

# Report

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

*Eastern Europe—*

## **IFDC Introduces Romania's Farming Sector to the Free Market System**

Dumitriu Emil, director of a swine farm near the village of Jilavele, Romania, believes that an agricultural development program conducted by IFDC will have a very positive impact on Romanian agriculture. Emil is one of several private farmers that this program, which is funded by the U.S. Agency for International Development (USAID), is designed to assist. The initiative is focused on swine and poultry operations that have become private since the 1989 revolution.

Emil's 7.5-ha farm, which was established in 1970, is the first big swine complex started in Romania and now has the capacity of producing 120,000 fattening hogs/year. He recently purchased 410 tons of protein-based feed supplement through the IFDC-conducted project that is providing this key input to Romanian swine and poultry production sectors. The feed supplement is enabling the producers to effectively and efficiently operate their enterprises by reducing the amount of feed needed to produce an extra kilogram of pork to 4 kg from 7.5 kg and by shortening the feeding cycle by about one third, thus the farmers will realize a greater profit.

"I do not have access to a steady supply of this type of feed supplement since I don't own enough land to produce the necessary input myself," Emil says. "It is important that we have access to this type of

feed supplement; without a source of protein, hog producers cannot do a good job."

After using the feed supplement for only a short period of time, this Romanian farmer has already begun to see positive results. "After using the feed supplement for only 10 days, we have seen our pigs' appetite increased. Within a period of 3-4 months, we will have concrete evidence of the impact of this feed supplement," Emil says.

The IFDC Romania project, initiated in 1992, has been called "the first real assistance to the Roma-

nian farmers by the United States of America," in an article in the May 14, 1993, issue of *Libertatea*, a Bucharest newspaper.

"A total of 10,220 tons of swine feed supplement was offered for sale at the first auctions (held in June 1993), and the total offering was sold. More than 22,000 tons was bid in 8 locations; this indicates the existence of a viable Romanian market among private farmers for this type of product at or near world market prices," says M. Terry Frederick, IFDC Chief of Party in Romania. *(Continued on page 8)*

**M. Terry Frederick (right), IFDC Chief of Party in Romania, inspects a supply of protein-based feed supplement purchased by Romanian swine farmer, Dumitriu Emil (left). By inviting private farmers to participate in competitive auctions, the IFDC-conducted project is introducing the free market system to Romania's farming sector.**

*(Photo by Maurice O. Klein)*



## IFDC Report

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## President's Report



(Photo by Charles E. Butler)

**Amit H. Roy**  
IFDC President and  
Chief Executive Officer

### Board of Directors' Meeting

During May 6-7, 1993, the IFDC Board of Directors held its regular meeting at Headquarters. In attendance were Dr. W. David Hopper, Chairman; Mr. Joseph C. Wheeler, Vice Chairman; Mr. Yaovi Adodo, Dr. Eliseu Alves, Dr. Anton Amberger, Dr. Hiram Grove, Dr. Christian Pieri, Mr. Pratap Narayan, Dr. Bukar Shaib, Dr. Robert E. Wagner, and Mr. William F. Willis.

**Program Committee Meeting**—The Program Committee met on May 6, 1993, during the Board of Directors' Meeting. The meeting was opened with an overview of the programs by the President. Activities in Africa, Asia, and Eastern Europe were highlighted. The development of the agribusiness and production and technology programs within the Outreach Division and the nutrient dynamics and information management programs within the Research and Development Division was discussed.

Dr. Uzo Mokuwunye, Director of the Africa Division, presented an update on the activities of that Division. Capacity building was cited as the primary theme of current work in Africa. The agronomic activities underway on the five research stations in northern and southern Togo, representing five ecologies, and two research stations in Niger are beginning to reap very informative results. Studies of the interaction between organic and inorganic materials

are progressing. Henny Gerner, IFDC-Africa Economist and Data Base Manager, discussed the accomplishments of the Market Development Project, the Fifth Annual Meeting of the African Fertilizer Trade and Market Information Network (AFTMIN), African Fertilizer Information Database, and future plans.

Dr. Carlos A. Baanante, Director of the Research and Development Division, and his staff presented an overview of IFDC's crop modeling activities. Ram S. Giroti, Coordinator of the Human Resource Development Unit, reviewed IFDC's training programs during the meeting.

### Activities in Eastern Europe

**Albania**—With funding from the United States Agency for International Development (USAID), IFDC continues to maintain a major presence in Albania. Dealer development activities gained momentum during this quarter. Two groups of dealers and one group of bankers attended training programs and study tours at Headquarters and other U.S. locations to enhance their knowledge of the practices of agribusiness, trade organizations, commodity procurement operations, and credit services. These groups were also acquainted with various private agribusiness operations in the United States.

As a consequence of IFDC's evaluation of the Fier nitrogen fertilizer factory, an oil and gas exploration firm has been contracted by IFDC (with USAID funding) to analyze data received from the Albanian National Petroleum Enterprise (ALBPETROL). During September 1993, the exploration firm will complete a study to determine the technical feasibility of stimulating existing natural gas wells through acid fractionation and conduct an onsite evaluation. Hopes are high that this technology will result in the increased production of natural gas that could be allotted to the production of nitrogen fertilizer by the Fier factory.

**Romania**—With assistance from USAID, IFDC is making great strides in its project to introduce the free market system into Romania's farming sector. The successful auction and distribution of

10,220 metric tons of swine protein-based feed supplement proved the existence of a viable Romanian market among private farmers for this type of product at or near world market prices. In fact, estimated demand for protein supplement in Romania is in excess of 1.0 million tons per year.

The US \$3.1 million collected during the auctions will be used to support the land surveys needed

for privatizing agriculture.

The Romanian press has labeled IFDC's Romanian project the "first real assistance by the United States of America to the Romanian farmers."

#### **Human Resource Development Activities**

Human resource development activities continue to be a major success story of IFDC. During this

quarter the programs in data collection and analysis, crop modeling, privatization of agribusiness markets, and an environmental workshop enhanced the knowledge base of 142 people from 49 countries.

*Amit H. Roy*

*Headquarters—*

## **Agribusiness and Trade Organization Management Study Tour Conducted for Albanian Entrepreneurs**

Gamil Dalipi of Elbasan, Albania, knows the impact of IFDC's agribusiness project in his country since he is one of the project's beneficiaries. "A 'mik' in the Albanian language is a very close friend," says Dalipi. "IFDC is a 'mik' to all Albanian dealers. The Center has helped us in all phases of our work. IFDC helped us to acquire credit to purchase fertilizer, which was a great help to us. In fact, IFDC's representatives in Albania are still working with three Albanian banks."

As a result of the IFDC project in Albania (see also *IFDC Report*, December 1992), Dalipi has been successful as a fertilizer dealer, and he has observed that his country has benefited as well. "Before the IFDC project began, I could not buy directly from the Fier nitrogen fertilizer factory," says Dalipi. "We operated under difficult conditions because prices were not liberalized during those times. We had to purchase our fertilizer from the agro-commercial enterprises that allowed us only a very limited profit."

With the beginning of the IFDC agribusiness project in Albania and the introduction of the free market system, many changes began to take place. "With the first urea auction, prices of fertilizers were liberalized in Albania," Dalipi says. "This was a source of great success for me as a dealer and also for our country. I became a regular dealer by buying fertilizer through the

auction and, in turn, selling this product to my farmer customers. The source of satisfaction was not just the profit that I made but also my experiences as a dealer—it was as if a light had come on in my life. All of the Albanian dealers have been successful; I don't think anyone has failed."

Dalipi was one of eight Albanian fertilizer dealers who attended a special Agribusiness and Trade Organization Management Study Tour for Albanian Entrepreneurs, conducted during June 16-23, 1993, at IFDC Headquarters.

The objectives of the program were to: (1) train Albanian study tour participants in the concepts and practices of agribusiness, trade organization, and commodity procurement operations and (2) acquaint Albanian participants with various private agribusiness operations in the United States. Catalino C. Yaptenco, IFDC Senior Marketing Specialist, was the manager of this training program; program coordinator was R. S. Giroti, IFDC's Coordinator of Human Resource Development Unit. This program was conducted in cosponsorship with Agricultural Cooperative Development International.

After the lecture portion of the program in the Muscle Shoals, Alabama, area, the participants trav-

eled to Texas A&M University for a 2-week stay and then visited Farmland Industries in Kansas City, Kansas, before returning home.

Rezi Velica of the IFDC/Albania staff, who served as the interpreter and accompanied the group, also found the visit very beneficial. During the tour she acquired several ideas that she feels can be applied in her country. "I see changes occurring in our country every day," she said. "It's like a seed that has just been planted, and it's going to take time for it to grow. But we're all anxious for it to grow and blossom. Our experiences here will give us ideas to take back with us."

**Albanian dealers visit an Alabama fruit farm and market to see agribusiness from production to marketing. Pictured from left are Gezim Pllaha, Azem Shehu, and Ibrahim Gangu.**

*(Photo by Charles E. Butler)*



## IFDC Team Evaluates Albanian Nitrogen Fertilizer Factory

The success of privatization in Albania's agri-inputs sector depends heavily upon a readily available and cost-effective supply of nitrogen fertilizer. Likewise, a reliable and cost-effective supply of nitrogen fertilizer is essential for achieving increased levels of production of wheat and maize, the primary food and feed grain crops in Albania.

At present Albania's only nitrogen fertilizer production facility operates only intermittently from May to October and generally not at all the remainder of the year due to the unavailability of natural gas (feedstock and fuel) for the production of ammonia. However, if this factory can be brought back into production, it has the capacity of producing two types of nitrogen fertilizer: urea and ammonium nitrate.

At the request of the United States Agency for International Development, an IFDC evaluation team visited Albania to conduct a 3-week evaluation of the Fier nitrogen fertilizer factory during February 14-March 6, 1993. The members of the team included J. R. Polo, Chemical Engineer and Team Leader; J. R. Lazo de la Vega, Ammonia/

Urea Specialist; and J. W. Foster, Ammonia/Urea Specialist and Natural Gas Specialist.

"This factory has a design capacity sufficient to supply all of Albania's nitrogen fertilizer needs for several years while still providing product for export to regional markets if such opportunities arise," says Polo. "The major constraint, however, to the Fier factory in routinely reaching its design capacity is the lack of a reliable supply of natural gas—the critical raw material and fuel required for the nitrogen fertilizer manufacturing process."

The team recommended a stepwise investment and technical assistance program for the Fier nitrogen factory that will ensure that the issues of natural gas supply, domestic demand for nitrogen fertilizer, environmental stewardship, and cost effectiveness of nitrogen fertilizer at the factory level are fully addressed.

"We recommended a plan of action, which considered nitrogen supply and demand, production economics, cost of restoring the Fier factory to commercial operation, and natural gas supply," Polo says.

There are a number of benefits of the proposed action plan. First, domestic production of nitrogen fertilizer by the Fier factory can easily meet domestic demand and thereby eliminate the drain on scarce foreign exchange that is urgently needed to support other sectors of the economy, for example, the energy sector. Second, with a more favorable price and a steady supply of natural gas to the Fier factory, it may be easier for the Albanian state-owned gas and oil-producing company to obtain financing to rework other natural gas wells and further improve the natural gas supply situation over the long term. In addition, the Fier factory would become a reliable supplier of urea to the emerging number of private-sector agri-inputs dealers. Last, improved economics of production will help the Fier factory obtain the financing needed to implement the necessary environmental and energy-saving projects and perhaps expand the product warehouse capacity and realize other improvements in product quality and services.

### Headquarters—

## Training Program Stresses Role of Data Collection, Analysis, and Projections in Agribusiness Development

Accurate information properly analyzed is the key to successful government policies and increased profits in the agribusiness sector. The importance of good data in decisionmaking is unquestioned. Good data are essential to developing successful business strategies, particularly in the commercial sector where a decision based on poorly analyzed or unreliable data can result in large financial losses.

To address this issue, IFDC conducted a training program on Data Collection, Analysis, and Projections for Agribusiness at Headquarters and other U.S. locations during March 29-April 16, 1993. The

program attracted nine participants from Albania, Cameroon, Ethiopia, Ghana, Indonesia, Pakistan, and Thailand. The participants represented six organizations and were engaged in economics and statistics-related activities.

During the classroom portion of the program, the participants learned about data collection, analysis, forecasting, data maintenance, and data dissemination. One important segment of the classroom sessions was devoted to presentations by the participants in which they related how data are collected, analyzed, and reported by their organizations or countries; what the

major successes are; what the major problems are; and how these problems are solved.

Field trips are always a popular portion of the program because the participants are allowed the opportunity to see how theory is put into practice. Included this year were trips to eight organizations—commercial, Federal, and state agencies—to gain information regarding their data collection and data use activities.

"On the field trips the participants had the opportunity to gain much practical knowledge," says the program's manager, Gene Harris, IFDC Senior Marketing/

Economics Specialist. "At the Florida Citrus Commission the participants were shown how that organization analyzes and uses the statistics that are developed by the Florida Agricultural Statistical Service. Likewise, when we visited the Florida Agricultural Statistical Service, the participants gained an insight into how that entity supplies state data to the National Agricultural Statistical Service in Washington, D.C. In Washington the participants went through a 'confidential lockup' prior to the release of the April crop report and saw the Secretary of Agriculture sign and release the report."

The faculty for this training program was comprised of IFDC staff and 49 guest speakers. In his closing address, S. Zarqa, Senior Statistician with the Food and Agriculture Organization of the United Nations in Rome, showed the participants ways to implement in their organizations what they had seen during the 3-week program.



*(Photo by Ms. Panpimon Chunyanuwat)*

**During their Washington, D.C., visit, participants in the training program on Data Collection, Analysis, and Projections in Agribusiness Development witnessed the signing of the April crop report of the U.S. Department of Agriculture. Pictured here are: (from left) Keith Collins, Acting Assistant Secretary of Agriculture for Economics; the Honorable Mike Espy, Secretary of Agriculture (seated); Richard Allen, Deputy Administrator for Programs, NASS; and John Woodsit, Chief of Crops Branch, Estimates Division, National Agricultural Statistics Service (NASS).**

*Headquarters—*

## **Training Program Conducted on Computer Simulation for Crop Growth and Nutrient Management**

Greater collaboration on modeling research among the international agricultural research centers (IARCs) and National Agricultural Research Systems is often one of the spinoffs from IFDC training programs on Computer Simulation for Crop Growth and Nutrient Management. Four IARCs were represented at the IFDC training program conducted at Headquarters during May 10-21, 1993: Centro Internacional de Agricultura Tropical (CIAT), Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT), Centro Internacional de la Papa (CIP), and the International Rice Research Institute (IRRI).

Twenty-two participants from seventeen countries attended this program. The countries represented included: Albania, Brazil, Colombia, Egypt, Guatemala, Jordan, Malawi, Mexico, Morocco, Norway, Peru, Philippines, South Africa, Thailand, Tunisia, United States, and Zambia.

**Participants in the IFDC training program on Computer Simulation for Crop Growth and Nutrient Management work together to complete an exercise on the computer. Pictured from left are Francois Knight from South Africa, Edward Malenga from Malawi, and Dr. Mohammed Karrou from Morocco.**

*(Photo by Charles E. Butler)*



Dr. Philip K. Thornton, IFDC Senior Systems Modeling Scientist, served as the program's manager. Other staff of the Research and Development Division who assisted him included Dr. Walter T. Bowen, Systems Modeling Scientist; Dr. Deborah T. Hellums, Systems Modeling Scientist; and James E. Brink, Geographic Information Systems Technician. Besides the IFDC staff, serving on the faculty were five guest lecturers from U.S. universities. They included: Dr. Gerrit Hoogenboom, Assistant Professor

of Agrometeorology, University of Georgia; Dr. James W. Jones, Professor of Agricultural Engineering, University of Florida; Dr. Kenneth J. Boote, Professor of Agronomy, University of Florida; and Dr. Nigel Pickering, Visiting Assistant, University of Florida. Ram S. Giroti, Coordinator of the Human Resource Development Unit, rendered assistance in logistics and program administration.

In addition to attending lectures on various topics regarding crop modeling, the participants engaged

in a variety of hands-on computer exercises in crop modeling and were exposed to case studies, demonstrations, and applications. Two of the highlights of the 1993 program were the presentations entitled "Models: An Agribusiness Specialist's View," given by Ian Gregory, IFDC Senior Marketing Specialist and Financial Analyst, and "Models: A Soil Scientist's Viewpoint," presented by Dr. Bernard H. Byrnes, Soil Fertility Scientist.

Headquarters—

## Training Workshop Focuses on Reforming Policies for Agribusiness Markets Through Deregulation and Privatization



(Photo by Charles E. Butler)

**Dr. Vernon W. Ruttan, Regents' Professor of Economics and Agricultural Economics at the University of Minnesota, makes a point during his keynote address to the IFDC Training Workshop on Deregulation and Privatization Policies to Reform Agribusiness Markets.**

"The technologies that will account for most of the growth in agricultural production in developing countries over the next several decades will come from the yet unrealized gains from the development and application of what have now become the conventional sources of productivity growth. These include advances in crop yields, advances in animal feed efficiency, improvement in agronomic produce,

and improvement in the management of land and water resources."

This was the way Dr. Vernon W. Ruttan, Regents' Professor of Economics and Agricultural Economics at the University of Minnesota, concluded his keynote address to the participants in the IFDC Training Workshop on Deregulation and Privatization Policies to Reform Agribusiness Markets. The title of Dr. Ruttan's address was "Development Thought and Development Assistance: Implications for Agricultural and Agribusiness Development."

The international workshop was conducted in two parts during April 19-30, 1993. Part one focused on training at IFDC, and part two comprised the workshop segment in Washington, D.C.

This workshop, under the direction of Dr. Surjit S. Sidhu, IFDC Senior Economist, attracted 39 delegates from 11 countries—Albania, Bangladesh, Costa Rica, Estonia, Ethiopia, India, Indonesia, Malawi, St. Lucia, Zambia, and the United States.

Some of the main topics and issues covered during the workshop included: the rationale for deregulation and privatization of the nonmarket structures, the rapid development and integration of the international agricultural markets,

policies and implementation procedures for the development of market-led privatized agribusiness sectors, and case studies of successful deregulation and privatization experience.

In addition to the core faculty composed of IFDC staff, experts from the World Bank, the University of Minnesota, Yale University, the International Food Policy Research Institute (IFPRI), Fertiliser Association of India, the Governments of Bangladesh and India, and Winrock International served as resource persons. Mr. Joe Wheeler, Vice Chairman of the IFDC Board of Directors also made a keynote address at Headquarters while Dr. Per Pinstrup Andersen, Director General of IFPRI, presented a keynote address in the workshop session in Washington, D.C. Dr. W. David Hopper, Chairman of the IFDC Board of Directors, delivered the commencement address in Washington, D.C.

## Workshop Deliberates Environmental Issues Confronting Fertilizer Industry

"To avoid misinformation and confusion, business leaders and scientists must counter exaggerated accusations of the extreme elements of the environmental movement with good scientific information."

This was the advice given recently to the fertilizer industry by Dr. Norman Borlaug, winner of the Nobel Peace Prize and the Father of the Green Revolution. In keeping with this advice, IFDC conducted an international workshop on Nitric Acid-Based Fertilizers and the Environment during June 14-18 in Brussels, Belgium.

Providing a forum for an objective discussion and analysis of the environmental issues facing the fertilizer industry, this workshop aimed to:

- Identify the technological and management innovations to help mitigate any negative impact caused by the production and use of nitric acid-based fertilizers.
- Examine the role of public opinion and regulation in achieving sustainability in the fertilizer production and use sectors.
- Quantify costs associated with the implementation of environmental protection initiatives.
- Discuss governmental policy actions required to achieve an acceptable level of environmental protection while maintaining an adequate level of fertilizer production and use to ensure agricultural sustainability.

The inaugural session featured addresses by four noteworthy individuals. The keynote address, presented by Professor Dr. André Cottenie, Former Rector of the University of Ghent, pertained to "Nitrogen and the Environment." Dr. Cottenie reminded his audience that "in spite of local, regional surpluses, large parts of the world are suffering from food deficiency, especially food protein production, due to the lack of fertilizers. The Food and Agriculture Organization

of the United Nations and other organizations are actively involved in transferring knowledge and material aid for a better supply of water and fertilizers. However, experience teaches how difficult it is to overcome all sorts of constraints in this regard and to achieve a 'sustainable agriculture'."

In concluding his address, Cottenie challenged the workshop delegates and emphasized that "there is no excuse for allowing any deterioration of our agricultural and life environment, knowing that present technological and laboratory possibilities provide so many means to protect and improve its condition."

Three other inaugural addresses were made as follows:

- "The Role of the European Fertilizer Manufacturers' Association (EFMA) in the European Market" by A. J. Williams, Secretary General, EFMA
- "The Efficiency of Fertilization and the Environment" by L. M. Maene, Secretary General, International Fertilizer Industry Association
- "Fertilizers and the Environment: Current Status" by I. N. Volodin, United Nations Industrial Development Organization

This international workshop was attended by 65 delegates and invited speakers representing 28 countries. The forty papers that were presented will be published in a proceedings, which will be available in early 1994.

The workshop manager, J. J. Schultz, Director of IFDC's Outreach Division, outlined the importance of nitric acid-based fertilizers. "Their importance is manifested in three primary ways: (1) their widespread production and use in many developed and developing countries, (2) their potential relatively benign environmental impact at the production site, and (3) their role in international trade

for meeting the fertilizer needs of many developing countries," he said.

Assisting Schultz in conducting the workshop were the workshop comanager—D. I. Gregory, IFDC Senior Marketing Specialist; workshop coordinators—J. R. Polo, IFDC Engineering and Technology Coordinator, and D. W. Rutland, IFDC Specialist—Physical Properties/Environmental Regulations; and workshop administrator—R. S. Giroti, IFDC Coordinator of the Human Resource Development Unit.

During the last session of the workshop, the delegates discussed the following issues in an effort to form a consensus:

- The agronomic advantages of nitric acid-based fertilizers over other nutrient sources.
- The environmental impact of these fertilizers as far as: (1) production, (2) transport and distribution, and (3) farm-level use.
- The issue of cadmium and other heavy metals.
- The complimentary use of alternative nitrogen sources, such as biological nitrogen fixation and natural nitrates.
- The key concern of achieving scientifically based environmental regulation and legislation.
- The role of public pressure in formulating and enforcing environmental regulations.
- The role of education, extension, and technology in mitigating environmental impacts.
- The impact of structural changes in the industrial and agricultural sectors on environmental stewardship.
- The impact of energy, finance, and market opportunities on environmental stewardship.

Four field trips provided an added dimension and gave the workshop delegates the opportunity to view

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**International Fertilizer Development Center**  
**P.O. Box 2040**  
**Muscle Shoals, Alabama, U.S.A. 35662**

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The IFDC team received many inquiries concerning the reasons for selling the feed supplement instead of donating it and how the resulting funds would be used. All funds raised, about 2.4 billion lei (US \$3.1 million), were deposited in a special account to be used to support local purchases required to complete the land surveys needed for privatizing agriculture. This intervention, along with the assistance being given by E.C. PHARE and other programs, should allow land titles to be issued to the private land owners on a timely basis.

This project has implications for not only Romania but also the developed market economies. "Because the shortage of protein-based animal feed supplement in Romania is real, there appear to be market opportunities for private international companies that can take advantage of this situation," says

Frederick. "Estimated demand for protein supplement in Romania is in excess of 1.0 million tons/year."

The IFDC Romania project represents the initial stage of the development of a free market system in that country's agricultural sector. "The exposure of the auction participants to a free market system is one of the first steps in the introduction of free market practices into the agriculture sector," Frederick says. "The response by many of the farmers in a competitive atmosphere and in their procedures for bidding was extremely enlightening."

Considering the percentage of people in agriculture in Romania (30%), liberalizing tendencies in this area may produce greater results than comparable policies would in other sectors. The IFDC Romania project is playing a vital role in this privatization process.

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industrial and agricultural practices firsthand. Visits were offered to the following: Nitrophosphate Complex at BASF, Antwerp; Agricultural Research Centre, Gembloux; University of Ghent Nitrogen, Soil Chemistry, and Soil Fertility Laboratories and Experimental Station, Ghent; and Rothamsted Experimental Station, Harpenden Herts, England.