The International Fertilizer Development Center (IFDC), announces an International Training and Study Tour on Technology Advances in Agricultural Production, Water, and Nutrient Management.

Alabama, Arkansas, Illinois, Tennessee, and Washington D.C., USA
August 19-30, 2019

ABOUT IFDC

IFDC is a nonprofit, public international organization (PIO) dedicated to increasing agricultural productivity and food production through the development and use of plant nutrients in sustainable crop production systems. Headquartered in Muscle Shoals, Alabama, U.S.A., IFDC is involved in human resource development, research, and technical assistance in collaboration with public, private, national, and international organizations throughout the world. IFDC has conducted more than 700 formal workshops, study tours, and training programs for over 11,000 participants from over 150 countries since 1974. The programs have covered a wide range of subjects including integrated soil fertility management and fertilizer use efficiency, fertilizer production technology, agro-input dealerships, competitive marketing, supply chain management, investment analysis, policy reforms, and numerous specialized topics.

FOR MORE INFORMATION

Bridget Okumu
Training Coordinator
IFDC Kenya
C/o ICIPE Campus
Duduville, Kasarani, Thika Road
P.O Box 30772-00100
Nairobi Kenya
Telephone: +254 (20) 514 3600
Cell: +254 728 561 710
Skype: baokumu

E-Mail: training@ifdc.org | Website: www.ifdc.org
Note: As a nonprofit organization, IFDC does not finance or sponsor any participant.

REGISTER ONLINE

For complete course information, including payment terms and options, and to register online, please visit: http://bit.ly/2019USATRAINING.
BACKGROUND

By 2050, the global population is projected to reach 9 billion, which will nearly double global food and fiber demand. Achieving and sustaining production at that level are major challenges that must be met without compromising environmental integrity or public health. Agricultural intensification, through the use of high-yielding crop varieties, balanced fertilization, irrigation, and crop protection products and practices, remains the best method to combat these challenges. In the past, emphasis was placed on improving potential yield, but today’s focus is increasingly on improving the nutritional value of foods, reducing post-harvest losses, improving stress tolerance, and reducing reliance on chemical crop protection products.

Agricultural technologies continue to make enormous advances in increasing crop production while safeguarding the environment. The integration of IT and systems research tools, such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing (RT), has spurred the development of precision agriculture tools, such as variable rate technology (VRT) and in-season prediction of crop yield potential. These tools ensure that nutrient and irrigation management match conditions that often vary across and within fields. Precision agriculture allows farmers to maximize their cost: benefit ratio while mitigating environmental impacts. In addition, new technologies, such as chlorophyll meters, allow producers to apply fertilizer based on crop need.

Technological advances also have been made in water management techniques, such as soil moisture sensors that control irrigation. These sensors detect when the substrate water content drops below a grower-defined point and automatically activate irrigation when needed.

These emerging technologies are ushering in a new era that will affect farmers’ day-to-day operations and improve their ability to compete in the global market. The innovations will contribute to increased agricultural productivity and transformation of agribusiness infrastructure. Many of these advanced technologies, as well as the concepts and approaches in strategic farming in the United States, are directly applicable to agricultural production in developing and developed country environments. Thus, the IFDC study tour will provide participants with a unique opportunity to develop their professional skills and collaborate with U.S. organizations and other participants.

IFDC is uniquely positioned to stay abreast of the latest technologies related to soil fertility and water management and how these can be applied to developing and developed country agriculture. IFDC has well-established relationships with public and private sector organizations that impact agricultural production in the U.S. This study tour will allow participants to visit some of these organizations, including farmer cooperatives, the U.S. Department of Agriculture, numerous research and extension centers and county agricultural extension services, Bayer Crop Sciences (formerly Monsanto), The Fertilizer Institute, major agricultural colleges and universities, and large- and small-scale farmers. Interactions with these groups will provide the participants with the opportunity to see how farmers, agribusinesses, and policymakers are adjusting to today’s agricultural challenges in ways that ensure agriculture in the United States remains competitive on a global scale. While in the Midwestern United States, the participants will be offered a unique opportunity to visit the Farm Progress Show, the largest outdoor farm show in U.S. agriculture, featuring the most extensive state-of-the-art farm equipment, information, and technology available for today’s agricultural producers.

OBJECTIVES

The objectives of the 10-day training and study tour program are to:

- Improve participants’ knowledge and understanding of recent technological advances in the areas of biotechnology, irrigation, information management, and precision agriculture.
- Familiarize the participants with the impact of each of these advances on nutrient management.
- Provide an opportunity for participants from various countries and backgrounds to observe and discuss the practicality and economics of integrating these innovations into mainstream major crop production.
- Expose participants to trends and challenges in the agricultural global market.
- Provide a forum for participants to discuss the farm-level impacts of national policies related to water and nutrient management.
The program will cover various topics, including:

- Overview of advances in U.S. agricultural production and nutrient management
- Economic benefits of integrating agricultural technology advances into U.S. agriculture
- Nutrient management using precision agriculture and remote sensing technologies
- Sensor-based irrigation management
- Nutrient and water spatial and temporal variability management
- Strategic planning and risk management in uncertain times
- Biotechnology and advances for crop improvement
- Management of natural resources and the environment under a changing climate

The program offers exceptional highlights and features, including:

- International faculty from IFDC, leading U.S. agricultural producers, and other international experts
- Diverse and participatory activities, such as training activities, key lectures, and films
- Written training materials for reference
- Eight days of field trips to observe recent advances in irrigation and nutrient management, biotechnology, precision agriculture, etc., and two days of classroom-style presentations and discussion opportunities
- Discussions and interactions that will help participants improve their ability to compete in the global market and assist farmers in their day-to-day operations

This workshop is designed for innovative farmers, agronomists, soil scientists, researchers, and extensionists from national and international agricultural research institutes and universities, as well as policymakers from governments and ministries in charge of agricultural productivity and planning. Executives and managers of fertilizer and agricultural input organizations will find this program extremely interesting. Government officials involved in developing strategies for increased agricultural production through the use of emerging technologies that promote resource conservation and increased efficiencies also will benefit from the program. Participants should be fluent in English.
FACULTY

Faculty will include IFDC specialists with many years of experience, farmers, extension agents, public sector researchers, entrepreneurs, and other representatives of the private sector involved in using, supplying, or developing the technologies.

COST AND ENROLLMENT

The program fee for this training course is US $2,700 per participant (inclusive of a US $250 non-refundable deposit) and should reach IFDC no later than July 19, 2019, four (4) weeks before the program is scheduled. Those received thereafter will be accepted at IFDC’s discretion and incur a late fee. Participants will be given the opportunity to take advantage of an early bird rate if registration and payment is received by IFDC prior to June 19, 2019. Please refer to the table for pricing.

<table>
<thead>
<tr>
<th>Early: Registration and Payment before June 21, 2019</th>
<th>Regular: Registration and Payment before July 21, 2019</th>
<th>Late: After July 21, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,500</td>
<td>$2,700</td>
<td>$2,900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1-4 participants</th>
<th>5-10 participants</th>
<th>&gt;10 participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Registration Fee</td>
<td>10% Discount</td>
<td>20% Discount</td>
</tr>
</tbody>
</table>

Applications for necessary visas should be made as early as possible. A visa is required for entry into the United States. Each participant must obtain a visa from the Embassy or Consulate of the United States in their country of residence.

Participants should fulfill all required immunizations and health formalities before departing their county of residence. Medical insurance should be obtained by participants. The program fee does not cover any medical insurance or expenses.

TRAVEL, FOOD, AND LODGING

Participants should plan to arrive in Muscle Shoals, Alabama, on Sunday, August 18, 2019. The program will begin August 19, 2019, at IFDC Headquarters in Muscle Shoals, Alabama. The participants will travel as a group via bus from Muscle Shoals, Alabama, to Tennessee, Arkansas, and Missouri. From Missouri, the group will travel via plane to Washington, D.C., where the program will conclude on August 30, 2019. Participants should return to their home country from Washington, D.C.

Participants will require an airline ticket to the United States for the following routing: home country → Huntsville or Muscle Shoals, Alabama; St. Louis, Missouri → Washington, D.C.; Washington D.C. → home country. Huntsville, AL, is the nearest city with an international airport (located approximately 75 minutes from Muscle Shoals/Florence area). For the St. Louis, MO, to Washington, D.C., portion, participants will be asked to book a specific flight (TBD) so that all participants travel together to Washington, D.C.

The food and lodging expenses will average approximately:
- U.S. $120/day in Muscle Shoals/Florence, AL
- U.S. $150/day in Little Rock, AR, and St. Louis, MO
- U.S. $220/day in Washington, D.C.

VENUE SNAPSHOT

<table>
<thead>
<tr>
<th>VENUE</th>
<th>CITY</th>
<th>STATE</th>
<th>CHECK-IN</th>
<th>CHECK-OUT</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriott Shoals Resort and Spa</td>
<td>FLORENCE</td>
<td>ALABAMA (AL)</td>
<td>AUG. 18</td>
<td>AUG. 21</td>
<td>USD 116.89 BB</td>
</tr>
<tr>
<td>Hampton Inn &amp; Suites, West Little Rock</td>
<td>LITTLE ROCK</td>
<td>ARKANSAS (AR)</td>
<td>AUG. 21</td>
<td>AUG. 22</td>
<td>USD 92 BB</td>
</tr>
<tr>
<td>Holiday Inn &amp; Suites</td>
<td>FORREST CITY</td>
<td>ARKANSAS (AR)</td>
<td>AUG. 22</td>
<td>AUG. 23</td>
<td>USD 109.99</td>
</tr>
<tr>
<td>Residence Inn</td>
<td>ST. LOUIS</td>
<td>MISSOURI (MO)</td>
<td>AUG. 23</td>
<td>AUG. 28</td>
<td>USD 109 BB</td>
</tr>
<tr>
<td>Hampton Inn</td>
<td>WASHINGTON</td>
<td>D.C.</td>
<td>AUG. 28</td>
<td>NO LATER THAN SUNDAY, SEPT. 1</td>
<td>USD 149</td>
</tr>
</tbody>
</table>

For more information and to register for the study tour, please visit http://bit.ly/2019USATRAINING