

Report

*an update on
the work & progress at the
International Fertilizer Development Center*

In memoriam—Dr. David B. Parbery

Dr. David B. Parbery, who became IFDC's second managing director on February 1, 1990, died on February 17, 1992. His tenure lasted nearly 9 months (he contracted chronic lymphatic leukemia). Nevertheless, Dr. Parbery left his mark on IFDC.

Dr. Parbery encouraged the Center's staff to view chemical fertilizer as part of a total nutrient management system. He also emphasized the need for addressing nutrient-related environmental issues and examining these in the context of preserving the land resource base for future generations. Many of these initiatives are now being developed by IFDC management and staff.

An international development specialist from Australia, Dr. Parbery had an outstanding career, spanning a period of some 38 years. This career covered a broad spectrum of experience, ranging from research scientist to director of international development with several organizations.

Parbery lived and worked in the United States for approximately 17 years (on an intermittent basis) and approximately 7 years in Asia. Throughout his professional life, he worked in 20 countries.

The Australian native "liked initiating things, enjoyed innovation, and took pleasure in seeing new ideas coming to fruition."

Prior to his appointment as IFDC's chief executive, Parbery was Managing Director of Luminis Pty., Ltd., the technology transfer company of the University of Adelaide, Australia, for 5 years. At Luminis, he was highly

successful in commercializing a varied range of technology developed by the University of Adelaide. The range of specialties covered the fields of agriculture, the physical and biological sciences (especially medicine and dentistry), and engineering.

Prior to that appointment, he served in various capacities with the World Bank in Asia and Latin America for more than a decade.



(Photo by Charles E. Butler)

Preceding this period, he founded and/or served as the managing director of three other organizations: the Agricultural and Industrial Development Corporation, Ltd., the Kalbilli Pastoral Co. Pty. Ltd., and the Australian Potash Research Institute—all of which were headquartered in Canberra, Australia.

Having first been educated in Australia, where he received a B.S. degree in biology at Sydney Univer-

sity, Parbery ventured to the United States for the remainder of his education. At the University of Missouri, he completed an M.S. degree in agronomy, and at Cornell University he received a Ph.D. in agronomy and development economics.

Dr. Parbery's many international friends will miss him. Dr. Nyle Brady, Senior Consultant, United Nations Development Programme, served as Parbery's major professor at Cornell University. Brady remembers his former student in this way: "I always found David to be an innovative, positive person with a good sense of humor and a love of life." A close friend of Parbery's, Dr. Saad Nagi, Director of the Center for Social Research, American University, Cairo, Egypt, remembers Parbery for his "rare combination of a keen and searching mind, a large and generous heart, and a comfortable and engaging presence."

Dr. Paul J. Stangel, IFDC's present President and Chief Executive Officer, recounted some personal traits of Dr. Parbery: "David was a person who was easily accessible, open to new ideas, and willing to listen to the views of staff from all levels. His inspiration and many of these traits are his legacy to IFDC."

At the request of his widow, Dr. Lu Parbery, memorials may be made to the Parbery International Scholarship Fund, University of North Alabama, Florence, Alabama 35630. Besides Mrs. Parbery, Dr. Parbery leaves three sons, Gordon, Gregg, and Douglas, and one daughter Sharon.

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IFDC is a public, international, nonprofit organization, governed by an international board of directors with representation from developed and developing countries. The Center is supported by various bilateral and multilateral aid agencies, private foundations, and national governments. IFDC focuses on creating sustainable agricultural productivity and food production in the tropics and subtropics through the development and use of improved and environmentally sound fertilizers and fertilization practices.

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President's Report



(Photo by Charles E. Butler)

Dr. Paul J. Stangel
IFDC President and
Chief Executive Officer

Over the past year IFDC has become increasingly involved in developing programs that address environmental issues that involve plant nutrients as a solution. Two environmental concerns: the accumulation of greenhouse gases in the atmosphere and decline in biodiversity appear to be strongly affected by the increased intensity of slash-and-burn systems currently being practiced by many farmers living in or near the rain forest margins of the tropics. Much of this increase in intensity appears to be caused by the inherently low fertility of the soils and severe limitations in providing nutrient additions needed to build soil fertility. There is a need to remove this constraint if this growing environmental concern is to be addressed.

Slash-and-burn farming systems that destroy vast areas of tropical forests was the subject of a Global Workshop held in Porto Velho, Rondonia, Brazil, during February 16-21, 1992. Research leaders from six international and eight national research institutes attended the workshop to plan the Slash and Burn Project. The group discussed the global research proposal aimed at evaluating the effects of slash-and-burn systems and at modifying them and/or identifying suitable alternatives that collectively would reduce the loss of rain forests and the resultant pollution of the atmosphere and slow the decline in biodiversity.

Representatives of private voluntary organizations also participated, and a number of donors sent observers to the meeting. The Workshop participants also observed nearby areas where the forests are being burned and the land planted to foodcrops.

A concrete research proposal was developed and approved. The international institutions involved in the project include the International Center for Research in Agro-Forestry (ICRAF), the International Institute for Tropical Agriculture (IITA), the International Center for Tropical Agriculture (CIAT), the International Rice Research Institute (IRRI), the Tropical Soil Biology and Fertility Programme (TSBF), and IFDC. National research representatives attending were from Brazil, Cameroon, Indonesia, Mexico, Peru, Philippines, Thailand, and Zambia.

Of the 14 million ha of tropical moist forests currently destroyed every year, shifting cultivation accounts for about 70% of the deforestation in Africa, 50% in Asia, and 30% in Latin America. Landless farmers from crowded areas migrate to the forested areas and attempt to make a living by slash and burn, which results in unsustainable agriculture and continuing rain forest destruction. Sustainable alternatives to slash and burn would enable millions of poor farmers to make an adequate living without destroying additional forests.

The proposed strategy focuses on two main targets: (1) reclamation of already deforested lands such as secondary forest fallows and abandoned grasslands and (2) prevention of damage by deforestation itself. The strategy consists of three main components: (1) developing and testing alternative slash- and-burn technologies for small-scale farms, adapted to specific ecoregions within the humid tropics, (2) linking environmentally oriented strategies with socioeconomic policies that provide incentives for such technologies and disincentives to further deforestation and (3) designing effective economically sound and socially acceptable rain forest conservation methods.

The proposed mode of operation is (1) a joint strategic research effort involving

international and national institutions, and nongovernmental organizations (NGOs) at selected benchmark sites on socioeconomic and biophysical aspects of slash and burn, (2) validating, testing, and disseminating options through regional networks, involving public/private organizations and effective policy dialogues in each collaborating country, (3) extrapolation of the global change implications by making the research results available to IGBP-related programs and (4) training and institution-strengthening to enhance the capacity of the deforesting nations to build a sustained effort to alleviate the crisis.

Selected benchmark sites, two or three per continent, will be chosen to encompass the range of biophysical and socioeconomic conditions in the humid tropics.

It is envisioned that through a series of short-term and long-term investigations, the project will have made major contributions to the mitigation of major environmental damage while enhancing equity for small-scale farmers in the humid tropics. The immediate beneficiaries will be farmers and consumers in the humid tropics; however, the mitigation of tropical deforestation will also benefit every person in the world.

This is a unique effort. For the first

time, select international agricultural research centers (IARCs), national agricultural research systems (NARS), and NGOs are joining forces in a project that has common goals, requires pooling of resources, involves the direct participation of farmers, and is aimed at solving their problems.

IFDC is committed to this research effort and will provide a major input by developing and testing nutrient management strategies complete with products, practices, and policies that will ensure that the alternatives identified are economically, socially, and physically acceptable to the farmers and society in general.

Paul J. Stangel

Egypt—

IFDC continues its assistance to EFDC

Two IFDC staff members—Dr. L. E. Ahlrichs, Marketing Specialist, and G. W. Bolds, Pilot-Plant Operations Coordinator—recently provided onsite assistance to the Egyptian Fertilizer Development Center (EFDC). The primary purpose of their visit to Egypt was to review the progress of the project.

Bolds discussed the civil engineering and technical drawings of the proposed pilot-plant facilities with EFDC staff engineers so that they could start fabrication of some equipment and do the civil engineering work necessary for installation of the equipment. Upon arrival of the equipment for the pilot plant, IFDC staff will provide onsite assistance in the inspection, installation, and operation of the facility.

During his recent visit to Egypt, Ahlrichs helped launch the first fertilizer marketing training program conducted by EFDC by giving two presentations on marketing during this activity. The Egyptian counterparts made the balance of the presentations; the general consensus was that the program was highly successful. Additional training pro-

grams in fertilizer technology and dealer development—joint EFDC/IFDC activities—are currently being considered.

EFDC and the United Nations Development Programme (UNDP)/Cairo are discussing an extension of the UNDP contract with EFDC. This would extend the period of the project's contract and include additional assistance in training, fluid fertilizer, and fertigation.

G.W. Bolds, IFDC Pilot Plant Coordinator (center), confers with his Egyptian counterparts regarding engineering drawings of the proposed facility at EFDC.

(Photo by Dr. Loren Ahlrichs)



Brazil—

IFDC provides technical assistance to Atlantic Capital, Ltda.

At the request of Atlantic Capital, Ltda., of Rio de Janeiro, Brazil, IFDC provided technical assistance in the evaluation of the nitrogen fertilizer facilities operated by Ultrafertil and Nitrofertil, which are currently owned by the Government of Brazil. The ultimate objective of Atlantic Capital, Ltda., is to assist the Government of Brazil in the privatization of these facilities.

During February 1992 an IFDC nitrogen expert, Donald R. Waggoner, visited four nitrogen fertilizer production sites in Brazil to make an

inspection of the plants. The purpose of the inspection was to determine the general condition and operability of the facilities. Thirteen production units were inspected, including four nitric acid units, one calcium ammonium nitrate unit, four ammonia units, three urea units, and one ammonium nitrate unit. The ages of the units range from 2 years to more than 30 years.

The findings of the evaluation have been incorporated into a report that is intended to assist Atlantic Capital, Ltda., in assessing adequate market

values for the units.

The Managing Director of Atlantic Capital, Paul Bydalek, commended IFDC on its high-quality technical assistance. The IFDC assessment of these units and comments on their operations will prove beneficial not only for Atlantic Capital, Ltda., in recommending market values, but also for the producing companies themselves and for the investors who will acquire them, in optimizing their operations.

Mexico—

IFDC helps SOCOADA develop future fertilizer strategy

At the request of Sociedad Cooperativa Agropecuaria del Distrito de Altar S.C.L. (SOCOADA), IFDC has provided technical staff to conduct a study of the Mexican cooperative in preparation for developing its future fertilizer strategy. Dr. Loren Ahlrichs, IFDC Marketing Specialist, and Jose R. Lazo de la Vega, IFDC Special Project Engineer, recently visited SOCOADA's facilities in Coborca, Mexico, to obtain information for use in the study.

This study represents one segment of an overall agreement between IFDC and SOCOADA, under which the Center will provide technical services, training, and agronomic services to the cooperative.

SOCOADA, a 40-year old cooperative with 610 members, provides such agricultural inputs as fertilizers, agricultural chemicals, irrigation equipment, liquid fertilizer application equipment, technical assistance to the farmers, petroleum products, and building supplies.

The primary objectives of the IFDC study were to (1) gather market infor-

mation to determine the current and future fertilizer market demand and detect changes in this market that will influence fertilizer product mix; (2) determine the present product mix and the equipment available to service the products; (3) assess the cropping patterns and determine possible cropping patterns in the future; (4) review the soil testing procedures and technical support program and make suggestions; and (5) make recommendations on changes that might be needed in the dry and liquid fertilizer products regarding market potential, manufacturing potential, and equipment for distribution.

"SOCOADA does not currently manufacture any liquid fertilizers," Lazo de la Vega says. "Most of the liquid fertilizers distributed by SOCOADA are purchased from other sources. Some of these liquid fertilizers can be produced by SOCOADA at its facilities by purchasing some new equipment and by modifying existing equipment."

Since SOCOADA has almost a 100% market share in solid fertilizers but much less (60% share) in liquid fertilizers and since the market is moving toward liquid fertilizers, the IFDC team recommended that SOCOADA concentrate on buying better materials to develop the liquid fertilizer business. In addition, it was recommended that the cooperative develop the liquid fertilizer business to include manufacturing of those products that are economically feasible in the market area served by SOCOADA. The technical assistance team recommended that SOCOADA develop and streamline the mixing, delivery, and application of liquid fertilizer to farmers and increase the development of its technical support program to increase the use of liquid fertilizers.

In memoriam—Dr. George W. Cooke



(Photo by Tommy L. Wright)

Dr. George W. Cooke presenting a seminar at IFDC in 1984.

With the death of Dr. George W. Cooke in February of this year, IFDC lost a strong ally and a long-time friend. Dr. Cooke was a former IFDC Board member and frequent member of the Center's program review committees.

In a tribute delivered during a memorial service by one of his long-time associates, A. H. Bunting of the University of Reading, England, Dr. Cooke was described as "the last of the great British agricultural chemists in the tradition of Black, Davy, Lawes, Gilbert, Voelcker, and Crowther."

Bunting pointed out that "With Dr. Cooke's death the classical era of agricultural chemistry in Britain has at last reached its end. Along with advances in the breeding and protection of plants and animals, its achievements are part of the scientific basis of the worldwide agricultural revolution of the past 40 years."

During his career, Dr. Cooke served as Honorary Scientist, Rothamsted Experimental Station, England, and Chief Scientific Of-

ficer of the United Kingdom's Agricultural Research Council. He had considerable international experience, especially relating to soil fertility problems in the developing world. His research focused on soil chemistry, soil fertility, and the value and use of fertilizers.

Dr. Cooke had numerous honors to his credit. Among them were several honorary lectureships, including Farmers' Club Lecturer and the Fertiliser Society of London's 1971 Francis New Memorial Lecturer. Other honors include the Research Medal of the Royal Society of England, which he received in 1967. He was elected an honorary Fellow by the Royal Agricultural Society of England in 1981; he was appointed a Commander in the Order of the British Empire in 1975.

Educated at London University, Dr. Cooke was the recipient of B.Sc. and Ph.D. degrees from that institute.

The author of numerous papers, critical reviews and general reviews, Dr. Cooke is widely known

for three books that he contributed to the agricultural field. They include: *Fertilisers and Profitable Farming*, *The Control of Soil Fertility*, and *Fertilising for Maximum Yield*. His book, *Fertilisers and Profitable Farming*, was translated into several languages and became a standard textbook for agricultural students in Britain.

In his tribute Bunting mentioned that "for many, Cooke's most lasting influence came through his logical and memorable lectures." During one such lecture at IFDC he remarked that "Fertilizers were the greatest breakthrough in man's ability to control the production of his food."

Cooke traveled and lectured widely in Europe, where he had many professional and personal friends. In 1972 he was made a foreign member of the Lenin All-Union Academy of Agricultural Sciences of the former Soviet Union and an Honorary Member of the Royal Irish Academy in 1980. He was a member of the scientific board of the International Potash Institute, a consultant to the Rubber Research Institute of Malaysia, and an advisor to the Cotton Research Corporation and the Ministry of Overseas Development.

His widow Beth has requested that memorials be made to the Farmers' Club Charitable Fund, 3 Whitehall Court, London, England. A trust fund has been established for the George W. Cooke Memorial Lectures.

Fertilizer marketing training program conducted

Thirty-four participants from 11 countries attended an IFDC Fertilizer Marketing Training Program, conducted during December 2-13, 1991, in Bangkok, Thailand. The countries represented were: Bahrain, India, Indonesia, Malaysia, Qatar, Saudi Arabia, Singapore, Taiwan, Thailand, United Arab Emirates, and Vietnam.

Cosponsoring the program with IFDC was the Department of Agricultural Extension (DOAE), Ministry of Agriculture and Cooperatives, Royal Government of Thailand.

Presiding over the opening ceremonies was Dr. A. H. Roy, Executive Vice President and Chief Operating Officer. Dr. Narong Minanandana, Director General,

DOAE—the chief guest—inaugurated the program.

Besides covering the four Ps of marketing—product, place, promotion, and price, the following topics were covered: agronomy, management, communication, plant protection chemicals, and procurement. In addition to formal presentations, the program included field trips to the TCCC fertilizer plant and TCCC wharf, fertilizer retailers, NPK plant unit of Monthon Fertilizer Company, and the Tissue Culture Laboratory of the Bangkok Flower Centre.

IFDC's Alpha Simulation Exercise stimulated group dynamics. Divided into five companies, the participants received hands-on experience in analyzing a fertilizer marketing system, developing and

implementing a complete marketing strategy, and controlling marketing programs. Each of the companies selected the same objective: highest retained earnings.

"Achieving the same objective," says R. S. Giroti, Training Administrator, "generated much competition, which made the participants apply the knowledge that they learned from the presentations."

At the conclusion of this program, the participants rated the program as "very good" and acknowledged that they benefited from the program through an increase in their knowledge and skills in fertilizer marketing.

Recent IFDC Publications

Developing the Fertilizer Dealer: Emphasizing the Small-Farm Sector

Now available from IFDC is a new publication entitled, *Developing the Fertilizer Dealer: Emphasizing the Small-Farm Sector*, edited by Loren Ahlrichs and Orvis P. Engelstad. This proceedings of a workshop held in Kingston, Jamaica, during January 21-25, 1991, contains a summary, twenty-two papers that were presented by the workshop principals, and a list of the participants.

Recognizing the importance of the fertilizer dealer, and with encouragement and support from the Canadian International Development Agency (CIDA) and the Jamaica Ministry of Agriculture,

IFDC organized this workshop to continue the process of helping the fertilizer dealer meet the needs of the small-farm sector in the Caribbean region.

The agricultural situation in the Caribbean is not unlike that of many landlocked developing countries where the farms are small, resources are limited, farm-level education and extension activities are often lacking, and many essential elements of a comprehensive crop production and marketing system do not exist. The development of a well-trained and responsible network of dealers is a first essential step that can

be taken for dulling the impact of the technical and financial constraints faced by most of the small-scale farmers in the developing world.

The delegates, speakers, and technical resource persons assembled at this workshop discussed their experiences and proposed methods for the effective development of dealers and dealer networks.

The price of this publication is US \$40. To purchase this publication, IFDC-SP-16, please send your order to the IFDC Purchasing Department.

ACFD and Zimbabwean Government sign agreement

On February 28, 1992, the Government of Zimbabwe and the Africa Center for Fertilizer Development (ACFD) signed an agreement recognizing ACFD as an international body that can operate from Zimbabwe to provide services to African countries. This agreement facilitates the implementation of ACFD's activities that include manpower training, research trials, marketing and distribution of fertilizers.

The agreement was signed in Harare by the Minister of Lands, Agriculture and Rural Resettlement, Cde. Witness Mangwende, on behalf of the Government of Zimbabwe, and Dr. Samuel C. Muchena, Managing Director of ACFD.

ACFD is an initiative of the Organization of African Unity (OAU). The Center represents an important part of the long-term strategy for implementation of the Lagos Plan of Action for Economic and Social Development, adopted by the 1980 Economic Summit of the OAU calling for the stimulation of proper production and use of fertilizers.

"It has also been shown that Africa has the natural resources to produce the required quantities of fertilizers that are needed for intensive agriculture to succeed," Cde. Mangwende says. "It has been demonstrated that the continent lacks an organization to develop indigenous materials associated with industrial techniques in fertilizer development."

At the root of Africa's food problems is the neglect of soil fertility. ACFD and IFDC have been charged with the mandate to develop and direct an overall effort to remove soil fertility and nutrient supply and management as major constraints to increased agricultural productivity in sub-Saharan Africa. ACFD, in collaboration with IFDC and other relevant organizations in the developed countries, can fulfill this role. OAU has selected IFDC to serve as the executing agency and provide technical management during the planning, development, implementation, and operation of ACFD for a period of at least 5 years.

International Fertilizer Development Center 1992 Training Calendar

Program	Dates	Location	Fees
Efficient Marketing of Fertilizer and Other Agri-Inputs	May 11-22	Nairobi, Kenya	1,200
Computer Simulation of Crop Growth and Nutrient Management	June 16-29	Honolulu, Hawaii, U.S.A.	1,400
Advances in Fertilizer and Irrigation Technology	June 8-27	Alabama, California, Illinois, Missouri, Nebraska, Washington, D.C., U.S.A.	1,800
Agroeconomic Evaluation for Development of Fertilizer Recommendations (in Spanish and English)	July 6-17	Valencia, Venezuela	1,200
Efficient Marketing Management for Fertilizer and Other Agri-Inputs	August 3-September 4	Muscle Shoals, Alabama, and other locations, U.S.A.	2,475
Plant Nutrient Management for Sustainable Agriculture	September 14-25	Muscle Shoals, Alabama, and other locations, U.S.A.	1,200
Technical Management of Fertilizer Production Units	October 19-November 6	Muscle Shoals, Alabama, and other locations, U.S.A.	1,800
Fertilizer Marketing	December 7-18	Jakarta, Indonesia	1,200

Program dates and locations are subject to change.
Fees do not include travel expenses or living expenses.

For details, please contact: Director, Outreach Division
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