and distribution. To that end, PReFER staff and MINAGRI are identifying policies supportive of private sector enterprise in the fertilizer market and contributing to the development of a sustainable supply system. This effort is expected to stimulate fertilizer demand and will increase agricultural intensification, farm output and market development.
Collaborators – Private sector entrepreneurs, Rwanda Fertilizer Association (RFA), Rwandan government and MINAGRI
Donor – USAID
Location – Rwanda

**Production, Finance and Improved Technology Plus (PROFIT+) 2012-2016**
Overview – IFDC’s role in PROFIT+ is to help improve the productivity of selected commodities and develop commercial agricultural input markets. IFDC is introducing ISFM to smallholder farmers who are participating in maize-based farming systems in the Eastern Province and horticulture value chains around the capital city of Lusaka, Zambia. This involves demonstrating a range of improved agricultural technologies and supporting the development of sustainable agro-input supply systems to meet increased farmer demand stimulated by the innovative demonstrations.

Lead Implementer – ACDI/VOCA
Collaborators – Associates for International Resources and Development, Catholic Relief Services, Crown Agents USA, Danya International and Kimetrica
Donor – USAID
Location – Zambia
Regional Agricultural Input Market Information System (AMITSA) 2012-2017

Overview – AMITSA is substantially improving access to market and technical information on agricultural inputs, using web- and mobile phone-based platforms. AMITSA provides support to several IFDC projects and to private sector project partners. AMITSA information is used by various stakeholders, from farmers and agro-dealers to government ministries and international research centers.

Collaborators – EAC and COMESA
Donors – AFAP, Netherlands’ Ministry of Foreign Affairs’ Directorate-General for International Cooperation (DGIS) and USAID

Locations – Benin, Burkina Faso, Ethiopia, Ghana, Kenya, Mali, Mozambique, Niger, Nigeria, South Sudan, Togo and Uganda

Seeds for Development (S4D) in South Sudan 2011-2013

Overview – Seeds for Development helped transform agriculture in South Sudan from subsistence farming to a market-oriented, competitive and profitable agricultural system. The project harnessed the entrepreneurial spirit of agro-dealers, seed companies, farmers, food processors and financial institutions to commercialize the agricultural value chain. A key methodology utilized was integrated seed sector development combined with the formation and maturation of specific agribusiness clusters. Through S4D, IFDC educated farmers about the benefits of high-quality seed and modern fertilizer technologies and trained them in their proper use.

Collaborators – AGRA, AGMARK, South Sudan Ministry of Agriculture, Forestry, Cooperatives and Rural Development and USAID FARM project
Donors – USAID and the Howard G. Buffett Foundation through AGRA
Location – South Sudan

This art of creating more food with less impact has been termed sustainable intensification, and should be the basis for all investments in farming, both big and small.”

– Sir Gordon Conway, Professor of International Development, Agriculture for Impact, Imperial College London

Rwanda Agro-Dealer Development (RADD) 2010-2013

Overview – The RADD project addressed supply-side agro-input issues by building the capacity of Rwanda’s agro-dealers. RADD generated interest in sector development and supporting private investments in agro-input import and distribution. The project focused on agro-dealer network development in conjunction with the expansion of the RFA, the future foundation for the enhanced network.

Collaborator – RFA
Donor – AGRA
Location – Rwanda

Staples Value Chain (NAFAKA) in Tanzania 2011-2016

Overview – To increase food security, the NAFAKA project is improving the competitiveness and productivity of the maize and rice value chains while expanding the benefits from this growth to women, youth and other vulnerable groups. As a member of the ACDI/VOCA SFSA team, IFDC is working with agro-input suppliers, agro-dealers, farmer-based organizations and financial institutions to increase the availability of quality agro-inputs and to demonstrate their proper use at the farm level.

Lead Implementer – ACDI/VOCA
Collaborators – Associates for International Resources and Development, Catholic Relief Services, Crown Agents USA, Danya International, Kemetica, Tanzanian Ministry of Agriculture, Food and Cooperatives
Donor – USAID
Location – Tanzania

Support Project for the National Fertilizer Subsidy Program in Burundi (PAN-PNSEB) 2012-2015
Overview – IFDC provided guidance and support for the creation of the National Fertilizer Subsidy Program, particularly its computerization. IFDC also worked with partner institutions to develop targeted fertilizer formulas suitable to Burundian soil conditions.
Collaborators – Burundi Ministry of Agriculture, the National Institute of Agricultural Sciences (ISABU), FAO and Burundian universities
Donor – Netherlands’ Ministry of Foreign Affairs
Location – Burundi

Sustainable Energy Production Through Woodlots and Agroforestry (SEW) 2009-2013
Overview – SEW decreased the competition for land between energy production and agricultural production by re-establishing wood plantations (micro-woodlots) and increasing the efficiency of the charcoal, brick-making and cook stove value chains. The project planted 22,500 hectares (ha) of trees and trained more than 2,000 charcoal producers.
Collaborators – National and regional NGOs, business development services, farmer-based organizations, charcoal producer organizations and national ministries
Donors – DGIS and the Embassy of the Kingdom of the Netherlands in Rwanda
Locations – Burundi, North and South Kivu provinces of the DRC and Rwanda

Toward Sustainable Clusters in Agribusiness through Learning in Entrepreneurship (2SCALE) 2012-2017
Overview – 2SCALE is improving rural livelihoods, nutrition and food security in 12 countries across Africa, aiming to help 1.15 million smallholder families ultimately increase their productivity by 100 percent and their net incomes by 30 percent. A key component is the development of a portfolio of 500 robust and viable agribusiness clusters and value chains targeting regional, national and local markets, including commodity and food product markets for base-of-the-pyramid consumers. 2SCALE focuses on the development of competitive rural agricultural systems, viable agro-enterprises and PPPs to meet its goals.
Implementing Partners – Base of the Pyramid Innovation Center (BoP) Inc. and International Centre for development oriented Research in Agriculture (ICRA)
Donors – DGIS (50 percent) and private sector enterprises (50 percent)
Locations – Benin, Burkina Faso, Ethiopia, Ghana, Kenya, Mali, Mozambique, Niger, Nigeria, South Sudan, Togo and Uganda

*This art of creating more food with less impact has been termed sustainable intensification, and should be the basis for all investments in farming, both big and small.*

– Sir Gordon Conway, Professor of International Development, Agriculture for Impact, Imperial College London
Overview

The North and West Africa Division (NWAFD) encompasses an area with huge agriculture potential but which at the same time faces major infrastructure, climatologic and agronomic challenges. NWAFD works in close partnership with organizations at regional, national and local levels, including regional economic communities, farmer-based organizations, government agencies, NGOs, research institutes, financial institutions and the private sector.

Projects address soil fertility improvements, build input and output markets, develop market information systems (MIS) and advise on appropriate regional and national agro-input policies. Facilitating the active participation of national, regional and international agro-enterprises in value chain development together with national actors aimed at improving access to food in the region is one of the key interventions. NWAFD supports the development and implementation of regional agricultural policies within ECOWAS and the West African Economic and Monetary Union (UEMOA). For more than 25 years, NWAFD projects have assisted millions of smallholder farmers, helping to move them away from subsistence farming. They are now agricultural entrepreneurs, able to actively participate in local and regional agricultural trade.

The division’s agricultural intervention strategy addresses constraints to agricultural development through four areas of expertise: ISFM, input market development, output market development and policy support.

AfricaFertilizer.org (AFO) 2010-ongoing

Overview – AFO is providing timely and transparent information on fertilizers to the public and private sector. To achieve this objective, AFO develops, manages, facilitates and shares technical and market information on fertilizers in Africa to support the implementation of continental, regional and national agricultural policies that benefit the private sector and the region’s smallholder farmers and agro-dealers. AFO’s main areas of interventions are on fertilizer statistics (production, trade, consumption) and market intelligence (fertilizer prices, business directories, policies). AFO web portal: www.africafertilizer.org

Collaborators – AFAP, FAO’s CountrySTAT program, IFA and NEPAD

Donors – AFAP, IFA and USAID

Locations – Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Senegal and Tanzania

Agricultural Value Chain Mentorship Project (AVCMP) 2011-2014

Overview – AVCMP is contributing to the government of Ghana’s objectives of achieving food security and converting the country’s agriculture sector into an agro-industrial economy. The goal is to transform the agricultural value chain into a highly productive, efficient, competitive and sustainable system. Key project activities include: assisting farmer-based organizations, smallholder farmers, agro-dealers and SMEs to improve their entrepreneurial and technical skills, develop business plans and link to commercial banks to access loans; linking agro-dealers to fertilizer suppliers and seed producers and developing a network of agro-dealers and SMEs; developing agribusiness clusters for provision of processing and cultivation equipment services; linking SMEs and farmer-based organizations to domestic, regional and international markets; and creating awareness of ISFM technologies.

Collaborators – Ghana Agricultural Associations Business and Information Center (GAABIC) and Savanna Agricultural Research Institute (SARI)

Donor – AGRA, through the Danish International Development Agency (DANIDA)

Location – Ghana
Communal Approach to Agricultural Market Access in Benin 2013-2017

Overview – The project aims to improve the livelihoods of 70,000 smallholder farmers and rural entrepreneurs through the development of 100 agricultural business clusters in southern Benin. The effort will connect the groups to agricultural market opportunities, including markets in neighboring Nigeria. The program focus is to improve the purchasing power of economic agents directly involved in commercial transactions, increase business between domestic and foreign (Nigerian) markets and build sustainable supply and demand of quality products, including commodities such as maize, cassava, palm oil and peppers.

Implementing Partners – Royal Tropical Institute (KIT) of the Netherlands, Care International Benin-Togo, Sahel Capital and Partners Ltd. of Nigeria and Benin Consulting Group International

Donor – Embassy of the Kingdom of the Netherlands in Benin
Location – Benin

Development of Sesame Production and Processing for Export 2011-2013

Overview – The Sesame Mali project strengthened sesame production and processing for smallholder farmers by supporting the development of sesame agribusiness clusters and value chains. In addition, the project included farmer field schools that built or reinforced large numbers of farmers’ capacities in sesame production. Members of agribusiness clusters were taught to apply IFDC’s Competitive Agricultural Systems and Enterprises (CASE) solution.

Donor – KIT through the Common Fund for Commodities (CFC)
Locations – Burkina Faso and Mali

Feed the Future USAID Agriculture Technology Transfer (FTF USAID ATT) 2013-2018

Overview – The project focuses on improving the rice, soybean and maize value chains by strengthening the seed industry and promoting complementary agricultural practices such as ISFM. The project will build the capacity of public institutions and private businesses to introduce new technologies and supply agricultural inputs. Demand for and adoption of new technologies will be heightened through information dissemination, training and other collaborative efforts. By encouraging the introduction and adoption of sustainable technologies, the project will increase productivity and incomes for agricultural producers throughout Northern Ghana.

Implementing Partners – GAABIC, the College of Agriculture and Life Sciences of Iowa State University (ISU) and WUR-CDI


Overview – The project implements the Integrated Agricultural Research for Development (IAR4D) approach using four innovation platforms for rice, vegetables, livestock and maize-legume. IFDC is leading the project’s work in the Northern Guinea Savanna Zone of Nigeria.

Collaborator – Sub-Saharan Africa Challenge Program
Donor – Forum for Agricultural Research in Africa (FARA)
Location – Nigeria

The backbone of any agricultural revolution is access of farmers to modern agricultural inputs, especially fertilizers and seeds.”

– Dr. Akinwumi Adesina, Nigerian Minister of Agriculture and Rural Development and Forbes Africa 2013 “Man of the Year”
Fertilizer and Sustainable Agricultural Development (F&SAD) 2009-2013
Overview – The F&SAD project improved access to agro-inputs and promoted their efficient use in the West African nations of Burkina Faso, Mali, Niger and Togo. Focusing on ISFM, the project engaged in the participatory development of technology packages and improved linkages between farmers and input and output markets.

Grassroots Development of Agribusiness Clusters in Mali (DEBPEA) 2009-2014
Overview – An extension of the completed From Thousands to Millions (1000s+) project, DEBPEA is reinforcing and expanding agricultural development in Mali. The project is increasing the number of agribusiness clusters in Mali and making agribusinesses sustainable and accessible – economically, organizationally and environmentally. DEBPEA is achieving this goal by designing and testing innovative instruments in rural finance such as contract financing, the inventory credit system and harvest insurance. To improve agribusiness clusters’ competitiveness and sustainability, DEBPEA is prompting agribusiness cluster participants to determine effective strategies to promote their product value chains by creating synergies and developing multi-participant action plans.

Growth Enhancement Support (GES) in Nigeria 2013-2014
Overview – IFDC is supporting the new GES program, one of the Nigerian government’s first steps in balancing its focus between the oil and agriculture sectors. To reach farmers directly, the 2013 GES program utilized electronic vouchers that were received by farmers through mobile phones (also known as an “e-wallet” system). IFDC provided technical expertise in the design and implementation of the program and coordinated supply-side activities in 15 states. This included coordination with input suppliers and government officials to ensure that an adequate stock of fertilizers was available throughout the program. Covering the entire nation, the program linked more than 4.5 million farmers to subsidized fertilizer; IFDC directly helped 2.4 million farmers to access the input.

Helping Farmers Produce Cassava for Profit (Cassava+) 2009-2013
Overview – Cassava+ was a PPP between DADTCO and IFDC that revolutionized cassava production, moving the tuber from a subsistence crop to a commercial crop for targeted smallholder farmers. IFDC worked with farm groups to facilitate cassava planting, harvesting and processing. IFDC also provided access to agro-inputs, training and new technologies. DADTCO’s mobile processing unit eliminated crop loss caused by rapid post-harvest deterioration by processing the cassava into cassava cake (which can last for months) near where it was harvested.

Improving the Access to Non-Cotton Agricultural Inputs for Producers in Benin 2009-2013
Overview – The project increased high-value crop productivity and smallholder farmers’ incomes. It focused on increasing farmers’ capacities to produce maize, pineapple and rice by providing access to quality agro-inputs, training in the proper use of the inputs and enhanced market linkages. In addition, lending institutions established a credit guarantee fund to support the warehouse receipt program that provided access to non-cotton inputs for targeted producers in the rice, maize and pineapple value chains.

Linking Farmers to Markets (FTM) 2010-2013
Overview – The project’s primary goal was to ease the flow of produce from farm-gate to the market by linking smallholder farmers to commercial buyers and processors. The project formed alliances with partners to build the organizational management, productivity and entrepreneurial skills of smallholder farmers; trained SMEs in commercial buying and processing; and linked approximately 50,000 smallholder rice, maize, sorghum and soybean farmers with structural markets in northern Ghana. An interactive ICT platform (mFarms) was developed to link value chain stakeholders operating in northern Ghana virtually, providing a powerful agricultural campaign planning and
Mainstreaming Pro-Poor Fertilizer Access and Innovative Practices in West Africa 2010-2013

Overview – The project focused on resource-poor farmers, farmer-based organizations and community associations. Utilizing a holistic ISFM approach, the project improved depleted soils and land husbandry while increasing access to and efficient use of fertilizer. The project also focused on natural resources, improved technologies, competitive markets, private enterprise development and national policy advocacy.

Donor – International Fund for Agricultural Development (IFAD)

Locations – Benin, Burkina Faso and Togo

Marketing Inputs Regionally Plus (MIR+) 2009-2013

Overview – MIR+ improved policy and regulatory environments in the 15 ECOWAS nations. The promotion of a broader market that permits free movement of agro-inputs within the region, without endangering public health or the environment, is likely to increase farmers’ access to a more diverse and more competitive range of products. In addition to the strong policy component, the project promoted innovations (e.g., UDP and fertilizer recommendations) that stimulate increased marketing and use of agro-inputs and improved the availability of technical information on these inputs. In addition, project activities in Burkina Faso, Ghana and Nigeria improved producer organizations’ access to agro-inputs.

Collaborators – ECOWAS and UEMOA

Donor – DGIS

Locations – Benin, Burkina Faso, Cape Verde, Côte d’Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo

Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites II (MARKETS II) 2012-2017

Overview – IFDC is facilitating a PPP between Notore Chemical Industries Ltd. and Nigeria’s National Program for Food Security (NFFS) to promote the use of FDP technology and facilitate the supply and demand of urea briquettes in Nigeria. IFDC also is continuing to strengthen Nigeria’s fertilizer sector by improving targeted farmers’ access to agro-inputs, loaning urea briquette manufacturing machines to Notore and training the company’s workers to use the machines. Notore is distributing the briquettes via its supply channels to agro-dealers located in rice-growing regions where the project is facilitating FDP demonstration fields.

Lead Implementer – Chemonics

Collaborators – Notore Chemical Industries Ltd. and NFFS

Donor – USAID

Location – Nigeria

Prevention of Seed Cotton Contamination in West Africa 2010-2013

Overview – This three-year pilot project helped cotton traders, farmer-based organizations and farmers in Burkina Faso, Côte d’Ivoire and Mali to significantly reduce high cotton contamination. Over the life of the project, 100,000 mt of seed cotton were affected. The project demonstrated that enhanced efforts to produce uncontaminated cotton lint are rewarded with higher world market prices and increased revenues for both cotton enterprises and smallholder farmers.

Donor – EU/CFC

Locations – Burkina Faso, Côte d’Ivoire and Mali

Professionalization of Agro-Input Dealers in Burkina Faso (PRODIB) 2011-2014

Overview – PRODIB is strengthening the ability of agro-dealers to create business linkages with input suppliers and extend their retail networks to reach more farmers. The primary goal is to increase agricultural productivity and boost the incomes of the country’s smallholder farmers. This is being achieved by increasing the availability, accessibility and affordability of quality agro-inputs in rural areas. Activities include building agro-dealer capacity, strengthening institutional bodies, providing financial support, increasing technology transfer through training programs, facilitating favorable agro-input policies and regulations and monitoring and evaluating project progress.

Collaborator – Association of Agro-Input Wholesalers and Retailers of Burkina Faso (AGRODIA)

Donor – AGRA

Location – Burkina Faso
Support Project for Agricultural Development in Togo (PADAT) 2012-2015
Overview – PADAT is one of three projects designed to complement Togo’s National Agricultural and Food Security Investment Program (PNIASA), which was launched in 2012. IFDC is implementing the ISFM component of PADAT in Togo’s five economic regions (Centrale, Kara, Maritime, Plateaux and Savanes). The project focuses on three crops – cassava, maize and rice. Its goal is to disseminate information about ISFM and other beneficial agricultural practices to increase production of these crops and increase incomes in Togo.
Donor – Togo Ministry of Agriculture, Animal Husbandry and Fisheries through IFAD
Location – Togo

Toward Sustainable Clusters in Agribusiness through Learning in Entrepreneurship (2SCALE) 2012-2017
Overview – 2SCALE is improving rural livelihoods, nutrition and food security in 12 countries across Africa, aiming to help 1.15 million smallholder families ultimately increase their productivity by 100 percent and their net incomes by 30 percent. A key component is the development of a portfolio of 500 robust and viable agribusiness clusters and value chains targeting regional, national and local markets, including commodity and food product markets for base-of-the-pyramid consumers. 2SCALE focuses on the development of competitive rural agricultural systems, viable agro-enterprises and PPPs to meet its goals.
Implementing Partners – BoP Inc. and ICRA
Donors – DGIS (50 percent) and private sector enterprises (50 percent)
Locations – Benin, Burkina Faso, Chad, Mali and Senegal

USAID Liberia Food and Enterprise Development (FED) 2011-2016
Overview – IFDC is leading a technical assistance component to recruit and train agro-dealers and promote ISFM in cassava cultivation. The broader project objectives are to improve nutrition and food security by increasing agricultural productivity and market access and building human capacity. The Liberia FED project is developing cassava value chains comprised of smallholder farmers, microfinance institutions and procurement, production and market links. IFDC-trained agro-dealers, trade associations and trainers, in turn, are transferring knowledge to smallholder farmers.
IFDC is also helping the farmers and agro-dealers form associations and facilitating connections to credit opportunities and service providers. A pilot market-friendly voucher system to transfer purchasing power to smallholder farmers is also being established. The voucher systems will stimulate demand for agro-inputs and facilitate a competitive input supply chain.
Lead Implementer – DAI
Donor – USAID
Location – Liberia

USAID West Africa Cotton Improvement Program (WACIP) 2006-2013
Overview – USAID WACIP boosted the productivity and profitability of the cotton sector in Benin, Burkina Faso, Chad and Mali (known as the Cotton Four [C-4]) as well as Senegal. The program worked with farmers, researchers, agro-dealers, private enterprises, inter-professional associations and textile artisans. In addition, the program promoted advanced agricultural practices that improve farmers’ yields (for cotton as well as rotational crops), build their capacities, support the ginning sector and provide greater access to foreign markets. USAID WACIP also conducted activities to improve the quality of cotton seed and fiber processing and developed cascade training sessions on demonstration plots to train farmers who received harvesting kits.
Collaborators – Abt Associates, Aid to Artisans, Auburn University, Michigan State University and Tuskegee University
Donor – USAID
Locations – Benin, Burkina Faso, Chad, Mali and Senegal

USAID West Africa Fertilizer Program (WAFP) 2012-2017
Overview – USAID WAFP seeks to significantly increase food security and reduce poverty and hunger in West Africa. The program’s goal is to increase the use of fertilizer by smallholder farmers by lowering its cost, reducing the distance between the farm-gate and agro-dealers and increasing the efficiency of fertilizers by accurately matching soil type and crop variety to recommended fertilizer types and quantities. To achieve this goal, IFDC is working closely with a sub-grantee, AFAP. Through this collaboration, supply-side constraints will be lessened, achieving a more reliable, affordable fertilizer supply in West Africa.
Collaborator – AFAP
Donor – USAID
Locations – ECOWAS member countries (with a focus on Ghana, Liberia, Mali and Senegal)
Overview
Office of Programs activities encompass multiple disciplines associated with fertilizer technology, production, use and market development. OP engages in and conducts fundamental and applied research to produce cost-effective and more efficient fertilizers, develops integrated nutrient management strategies for agricultural intensification and addresses policy and supply/demand issues—all of which provide an enabling environment for fertilizer market development. Research is geared toward nutrient use efficiencies while market development initiatives pursue improvements in the fertilizer value chain. As a result, national governments, private sector organizations, international institutions and development partners seek OP staff members’ input and advice to support decisions in these critical domains. Additionally, IFDC’s field programs draw on the scientific and technical expertise and assistance of OP staff in implementing field projects more effectively.

Markets and Economics
Through extensive market research and assessment activities, project development and advisory services and policy analysis and dialogue, this group helps developing and transitional economies provide an enabling environment for building both fertilizer supply chains and agricultural markets as a whole. Additionally, the group analyzes the feasibility of investment programs, socio-economic effects of new technologies, implications of regional trade on agriculture and agribusiness, as well as policy measures required to advance national agricultural growth objectives. The group also provides analysis for more effective implementation of agro-input subsidy programs.

During 2013, the group developed a number of studies and assessments for partners and donors such as AFAP, AU/NEPAD, FAO and the USAID FTF program, among others.

Fertilizer Technology
The primary function of the Fertilizer Technology group is to conduct R&D projects that characterize and identify the most efficient use of fertilizer raw materials and develop processes to use them in fertilizer production. These activities are conducted under contract and in collaboration with national and international R&D agencies, government institutions, fertilizer trade associations and fertilizer manufacturers.

In 2013, the group conducted research/testing for more than 30 private client projects in the IFDC laboratories, greenhouses/fields and pilot plant. In addition, a number of product analyses, industry trainings and fertilizer manufacturing facility evaluations were conducted. The group also provided technical assistance to 10 IFDC projects in the Center’s EurAsia and Africa divisions, and supported numerous specialized trainings and workshops conducted by IFDC’s Training and Workshop Coordination Unit.

In addition, the group provided support to the VFRC in the development of requests for proposals and the vetting of various technology development efforts for possible funding.

Soil and Plant Nutrition
The research team engaged in several fertilizer development projects under the IFDC Nitrogen Efficiency Initiative, which focuses on increasing the efficiency of nitrogen fertilizers (including improving the efficiency of nutrient uptake by plants and A graph illustrating the interaction of various groups within IFDC’s Office of Programs.
reducing nitrogen volatilization and leaching) and the Phosphate Efficiency Initiative, among other nutrient-specific research efforts. Major areas of research included:

- Greenhouse study on zinc (Zn)-fortified upland rice.
- Ongoing development of Zn seed core technology (ZSCT) – mini-granular seed cores coated with urea.
- Evaluation of nitrification inhibitors using Nitrosomonas.

Market Information Unit

Market data and information are researched and publications and studies are developed to support OP projects, as well as other IFDC projects and contract proposals. Industry publications are reviewed to keep fertilizer capacity information current and to maintain knowledge of the industry. Publications produced in 2013 included:

- Africa Fertilizer Situation.
- Asia Fertilizer Situation.
- Central Europe Fertilizer Situation.
- China Fertilizer Situation.
- Latin America Fertilizer Situation.
- North America Fertilizer Capacity.
- Worldwide Ammonia Capacity Listing by Plant.
- Worldwide Ammonium Nitrate/Calcium Ammonium Nitrate Capacity Listing by Plant.
- Worldwide Diammonium Phosphate (DAP)/Monoammonium Phosphate (MAP) Capacity Listing by Plant.
- Worldwide Nitrogen/Phosphorus/Potassium (NPK) Capacity Listing by Plant.
- Worldwide Phosphoric Acid Capacity Listing by Plant.
- Worldwide Urea Capacity Listing by Plant.

“…We need to strengthen research for efficiently produced, healthy food, while ensuring the availability of food at affordable prices.”

– Paul Bulcke, CEO of Nestlé
In addition, the group prepares statistical reports for The Fertilizer Institute (TFI) about the North American fertilizer industry. These reports involve collecting statistical data, verifying data and summarizing/preparing various reports. Due to market sensitivity, IFDC is diligent in keeping all data confidential. The following publications and studies were completed for TFI in 2013:

- Fertilizer Record (monthly).
- U.S. Phosphate Material Exports Report (monthly).
- Operating Rates, July-December 2012.
- Operating Rates, January-June 2013.
- North America Capacity Survey.

The annual North America Capacity Survey is conducted to support the TFI program and to update IFDC capacity files. This survey includes basic producers in the United States and Canada, as well as producers in Mexico and the Caribbean. It provides updates on existing and planned plant production capacities throughout the region.

**Analytical Services**

OP analytical chemists provide critical support to all of the research efforts of the office. In-house analytical work supports IFDC’s research efforts focused on increased agricultural production and improved fertilizer technologies. In support of agricultural productivity advancement, thousands of product, soil and plant tissue samples generated from the pilot plant, laboratories, greenhouses and field tests are analyzed on an annual basis. In addition, analyses that focus on the physical and chemical properties of various fertilizers produced in the IFDC pilot plant help establish high-quality and economical fertilizer products for both large-scale and smallholder farmers.

**Greenhouse Services**

This critical support service group is responsible for maintaining IFDC’s two greenhouse facilities and coordinating with OP scientists to move research from the laboratory to the greenhouse evaluation stage of the technology development process. This includes identification of soil sources and their collection for use, maintaining and monitoring crops and collecting analytical data during the growth cycle and post-harvest.

Quantifying GHG Emissions in Rice

According to the International Rice Research Institute (IRRI), rice production must grow parallel to population growth. Rice farming, however, is one of agriculture’s major sources of greenhouse gas emissions, particularly methane, nitrous oxide (N₂O) and nitric oxide (NO). Some suggest that rice emissions are threatening the rice itself: rice production decreases by 5 percent for every 1 degree Celsius increase in temperature over 32 degrees.

In 2013, IFDC began conducting field research in Bangladesh to quantify N₂O and NO emissions in rice. The data are collected through an IFDC advanced automated gas sampling system developed in our greenhouse. The system takes continuous measurements of gases released from the soil during rice production and during the non-rice/fallow period.

As possible solutions, IFDC is quantifying the environmental benefits of FDP technology and studying water-saving irrigation techniques such as alternate wetting and drying. FDP is more efficient than traditional fertilizer broadcasting, and results in lower nitrogen losses and higher crop uptake and yields.

The project will continue to collect data until late 2014, at which point the official report will be released. The activity integrates two U.S. Government programs – the Feed the Future initiative and the Global Climate Change Initiative.
OVER 890,000 TRAINED
Training is a strategic tool used to strengthen the capabilities of fertilizer producers, agro-dealers and farmers. Training also extends to transformers, traders and consumers of crop outputs. The topics covered vary according to the specific needs of each target group within a project or geographic region. With the ultimate goal to increase sustainable agricultural productivity, IFDC conducts field trainings at the project level in its three geographical divisions and coordinates global specialized trainings from its headquarters.

During 2013, the number of field training participants increased by 11 percent, from 807,449 to 898,271, due to the number of projects engaged in training activities, which increased from 24 in 2012 to 27 in 2013. The most significant contribution in 2013 was the increased proportion of women trained, which rose from 34 percent to 43 percent – the highest female enrollment in the last five years. IFDC recognizes the critical role of women farmers in reducing hunger and poverty, and considers training a tool for empowerment. “Providing the tools to empower women helps families thrive. Women farmers play a critical role in preventing malnutrition and ultimately ending poverty worldwide. IFDC is improving the lives of these farmers by giving them the training and the technologies to feed their families and, in turn, they are building their countries’ economies from the ground up,” stated Dr. Amit Roy, IFDC president and CEO.

EAD: EURASIA DIVISION
The AAPI project in Bangladesh and the KAED project in Kyrgyzstan recorded 243,601 training participants, of which, 49 percent were women, exceeding average female training participation. Under the AAPI project, farmers were trained in applying FDP technologies on rice and vegetables, as well as in the use of quality seeds, water conservation and crop management. Special training programs on alternate
wetting and drying technology improved water use efficiency in irrigated rice. In August 2013, the Walmart Foundation added a women’s empowerment component of the USAID-funded AAPI project that trains exclusively women farmers. They are being trained in the use of FDP technology on vegetable crops and in the nutritional aspects of vegetables. In Kyrgyzstan, trainings focused on three agricultural value chains (wheat, soybean and potatoes), as well as livestock (fodder crops, poultry farming and animal health care).

**ESAFD: EAST AND SOUTHERN AFRICA DIVISION**

With 10 projects in 10 countries (Burundi, DRC, Ethiopia, Kenya, Mozambique, Rwanda, South Sudan, Tanzania, Uganda and Zambia), ESAFD more than doubled the number of participants trained, from 148,243 in 2012 to 333,532 in 2013, of which 47 percent were women. This significant increase is due not only to the four new projects with training activities in 2013 (PAN-PNSEB in Burundi, CATALIST in Uganda, PROFIT+ in Zambia and 2SCALE in East Africa) but also the expansion of training activities by the CATALIST-2 project in the Great Lakes Region. CATALIST-2 increased the number of trainees by 82 percent, from 133,962 in 2012 to 243,513 in 2013; among them, 45 percent were women.

The division’s training activities targeted mainly agribusiness cluster stakeholders including farmers, agro-dealers, collectors, processors, sellers and consumers, and focused on business management, financials, cooperative management, cost-benefit analysis, marketing and business negotiation, agribusiness and value chain development and linking farmers to buyers and financial institutions. At the farm level, agro-dealers, extension agents and farmers were taught best agricultural practices through ISFM curricula.

**NWAFD: NORTH AND WEST AFRICA DIVISION**

Due to the completion of six of 15 NWAFD projects in 2013, total training participation decreased by 10 percent, from 355,949 in 2012 to 321,138 in 2013. These training activities took place in nine countries (Benin, Burkina Faso, Chad, Ghana, Mali, Niger, Nigeria, Senegal and Togo). Training topics included the safe use of fertilizers and pesticides, professionalization of agro-dealers and ISFM agricultural techniques across key agricultural value chains (cotton, cowpea, maize, pineapple, rice and sesame). Among the closing projects was the regional MIR+, which contributed to improving producers organizations’ access to agro-inputs in Burkina Faso, Ghana and Nigeria. In these countries, the capacities of more than one million farmers were indirectly strengthened in the areas of fertilizer product knowledge and the safe use and handling of pesticides. Through training in demand pooling and procurement, the project successfully tested a model for grouped procurement of agro-inputs by small-scale farmers, which induced important business transactions. FDP technology was successfully introduced in 25 sites in four pilot countries (Burkina, Mali, Niger and Senegal) with promising performances on irrigated rice. Though the project ended, there are positive signs that the momentum generated by MIR+ is being extended independently by ECOWAS and UEMOA and other stakeholders operating in West Africa.

**SPECIALIZED TRAININGS AND WORKSHOPS**

During 2013, TWCU held six international training sessions for 240 attendees in locations ranging from the United States to Kenya, China, Tanzania and Thailand. Participants represented all five continents, with Africa and Asia combined representing 88 percent of total attendance. As shown in the graphic (top of page), international training programs attracted professionals from both the public and private sectors, along with international development agencies and agricultural research centers and universities. Topics included phosphate and nitrogen fertilizer production technology, targeted agro-input subsidy programs, linking farmers to markets, fertilizer policy and marketing strategy in Africa and technology advances in agricultural production and fertilization. Experts from IFDC, IFA and other partner organizations served as faculty for these trainings. These efforts allowed participants to enhance their own expertise and better perform their duties on behalf of their respective organizations. The workshops also provided a unique opportunity for participants to exchange ideas on a range of topics with industry peers. On average, 81 percent of the participants judged the 2013 programs as “very good” to “excellent” with respect to the technical delivery and the program content and methodology, as well as all administrative aspects.
2013 Selected Articles


“Producer Choice,” by Ari Novy and L. Nagarajan, chapter in *Socio-Economic Considerations in Biotechnology Regulations*, K. Ludlow, S. Smyth, F. Jose (Eds.), to be published by Cambridge University Press, United Kingdom.

“Role of Biotechnology in Stimulating Agribusiness R&D Investments in India,” by C.E. Pray and L. Nagarajan, published in *AgBioForum* 16(2).


“Direct Application of Phosphate Rock (DAPR),” by Steven Van Kauwenbergh, Upendra Singh and Cibeber Viera, published in the IFA issue brief *Feeding the Earth*.

“Towards the Achievement of an African Green Revolution: Key Accomplishments Since the 2006 Africa Fertilizer Summit,” by Oumou Camara, published in *AU Echo*, Issue 05.

2013 Selected Presentations


“Principles to Guide Cost-Effective Fertilizer Policies,” presented by Peter Heffernan

“CERES-Rice: Current Status and Future Improvements,” presented by Upendra Singh at the MARCO-AgMIP Rice Team Workshop, December 2-5, 2013, Tsukuba, Japan. Coauthors are Job Fugice, Gerrit Hoogenboom and Jakarat Anothai.

“Determinants of Rice Marketed Surplus in Togo: A Heckman Two-Stage Selection Approach,” a poster presentation by Latha Nagarajan, with coauthors Serge Adjognon, Anwar Naseem and Aliou Diagne, accepted by American Agricultural Economics Association annual meetings, August 4-6, 2013, Washington, D.C.


“Linking Farmers to Agro-Input Supply Chains from Global to Local Levels through ICT,” presented by Bridget Okumu at the 2013 ICT4Ag International Conference, November 4-8, 2013.

2013 Selected Studies


The Quality of Fertilizer Traded in West Africa: Côte d’Ivoire Report by Joaquin Sanabria, Georges Dimithé and Emmanuel K.M. Alognikou.


The Quality of Fertilizer Traded in West Africa: Togo Report, by Joaquin Sanabria, Georges Dimithé and Emmanuel K.M. Alognikou.


Zambia Fertilizer Assessment, by Joshua Ariga, Porfirio Fuentes and Peter Heffernan.

Malawi Fertilizer Assessment, by Porfirio Fuentes.
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Moses Kamau, Driver
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Philip Karuri, Country Representative
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Paul Makepeace, Senior Agribusiness Advisor

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Doncas Mdengi, Administrative Assistant
Charles Ngutu, Regional Human Resource Officer
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Terry Njeri, National Administration and Finance Officer
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Samuel Njoroge, IFNI Program Assistant
Kevin Nyakwai, Accountant1
Mary Nyaosso, Project Coordinator
Beatrice Obara, Access to Finance Specialist
Angela Okoth, IFNI Administration and Finance Officer
Bridget Ochiering Okumu, Regional MIS Specialist – AMITSA/2SCALE
Francis Shivone, Agronomist/Training Officer – S4D1
Dennis Tiren, Portfolio Manager
Jane Tum, Coordinator, Capacity Strengthening – 2SCALE
Ajay Varadachary, Regional Communications Officer
Esther Mug Wangechi, Research Assistant – IFNI
John William Wendt, Program Leader – Natural Resource Management
Shamie Zingore, IFNI Africa Program Director

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Frauzia Americano Pereira, Accountant
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Dito Sitoe, Driver
Mario Sebastiao Ubisse, National Agribusiness Cluster Advisor
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N’dajpa Fazenda, Guard – MADD1

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Wilson Jose Leonardo, Senior Agronomist
Casimiro Junior Jose Macou, Project Coordinator – 2SCALE²
Francisco Macoua, Consultant, Demonstration Field Specialist – AIMS
Domingos Maenda, Extension Officer – MADD
Aniceto da Fonseca Matias, Project Assistant
Bruno M话剧, Janitorial Guard – MADD
Aniceto da Fonseca Matias, Project Assistant
Celia Zavala, Satellite Administration and Finance Officer – Nampula

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Martin Drevon, Chief of Party – PReFER
Johannes Veenkamp, Country Representative and Chief of Party – CATALIST
Martin Drevon, Chief of Party – PReFER

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Racheal Jama, Accounts Assistant
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Deo Tibanyendera, Agribusiness Cluster Advisor
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Brenda Akurechet, Communications Officer
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Shadha Afreen Ahmed, Data Analyst – AAPI
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Md. Habibur Rahman, Field Monitoring Officer – AAPI
Md. Mizanur Rahman, Field Monitoring Officer – AAPI
Md. Mostafizur Rahman, Field Monitoring Officer – AAPI
Md. Sajidur Rahman, Field Monitoring Officer – AAPI
Md. Shahidor Rahman, Field Monitoring Officer – AAPI
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Md. Rashadur Rahman Rajib, Field Monitoring Officer – AAPI
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Md. Abdur Rashid, Field Monitoring Officer – AAPI
Md. Alamgir Rashid, Field Monitoring Officer – AAPI
Md. Mohsinuddin Razzaq, Janitor – Asia Division
HM Al-Massum Reza, Field Monitoring Officer – AAPI
Md. Abdul Rob, Field Monitoring Officer – AAPI
Arindu Chandra Roy, Field Monitoring Officer – AAPI
Jagadish Chandra Roy, Field Monitoring Officer – AAPI
Sajib Roy, Field Monitoring Officer – AAPI
Saniga Roy, Accounts Associate – AAPI
Shatabdy Roy, Field Monitoring Officer – AAPI Walmart
Foundation Activity
Tanvir Mohammad Sadaaf, Data Analyst – AAPI
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Md. Abdul Salam, Field Monitoring Officer – AAPI
Md. Lasemuddin Sapuri, Janitor – AAPI
Durgapada Sarker, Field Monitoring Officer – AAPI
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Foundation Activity
Md. Abdu Raul Sarker, Field Monitoring Officer – AAPI
Prodipto Sarker, Field Monitoring Officer – AAPI
Md. Golam Sarwar, Assistant Administrative Officer – AAPI
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Walmart Foundation Activity
Md. Shahabuddin, Field Monitoring Officer – AAPI
Md. Tahleedullah, Data/Word Processor – AAPI
Ismail Shahid, Field Monitoring Officer – AAPI
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Walmart Foundation Activity
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Foundation Activity
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Activity
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Lola Ukumathsoev, Office Manager and Procurement Specialist

1Left during 2013 or 2014
2Retired during 2013 or 2014
3Short-term staff 2013
4On extended leave
5Deceased 2013
6Student attachment

Revenue Sources

ACDI/VOCA
African Fertilizer and Agribusiness Partnership
Alliance for a Green Revolution in Africa
AgriMerc
Agrium
Centre for Agricultural Bioscience International
Chemonics International Inc.
Common Fund for Commodities
Developing Business Services Markets
Development Alternatives, Inc.
Forum for Agricultural Research in Africa
Government of Nigeria
Greenbelt Fertiliser, LTD
International Fertilizer Industry Association
International Food Policy Research Institute
International Fund for Agricultural Development
Jacobs Engineering Group Inc.
Kumtor Gold Company
McKnight Foundation
Ministry of Agriculture (Togo)
Nagarjuna Fertilizer and Chemicals Limited
Namibian Marine Phosphate (Pty) Limited
Ostara USA LLC
PotashCorp
Netherlands’ Directorate-General for International Cooperation
Royal Embassies of the Kingdom of the Netherlands
Royal Tropical Institute
Rutgers University
Shell Oil Products U.S.
Sulvaris Inc.
Swiss Confederation
Taraba State Government (Nigeria)
Teck Resources
The Fertilizer Institute
United Nations Environment Programme
University of Michigan
U.S. Agency for International Development
The Walmart Foundation
Yacimientos Petrolíferos Fiscales – YPF S.A.
The following is a summary of financial information for the year ended December 31, 2013. The full financial statements and the independent auditors’ reports are available from IFDC upon request.

### Balance Sheet – For the year ended December 31, 2013

<table>
<thead>
<tr>
<th><strong>Assets:</strong></th>
<th><strong>US $’000</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>7,301</td>
</tr>
<tr>
<td>Contracts receivable, net of allowance for doubtful accounts</td>
<td>9,624</td>
</tr>
<tr>
<td>Other receivables</td>
<td>477</td>
</tr>
<tr>
<td>Supplies inventory</td>
<td>160</td>
</tr>
<tr>
<td>Prepaid expenses and advances</td>
<td>799</td>
</tr>
<tr>
<td><strong>Total Current Assets:</strong></td>
<td>18,361</td>
</tr>
<tr>
<td>Buildings and equipment, net</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>18,382</td>
</tr>
<tr>
<td><strong>Liabilities and Net Assets:</strong></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>2,642</td>
</tr>
<tr>
<td>Accrued annual and sick leave</td>
<td>1,897</td>
</tr>
<tr>
<td>Deferred revenue</td>
<td>12,015</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>16,554</td>
</tr>
<tr>
<td><strong>Unrestricted Net Assets</strong></td>
<td>1,820</td>
</tr>
<tr>
<td><strong>Permanently Restricted Net Assets</strong></td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Liabilities and Net Assets</strong></td>
<td>18,382</td>
</tr>
</tbody>
</table>
## Statement of Revenue and Expenses – *For the year ended December 31, 2013*

<table>
<thead>
<tr>
<th>Revenue and Support:</th>
<th>US $’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACDI/VOCA</td>
<td>1,666</td>
</tr>
<tr>
<td>AFAP</td>
<td>872</td>
</tr>
<tr>
<td>AGRA</td>
<td>1,708</td>
</tr>
<tr>
<td>Chemonics International Inc.</td>
<td>3,497</td>
</tr>
<tr>
<td>Common Fund for Commodities</td>
<td>238</td>
</tr>
<tr>
<td>DAI</td>
<td>479</td>
</tr>
<tr>
<td>DGIS</td>
<td>14,033</td>
</tr>
<tr>
<td>Embassies of the Kingdom of the Netherlands</td>
<td>12,329</td>
</tr>
<tr>
<td>Government of Nigeria</td>
<td>1,062</td>
</tr>
<tr>
<td>ICRISAT</td>
<td>433</td>
</tr>
<tr>
<td>IFA</td>
<td>102</td>
</tr>
<tr>
<td>Jacobs Engineering</td>
<td>752</td>
</tr>
<tr>
<td>SDC</td>
<td>2,132</td>
</tr>
<tr>
<td>The Fertilizer Institute</td>
<td>173</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>158</td>
</tr>
<tr>
<td>USAID</td>
<td>32,158</td>
</tr>
<tr>
<td>Others</td>
<td>3,917</td>
</tr>
</tbody>
</table>

**Total Revenue and Support**  
75,709

<table>
<thead>
<tr>
<th>Expenses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development</td>
<td>3,133</td>
</tr>
<tr>
<td>Agribusiness</td>
<td>44,139</td>
</tr>
<tr>
<td>Natural resource management</td>
<td>3,696</td>
</tr>
<tr>
<td>Capacity building</td>
<td>12,634</td>
</tr>
<tr>
<td>VFRC</td>
<td>573</td>
</tr>
<tr>
<td>Support activities</td>
<td>11,822</td>
</tr>
</tbody>
</table>

**Total Expenses**  
75,997

**Increase (Decrease) in Unrestricted Net Assets**  
(288)
## Acronyms & Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2SCALE</td>
<td>Toward Sustainable Clusters in Agribusiness through Learning in Entrepreneurship</td>
</tr>
<tr>
<td>AAPI</td>
<td>Accelerating Agriculture Productivity Improvement</td>
</tr>
<tr>
<td>ACDI/VOCA</td>
<td>Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance</td>
</tr>
<tr>
<td>AFAP</td>
<td>African Fertilizer and Agribusiness Partnership</td>
</tr>
<tr>
<td>AFO</td>
<td>AfricaFertilizer.org</td>
</tr>
<tr>
<td>AGRA</td>
<td>Alliance for a Green Revolution in Africa</td>
</tr>
<tr>
<td>AIMS</td>
<td>Agricultural Input Market Strengthening</td>
</tr>
<tr>
<td>AIRCA</td>
<td>Association of International Research and Development Centers for Agriculture</td>
</tr>
<tr>
<td>AMITSA</td>
<td>Regional Agricultural Input Market Information and Transparency System</td>
</tr>
<tr>
<td>ASHC</td>
<td>Africa Soil Health Consortium</td>
</tr>
<tr>
<td>CATALIST</td>
<td>Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability</td>
</tr>
<tr>
<td>DADTCO</td>
<td>Dutch Agricultural Development &amp; Trading Company</td>
</tr>
<tr>
<td>DGIS</td>
<td>Directorate-General for International Cooperation (Netherlands)</td>
</tr>
<tr>
<td>ECOWAS</td>
<td>Economic Community of West African States</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FBO</td>
<td>farmer-based organization</td>
</tr>
<tr>
<td>FDP</td>
<td>fertilizer deep placement</td>
</tr>
<tr>
<td>FTF</td>
<td>Feed the Future</td>
</tr>
<tr>
<td>GHG</td>
<td>greenhouse gas</td>
</tr>
<tr>
<td>Global TraPs</td>
<td>Global Transdisciplinary Processes for Sustainable Phosphorus Management</td>
</tr>
<tr>
<td>IFA</td>
<td>International Fertilizer Industry Association</td>
</tr>
<tr>
<td>ISFM</td>
<td>Integrated Soil Fertility Management</td>
</tr>
<tr>
<td>KAED</td>
<td>Kyrgyzstan Agro-Input Enterprise Development</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>monitoring and evaluation</td>
</tr>
<tr>
<td>MINAGRI</td>
<td>Rwanda Ministry of Agriculture and Animal Resources</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa's Development</td>
</tr>
<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>PPP</td>
<td>public-private partnership</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>research and development</td>
</tr>
<tr>
<td>SME</td>
<td>small and medium enterprises</td>
</tr>
<tr>
<td>SSA</td>
<td>sub-Saharan Africa</td>
</tr>
<tr>
<td>UEMOA</td>
<td>West African Economic and Monetary Union</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VFRC</td>
<td>Virtual Fertilizer Research Center</td>
</tr>
<tr>
<td>WUR</td>
<td>Wageningen University and Research Centre</td>
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</tbody>
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“The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life.”

– Wendell Berry, American novelist, poet and farmer