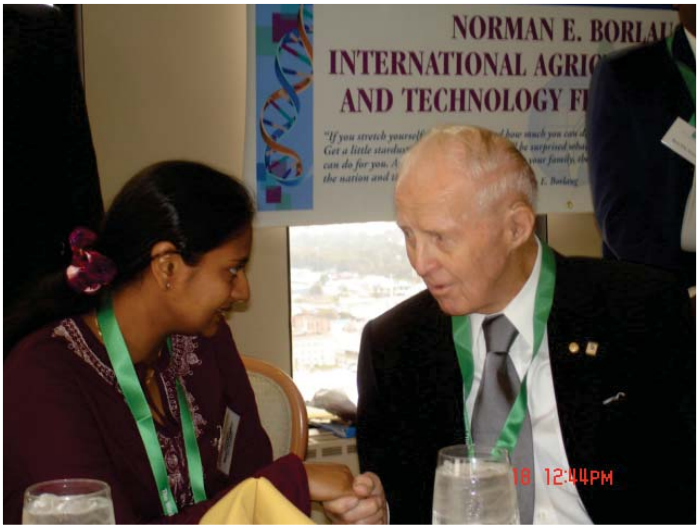
MSU-USDA/FAS Partnership

Building Human Resources In Food and Agriculture

Norman E. Borlaug International Agricultural Science and Technology Fellowship Program



Summary Report compiled by:
Karim Maredia, Cholani Weebadde, Nanda Joshi, Hashini Galhena, Ruth Mbabazi, and Amy Pinckney

World Technology Access Program (WorldTAP)
College of Agriculture and Natural Resources
Michigan State University
http://worldtap.msu.edu/

December 2016

Norman E. Borlaug International Agricultural Science and Technology Fellows Program

This program, administered by the USDA-FAS, provides opportunities for researchers from developing countries to work with a mentor in the U.S. The complete program description, along with information about Dr. Borlaug and application instructions can be found at the USDA-FAS website: https://www.fas.usda.gov/programs/borlaug-fellowship-program

Special thanks goes to USDA-FAS Project Officers:

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Mr. Edward Gerard
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Mr. James Remcheck
Mr. Tim Sheehan
Mr. Jim Stevenson
Ms. Karen Uetrecht
Ms. Lisa Wendel

Acknowledgements

We would like to thank Pat Sutherland, Karen Hassankhani, Diane Cox and Jane Payumo (editing) for their support.

Dedication

This publication is dedicated to the late Dr. Norman E. Borlaug, an inspirational leader, visionary scientist, and champion of developing young minds. His lifelong dedication towards training and educating young scientists through collaborative research has generated numerous long-term partnerships towards the development and use of new science and technology for sustainable agricultural development for the benefit of humanity.

"If you stretch yourself, you'll be surprised how much you can do. Get a little stardust on your hands, and you'll be surprised what that can do for you. And not only for you but also for your family, the state, the nation, and the people of the world."

- Norman E. Borlaug

Foreword

International cooperation and collaboration is the hallmark of Michigan State University (MSU). As a premier land grant university in the US, MSU is actively involved in providing training and capacity building in international agriculture. In 2005, MSU became a partner with USDA Foreign Agriculture Service (USDA-FAS) in hosting Norman E. Borlaug Fellows from all over the world to share MSU's experience and knowledge base in the cutting edge areas of agricultural research and development with the international community.

During the past eleven years, MSU has hosted 42 Borlaug Fellows from 17 countries, including Algeria, Bulgaria, Egypt, Ethiopia, India, Kenya, Liberia, Montenegro, Morocco, Mozambique, Peru, Poland, Senegal, Serbia, South Africa, Sri Lanka, and Tanzania. The emphasis has been to provide training and experiences through collaborative research. Through the Borlaug fellowship program, Borlaug fellows have received training in diverse areas of agricultural development, including plant breeding, biotechnology, water management, animal agriculture, veterinary medicine, food science and food safety. The training is provided by faculty mentors at MSU that match research interests and needs of the Borlaug fellows. The fellows have spent six to eight weeks in specific laboratories relevant to their research programs. Several of the Borlaug fellows have attended the World Food Prize event and have had the honor to personally meet and interact with Dr. Borlaug, which has been a great inspiration to the young minds.

As a follow up to the Borlaug fellowship program, MSU faculty mentors have visited fellows' home countries, fostering two-way partnerships and sharing of knowledge and experiences. As a result of the Borlaug fellowship, there have been positive impacts on the agricultural research, education, and policy developments in a number of countries. Upon their return, MSU hosted fellows have organized and offered workshops, seminars and training programs in their home countries to share their knowledge and experiences with others in their home countries.

MSU is proud to be a partner with USDA-FAS in providing training to the international community. We are thankful to the USDA-FAS for their continuing support to make this program successful. We are also thankful to the faculty members at MSU for hosting Borlaug fellows in their research programs.

This summary report chronicles the Fellows who have joined us at MSU, their activities and experiences, and the follow up events.

With Best Wishes,
Karim Maredia, Cholani Weebadde, Nanda Joshi, Hashini Galhena, Ruth Mbabazi, and Amy Pinckney
World Technology Access Program (WorldTAP)
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College of Agriculture and Natural Resources
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List of 42 Borlaug Fellows and Focus Areas

Page	Dates	Fellow	Country	Fellowship Area	Mentors
1	08/12/16 – 10/28/16	Haileselassie Teklehaimanot	Ethiopia	Molecular Plant Breeding	Dr. Ruth Mbabazi
3	07/17/15 – 08/30/15	Manuel Pedro Maleia	Mozambique	International Food Safety, Agricultural Biotechnology and Biosafety, and Marker Assisted Breeding	Dr. Cholani Weebadde
4	09/07/14 – 09/19/14	Águeda Leonor Belunga Tembe	Mozambique	Agricultural Biotechnology Program	Dr. Cholani Weebadde
5	09/01/13 – 11/23/13	Atef Abdelfattah Shahin	Egypt	Molecular Plant Breeding	Dr. Eric Olson
5	09/01/13 – 11/23/13	Gemechu Keneni Wakeyo	Ethiopia	Molecular Plant Breeding	Dr. Cholani Weebadde
6	08/24/13 – **11/24/13**	Tariku Hunduma Tolera	Ethiopia	Molecular Plant Breeding	Dr. Karim Maredia
6	08/24/13 – 11/24/13	Rania Ahmed Mahmoud Ahmed	Egypt	Marker-Assisted Selection and Genetic Transformation	Dr. Gregory Lang
7	09/01/13 – 11/07/13	Yasmina Haddadi	Algeria	Biotechnology in wheat breeding and genetics	Dr. Eric Olson
10	08/14/11 – 11/05/11	Kefyalew Negisho Bayissa	Ethiopia	Biotechnology and Biosafety	Dr. Karim Maredia & Dr. Cholani Weebadde
10	08/14/11 – 11/05/11	Dejene Girma Kebede	Ethiopia	Biotechnology and Biosafety	Dr. Karim Maredia & Dr. Cholani Weebadde
11	08/14/11 – 11/05/11	Oshingi Shilla	Tanzania	Biotechnology and Biosafety	Dr. Karim Maredia & Dr. Cholani Weebadde
12	10/10/10 – 11/20/10	Lucas Benjamin Uamusse	Mozambique	Food Safety and IPM	Dr. Karim Maredia & Dr. Nanda Joshi
12	09/25/10 – 11/20/10	Peter Obimbo Lamuka	Kenya	Food Safety and IPM	Dr. Karim Maredia & Dr. Nanda Joshi
13	09/25/10 – 11/20/10	Mashudu Silimela	South Africa	Food Safety and IPM	Dr. Karim Maredia & Dr. Nanda Joshi
14	09/12/09 – 10/24/09	Jorge Benavides	Peru	Potato Genetics and Genomics	Dr. Dave Douches & Dr. Jeff Landgraff
14	09/12/09 – 10/24/09	Renata Urban-Chimel	Poland	Bovine Respiratory Disease Detection and Characterization	Dr. Linda Mansfield
15	09/12/09 – 10/24/09	Kinga Wieczorek	Poland	Respiratory Disease in Cattle	Dr. Daniel Grooms
15	06/07/09 – 07/18/09	Cleopatra Gibson	Liberia	Sustainable Agriculture	Dr. Russ Freed
16	05/10/09 – 06/26/09	Chafika Djenadi	Algeria	Wheat Breeding and Genetics	Dr. Janet Lewis
16	05/01/09 – 06/30/09	Rakesh Kumar	India	Fish Biotechnology and Microbiology	Dr. Mohamed Faisal
17	10/13/08 – 11/23/08	Dharam Vir Singh	India	Water Use Management	Dr. Jon Bartholic

List Continued of Borlaug Fellows and Focus Areas

Page	Dates	Fellow	Country	Fellowship Area	Mentors
17	10/13/08 – 11/23/08	Fatimata Ndiaye	Senegal	Sustainable Agriculture	Dr. John Biernbaum
18	06/15/08 – 07/25/08	Driss Iraqi	Morocco	Crop Genetic Transformation	Dr. Mariam Sticklen
18	05/26/08 – 07/03/08	Gournnga Kar	India	Water Use Management	Dr. Jon Bartholic
19	05/26/08 – 07/03/08	B. Sahadeva Reddy	India	Water Use Management	Dr. Jon Bartholic
22	10/15/07 – 11/23/07	Igor Pajović	Montenegro	Nematode control in potato and greenhouses	Dr. George Bird
22	10/15/07 – 11/23/07	Boris Popović	Serbia	Plant Defense	Dr. Ray Hammerschmidt
23	10/15/07 – 11/23/07	Emil Rekanović	Serbia	Fungal Plant Disease Agents	Dr. Willie Kirk
23	10/07/07 – 11/10/07	Kapila Weeratunga	Sri Lanka	Post harvest technologies	Dr. Randy Beaudry
24	10/07/07 – 11/10/07	Prathiba Aruni Weerasinghe	Sri Lanka	Molecular marker techniques in biotechnology	Dr. Cholani Weebadde
24	10/07/07 – 11/10/07	Chandanie Rajapaksha	Sri Lanka	Soil Bioremediation	Dr. James Tiedje
25	04/29/07 – 06/09/07	Mariusz Maciejczak	Poland	Costs and benefits of co-existence of GMO and non-GM based agricultural supply chains	Dr. George Bird
27	10/12/06 – 11/22/06	Madurapperuma Arachchi Appuhamilage Buddhika Dilhan	Sri Lanka	Remote Sensing and GIS	Dr. Stuart Gage
27	10/15/06 – 11/22/06	Amali Manori Ranasinghe	Sri Lanka	Genomics facility- Techniques in plant genomics	Dr. Jeff Landgraff & Dr. Cholani Weebadde
28	10/15/06 – 11/22/06	Mohamed Ismail Safeena	Sri Lanka	Molecular Marker Assisted Plant Breeding	Dr. Jim Kelly & Dr. Cholani Weebadde
28	09/09/06 – 10/25/06	Zoran Jovović	Montenegro	Potato Biotechnology	Dr. Willie Kirk, Dr. Dave Douches
29	09/18/06 – 11/03/06	Ivana Maksimović	Serbia	Potato Biotechnology	Dr. Mitch McGrath
32	08/27/05 – 09/30/05	Srdjan Soskic	Montenegro	Sugar Beet Biotechnology	Dr. Jon Bartholic
32	08/27/05 – 09/30/05	Tzvetelin Dessev	Bulgaria	Food Safety and Quality	Dr. Kirk Dolan
33	08/27/05 – 09/30/05	Samir Izetov Naimov	Bulgaria	Insect Pest Management and Bt Toxins	Dr. David Douches
33	08/27/05 – 09/30/05	Slavica Colic	Serbia	Fruit Breeding and Genetics	Dr. Amy Iezzoni
34	08/27/05 – 09/30/05	Veselka Vlahova	Bulgaria	Insect Pest Management and Bt Toxins	Dr. Randy Beaudry

2016 Biography

Haileselassie Teklehaimanot
Institute of Biotechnology,
Addis Ababa University, Ethiopia

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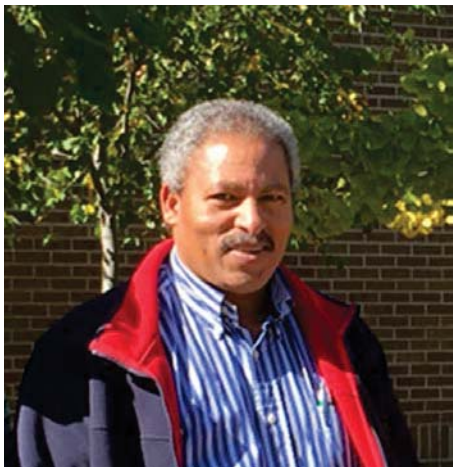

Focus Area:
Dr. Haileselassie Teklehaimanot worked with Dr. Ruth Mbabazi, Dr. Karen Cichy, and Dr. Karim Maredia at Michigan State University, College of Agriculture and Natural Resources from 08/12/16 to 10/28/16.

The main objective of his study was to investigate genetic diversity and population structure of "Dokoko" (*P. sativum* L. subsp. *abyssinicum*) from southern Tigray and northern Amhara regions of Ethiopia by using Simple Sequence Repeat (SSR) Markers (later decided to use SNPs markers). Information on genetic diversity of Dokoko will be very important for identification of proper genotypes to be used in breeding programs and optimize strategies to allow continued progress in the improvement of this crop that are geared towards enhancing food security and overall livelihood of smallholder farmers.

2016 Borlaug Fellow with Mentors at MSU

Borlaug Fellow taking care of plants in the MSU Green House

2016 World Food Prize in Des Moines, Iowa

2015 Biography

Manuel Pedro Maleia
Mozambique Agricultural Research Institute
Cotton Research and Seed Multiplication Center of Namialo, Mozambique

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Focus Area:
Mr. Maleia worked with different faculty members at MSU, Department of Plant, Soil and Microbial Sciences from 07/17/15 to 08/30/15.

Mr. Maleia works for the Mozambique Agricultural Research Institute (IIAM – "*Instituto de Investigação Agrária de Moçambique"*) as a plant breeder since 2003. He was a cotton specialist at the Cotton Research and Seed Multiplication Center of Namialo (CIMSAN – "*Centro de Investigação e Multiplicação de Sementes de Algodão de Namialo"*). His research focus was on new technologies and tools in plant breeding to address the problem of crop production to feed the world.

2014 Biography

Águeda Leonor Belunga Tembe
Mozambique Institute for Cotton, Mozambique

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Focus Area:
Ms. Tembe worked with different faculty members at MSU, Department of Plant, Soil and Microbial Sciences from 09/7/14-09/19/14. Ms. Tembe is an agronomist engineer at the Mozambique Institute for Cotton.

She is currently involved in R&D activities to increase cotton productivity, training of farmers and extension specialist on best practices in cotton production and dissemination of cotton technologies.

The program at MSU provided her with the methods used for the creation of genetically modified organisms, how to identify genes of interest, how to use the molecular markers to identify genes, how to identify, isolate and characterize the gene, how to develop transgenic cotton, and how to conduct confined field trials.

2013 Biographies

Atef Abdelfattah Shahin
Agriculture Research Center (ARC), Plant Pathology Research Institute, Egypt

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Focus Area:
Dr. Shahin worked on wheat breeding and genetics with Dr. Eric Olson, Department of Plant, Soil and Microbial Sciences at MSU from 09/01/13 to 11/23/13. He covered a wide range of topics in the areas of molecular plant breeding on wheat. His work back in Egypt is related to wheat rusts disease and breeding, with particular interest to yellow rust disease on wheat include identification of races, studying of the stripe rust effective genes and determination of resistant materials by genetic analysis and biotechnology component molecular markers.

Gemechu Keneni Wakeyo
Ethiopian Institute of Agricultural Research, Ethiopia

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Focus Area:
Dr. Gemechu worked with different faculty members at MSU, Department of Plant, Soil and Microbial Sciences from 08/25/13 to 11/23/13. His research included a wide range of topics in the area of molecular plant breeding (common bean) and genetic transformation (soybean). His work in Ethiopia focuses on breeding of highland food legumes, with particular interest in quantifying the extent and pattern of genetic diversity, exploiting the potential of landraces in breeding for resistance to biotic and abiotic stresses, breeding for product quality and better adaptation to predictable and unpredictable environments, and nutrient use efficiency and system sustainability.

Tariku Hunduma Tolera
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Focus Area:
Mr. Tariku worked with USDA scientists at the Department of Plant, Soil and Microbial Sciences from 08/24/13 to 11/24/13. The program covered a wide range of topics in the areas of molecular biology techniques, biotechnology application and bioinformatics. In Ethiopia, he works in the area of plant pathology and food microbiology. He also leads Ambo Agricultural Research Center of the Ethiopian Institute of Agricultural Research (EIAR) as the Center Director.

Rania Ahmed Mahmoud Ahmed
Horticulture Research Institute, Agricultural Research Center, Egypt

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Focus Area:
Rania Ahmed Mahmoud Ahmed worked under the guidance of Dr. Gregory Lang at the Department of Horticulture at MSU from 08/24/13 to 11/24/13. Her focus was on marker-assisted selection and genetic transformation and she worked in collaboration with Dr. Guo-Qing Song. Her research interest is on the improvement of stone fruit rootstocks through tissue culture and molecular biology techniques.

Yasmina Haddadi
National Institute of Plant Protection (I.N.P.V), Regional Station of Chlef, Algeria

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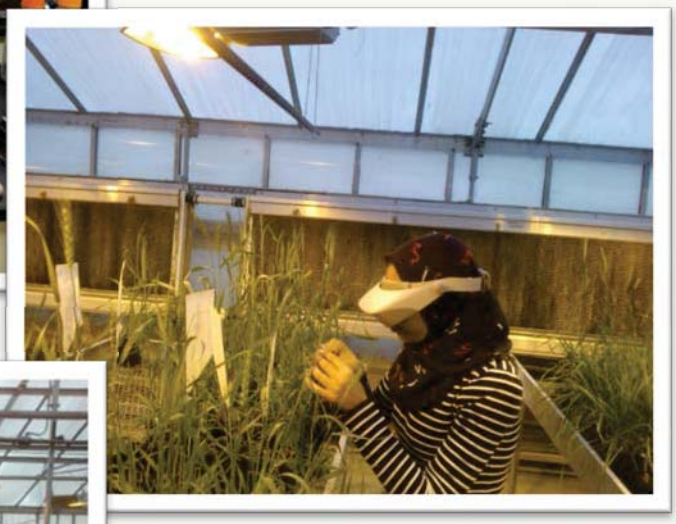
Focus Area:
Ms. Yasmina Haddadi worked with Dr. Eric Olson at the Crop and Soil Sciences Department at MSU from 09/01/13 to 11/07/13.

Her research focused on applying methods and techniques in genetic mapping of wheat rusts resistance genes and the use of biotechnology in wheat breeding and genetics. In Algeria, Ms. Haddadi works as a Principal Inspector of Plant Protection Responsible of Cereals Pests and Diseases Management.

2013 Borlaug Fellows in action at MSU



Borlaug Fellows with World Food Prize delegates at the 2013 World Food Prize in Des Moines, Iowa

2013 International Molecular Plant Breeding Short Course Program at MSU in East Lansing, MI

2011 Biographies

Kefyalew Negisho Bayissa
Ethiopian Institute of Agricultural Research, Ethiopia

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Focus Area:
Mr. Bayissa worked with several biosafety and biotechnology specialists from Michigan State University (MSU), Danforth Plant Sciences Center, Michigan Department of Agriculture (MDA), the U.S. Environmental Protection Agency (US-EPA), the USDA Animal and Plant Health Inspection Service (USDA-APHIS), and the private sector from 08/14/11 – 11/05/11. The program covered a wide range of topics in the areas of biotechnology and biosafety. He is an Assistant Researcher in Ethiopia and conducts plant biotechnology research.

Dejene Girma Kebede
Ethiopian Institute of Agricultural Research (EIAR), Ethiopia

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Focus Area:
Mr. Kebede worked with several biosafety and biotechnology specialists from Michigan State University (MSU), Danforth Plant Sciences Center, Michigan Department of Agriculture (MDA), the U.S. Environmental Protection Agency (US-EPA), the USDA Animal and Plant Health Inspection Service (USDA-APHIS), and the private sector from 08/14/11 – 11/05/11. The program covered a wide range of topics in the areas of Biotechnology and Biosafety. He is an Assistant Researcher in Ethiopia and conducts plant biotechnology research.

Oshingi Shilla
Tropical Pesticide Research Institute, Tanzania

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Focus Area:
Mr. Shilla worked with several biosafety and biotechnology specialists from Michigan State University (MSU), Danforth Plant Sciences Center, Michigan Department of Agriculture (MDA), the U.S. Environmental Protection Agency (US-EPA), the USDA Animal and Plant Health Inspection Service (USDA-APHIS), and the private sector from 08/14/11 – 11/05/11. The program covered a wide range of topics in the areas of Biotechnology and Biosafety. His work as a Plant Biosafety/Phytosanitary Inspector in Ethiopia includes plant molecular biology/biotechnology, plant molecular breeding, plant biosafety, plant genetic resource conservation, environmental /ecological risk assessment, environmental impact assessment and bioinformatics.

2010 Biographies

Lucas Benjamin Uamusse
Ministry of Agriculture, Mozambique

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Focus Area:
Mr. Uamusse worked with several faculty members at Michigan State University (MSU), Michigan Department of Agriculture (MDA), FDA, and various research centers in Michigan and other states (including Missouri) from 10/20/10 – 11/20/10. The program focused on the areas of food safety standards, plant protection and quarantine, sanitary and phyto-sanitary (SPS) measures related to international trade. His work as a plant quarantine officer in Mozambique ensures that phytosanitary inspections for importing and exporting goods are carried out according to International Plant Protection Convention and World Trade Organization specifications.

Peter Obimbo Lamuka
Department of Food Science Nutrition and Technology, University of Nairobi, Kenya

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Focus Area:
Mr. Lamuka worked with worked with several faculty members at Michigan State University (MSU), Michigan Department of Agriculture (MDA), FDA, and various research centers in Michigan and other states (including Missouri) from 09/25/10 – 11/20/10. The program focused on the areas of food safety standards, plant protection and quarantine, sanitary and phyto-sanitary (SPS) measures related to international trade. His work in Kenya includes teaching food microbiology, food quality and safety management and food biotechnology, and his research focuses on food safety along the food chains.

Mashudu Sillimela
International Plant Health Matters Sub-Directorate, Department of Agriculture, Forestry and Fisheries, Directorate of Plant Health, South Africa

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Focus Area:
Mr. Sillimela worked with several faculty members at Michigan State University (MSU), Michigan Department of Agriculture (MDA), FDA, and various research centers in Michigan and other states (including Missouri) from 09/25/10 – 11/19/10. The program focused on the areas of Food Safety Standards, Plant Protection and Quarantine, Sanitary and Phyto-Sanitary (SPS) measures related to international trade. His work in South Africa involves managing the sub-directorate International Plant Health Matters, where he serves as the contact point for international trade in plant health. His work involves legislation, policies, regulations, strategies and priorities and international communication, and he is responsible for ensuring that an effective phytosanitary system supports agricultural trade in compliance with international plant health obligation and responsibilities.

2009 Biographies

Jorge Benavides
Instituto Nacional de Innovación Agraria (National Institute of Agricultural Innovation, INIA), Peru

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Focus Area:
Dr. Benavides worked with Dr. Dave Douches in the Crop and Soil Sciences Department and Dr. Jeff Landgraff in the Genomics Facility from 09/12/09 – 10/24/09. His research focused on learning and experiencing the latest tools in molecular genetics, including sequencing and microarray. His research in Peru involves potato genetics and genomics.

Renata Urban-Chimel, University of Agriculture, Lublin, Faculty of Veterinary Medicine, Poland

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Focus Area:
Dr. Urban-Chimel worked with Dr. Linda Mansfield in the Department of Large Animal Clinical Sciences from 09/12/09 – 10/24/09. Her research focused on molecular methods of identification, typing of *Campylobacter* genera and detection of genotypic pathogenic markers and determination of clonal relationships of tested isolates. Her research in Poland involves analysis, diagnosis and characterization of bovine respiratory diseases and agents.

Kinga Wieczorek
Department of Hygiene of Food and Animal Origin, National Veterinary Research Institute, Poland

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Focus Area:
Dr. Wieczorek worked with Dr. Daniel Grooms in the Department of Large Animal Clinical Sciences from 09/12/09 – 10/24/09. Her research focused on methaphylactic aspects in prevention of respiratory diseases in cattle. Her research in Poland involves microbiological examination of food of animal origin; molecular identification, characterization and clonal relationship of *Campylobacter* spp., *Listeria* spp., *Salmonella* spp. and VTEC isolated from different sources; and assessing antimicrobial resistance of *Campylobacter*.

Cleopatra Gibson
Ministry of Agriculture, Liberia

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Focus Area:
Ms. Gibson worked with Dr. Russ Freed in the Department of Crop and Soil Sciences from 06/07/09 – 07/18/09. Her research focused on management of natural resources related to enhancing agricultural productivity in the area of sustainable agriculture. Her work in Liberia involves strategizing, implementing and rendering innovative means of making the agricultural sector more vibrant for economic and social stability.

Chafika Djenadi
Agronomic Research Institute of Algeria, Algeria

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Focus Area:
Ms. Djenadi worked with Dr. Janet Lewis of the Crop and Soil Sciences Department from 05/11/09 – 06/26/09. Her research focused on learning methods and techniques in genetic mapping and development of QTLs, and she worked with researchers using biotechnology tools in wheat breeding. Her research in Algeria involves the use of biotechnologies in wheat breeding for abiotic stress (drought).

Rakesh Kumar, Senior Scientist,
Central Institute of Fisheries Technology (CIFT), India

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Focus Area:
Dr. Kumar worked with Dr. Mohamed Faisal in the Department of Fisheries and Wildlife from 05/01/09 – 06/30/09. His research focused on identification and characterization of the fish pathogen, *Carnobacterium* spp., and he received training on T-RFLP and cDNA microarray and visited the Food and Drug Administration lab. His research in India involves fish and fishery microbial hazards, seafood safety, and development of preventative and control measures, as well as other projects related to fish biotechnology and microbiology.

2008 Biographies

Dharam Vir Singh
Indian Council of Agricultural Research, New Delhi, India

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Focus Area:
Dr. Singh worked with Dr. Jon Bartholic from 10/13/08 – 11/23/08. His research focused on water use efficiency. His research in India involves genesis, characterization and management of landslides, and the effect of conservation structures on ground water recharge.

Fatimata Ndiaye
Senegalese Institute of Agricultural Researches (ISRA)

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Focus Area:
Dr. Ndiaye worked with Dr. George Bird of the Department of Entomology and Dr. John Biernbaum of the Department of Horticulture from 10/13/08 – 11/23/08. Her research focused on organic certification and the use of natural resources for sustainable agriculture. Her research in Senegal involves the use of natural resources (arbuscular mycorrhiza) for sustainable agriculture.

Driss Iraqi
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Focus Area:
Dr. Iraqi worked with Dr. Mariam Sticklen in the Department of Crop and Soil Sciences from 06/15/08 – 07/25/08. His research focused on crop genetic transformation, biosafety and molecular characterization of genetic transformed plants. His research in Morocco involves tissue culture and genetic transformation of cereals.

Gournnga Kar
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Focus Area:
Dr. Kar worked with Dr. Jon Bartholic of the Institute of Water Research from 05/26/08 – 07/03/08. His research focused on water use management. His research in India involves agricultural water and drought management.

B. Sahadeva Reddy
Acharya N.G. Ranga Agricultural University Agricultural Research Station, India

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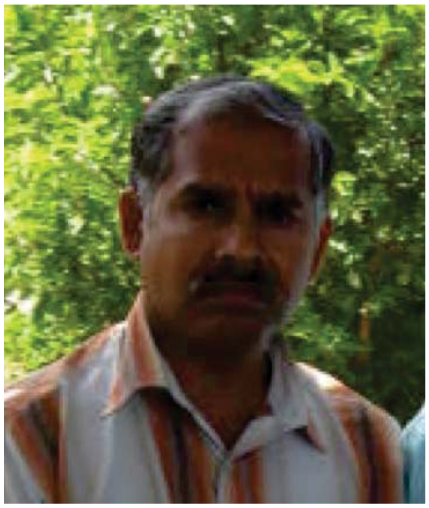

Focus Area:
Dr. Reddy worked with Dr. Jon Bartholic of the Institute for Water Research from 05/26/08 – 07/03/08. His research focused on improved techniques in water management, soil and water conservation for drought management. His research in India involves water management and drought mitigating techniques.

2009 World Food Prize in Des Moines, Iowa

2008 Fellows from Morocco

2007 Biographies

Igor Pajović
University of Montenegro, Biotechnology Institute, Department of Plant Protection, Montenegro

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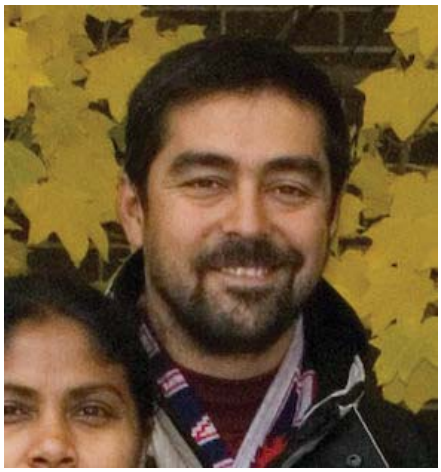

Focus Area:
Dr. Pajović worked with Dr. George Bird in the Department of Entomology from 10/15/07 – 11/23/07. His research focused on nematode control in potato and greenhouses. His research in Montenegro involves applied zoology and control and quarantine of economically important pests on imported plant materials.

Boris Popović
Teaching and Research Assistant,
Faculty of Agriculture, Novi Sad, Serbia

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Focus Area:
Dr. Popović worked with Dr. Ray Hammerschmidt in the Department of Plant Pathology from 10/15/07 – 11/23/07. His research focused on the nature of plant defenses and induced resistance to disease in plant pathogen systems. His research in Serbia involves antioxidant systems of plants and their dynamic responses to environmental stress factors, biochemistry of plant resistance and food irradiation.

Emil Rekanović
Pesticide and Environmental Research Institute, Serbia

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Focus Area:
Mr. Rekanović worked with Dr. Willie Kirk in the Department of Plant Pathology from 10/15/07 – 11/23/07. His research focused on biological, morphological and ecological characteristics of phytopathogenous fungi, and researching and developing methods for forecasting occurrence of plant disease agents. His research in Serbia involves fungal diseases of vegetables.

Kapila Weeratunga
University of Ruhuna, Sri Lanka

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Focus Area:
Mr. Weeratunga worked with Dr. Randy Beaudry of the Department of Horticulture from 10/7/07 – 11/10/07. His research focused on post-harvest technologies. His research in Sri Lanka involves small-scale combustion of woody biomass.

Prathiba Aruni Weerasinghe
Faculty of Agriculture, Rajarata University of Sri Lanka

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Focus Area:
Dr. Weerasinghe worked with Dr. Cholani Weebadde of the Department of Horticulture from 10/07/07 – 11/10/07. Her research focused on molecular marker techniques in biotechnology. Her research in Sri Lanka involves feasibility of another culture in wild rice species, cultivation of lettuce in hydroponics systems in dry zones, development of home gardens using harvested rain water and the uptake of heavy metals by plants.

Chandanie Rajapaksha
Faculty of Agriculture, University of Peradeniya, Sri Lanka

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Focus Area:
Dr. Rajapaksha worked with Dr. James Tiedje of the Crop and Soil Science Department from 10/07/07 – 11/10/07. Her research focused on soil bioremediation. Her research in Sri Lanka involves soil inoculants and biofertilizer development.

Mariusz Maciejczak
Warsaw Agricultural University – SGGW, Poland

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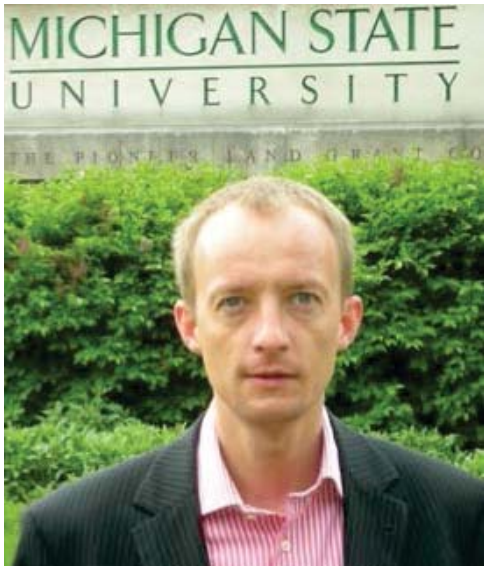

Focus Area:
Dr. Maciejczak worked with Dr. George Bird of the Department of Entomology from 04/29/07 – 09/06/07. His research focused on costs and benefits of co-existence of GMO and non-GM based agricultural supply chains. His research in Poland involves management, enterprise and farm economics, and issues related to agriculture and food economy and management.

2008 Fellows from Serbia

2006 Biographies

Madurapperuma Arachchi Appuhamilage Buddhika Dilhan
Ruk Rakaganno

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Focus Area:
Dr. Dilhan worked with Dr. Stuart Gage in the Department of Entomology from 10/12/06 – 11/22/06. His research focused on remote sensing and geographical information systems. His research in Sri Lanka involves plant regeneration, phenology and fire tolerance of seeds.

Amali Manori Ranasinghe
Agriculture Biotechnology Center, Faculty of Agriculture, University of Peradeniya, Sri Lanka

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Focus Area:
Ms. Ranasinghe worked with Dr. Jeff Landgraff and Dr. Cholani Weebadde in the Department of Horticulture from 10/15/06 – 11/22/06. Her research focused on new methods, techniques and tools of modern biotechnology and genetic engineering. Her research in Sri Lanka involves microbiology, molecular biology and environmental science.

Mohamed Ismail Safeena
South Eastern University of Sri Lanka, Sri Lanka

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Focus Area:
Dr. Safeena worked with Dr. Jim Kelly and Dr. Cholani Weebadde of the Department of Horticulture from 10/15/06 – 11/22/06. Her research focused on studying new methods and tools of biotechnology and genetic engineering, including DNA fingerprinting, genome sequencing, and Southern and northern blotting techniques. Her research in Sri Lanka involves plant breeding and crop improvement for biotic and abiotic stresses using biotechnology, antioxidants in plants under abiotic stress, and tissue culture.

Zoran Jovović
Biotechnical Institute, Montenegro

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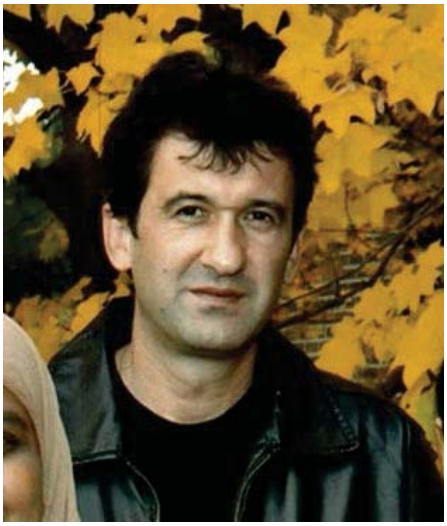

Focus Area:
Dr. Jovović worked with Dr. Willie Kirk of the Plant Pathology Department and Dr. Dave Douches of the Crop and Soil Science Department from 09/09/06 – 10/25/06. His research focused on potato biotechnology. His research in Montenegro involves seed potato production, seed-related aspects of commercial potato production, influence of agro-environmental conditions on production and variety trials.

Ivana Maksimović
Faculty of Agriculture, University of Novi Sad, Serbia

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Focus Area:
Dr. Maksimović worked with Dr. Mitch McGrath in the Department of Crop and Soil Science from 09/18/06 – 11/03/06. Her research focused on sugar beet biotechnology. Her research in Serbia involves breeding and biotechnology for improving sugar beet genetic potential and improvement of genetic, production and industrial potential of wheat by classic breeding and modern biotechnology.

2006 Fellows from Sri Lanka

2006 World Food Prize in Des Moines, Iowa

2005 Biographies

Srdjan Soskic
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Focus Area:
Mr. Soskic worked with Dr. Jon Bartholic in the Institute of Water Research in from 08/27/05 – 09/30/05. His research focused on water management. His research in Montenegro involves biotechnical science, soil and water melioration, and irrigation.

Tzvetelin Dessev
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Focus Area:
Mr. Dessev worked with Dr. Kirk Dolan of the Department of Food Science and Human Nutrition from 08/27/05 – 09/30/05. His research focused on continuous aeration of sponge dough. His research in Bulgaria involves food safety and quality, aeration of food products, emulsions, rheology, image analysis and micro and cellular structure of foams and emulsions and their influence on food safety and quality.

Samir Izetov Naimov
University of Plovdiv, Bulgaria

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Focus Area:
Dr. Naimov worked with Dr. David Douches in the Crop and Soil Science Department from 08/27/05 – 09/30/05. His research focused on insect pest management and Bt toxins. His research in Bulgaria involves insect resistant transgenic plants and Bt delta-endotoxins.

Slavica Colic
Institute PKB Agroekonomik, Serbia

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Focus Area:
Ms. Colic worked with Dr. Amy Iezzoni in the Horticulture Department from 08/27/05 – 09/30/05. Her research focused on fruit breeding and genetics. Her research in Serbia involves fruit breeding and selection and off-season berry production.

Veselka Vlahova
Agroecology Department, Agricultural University of Plovdiv, Bulgaria

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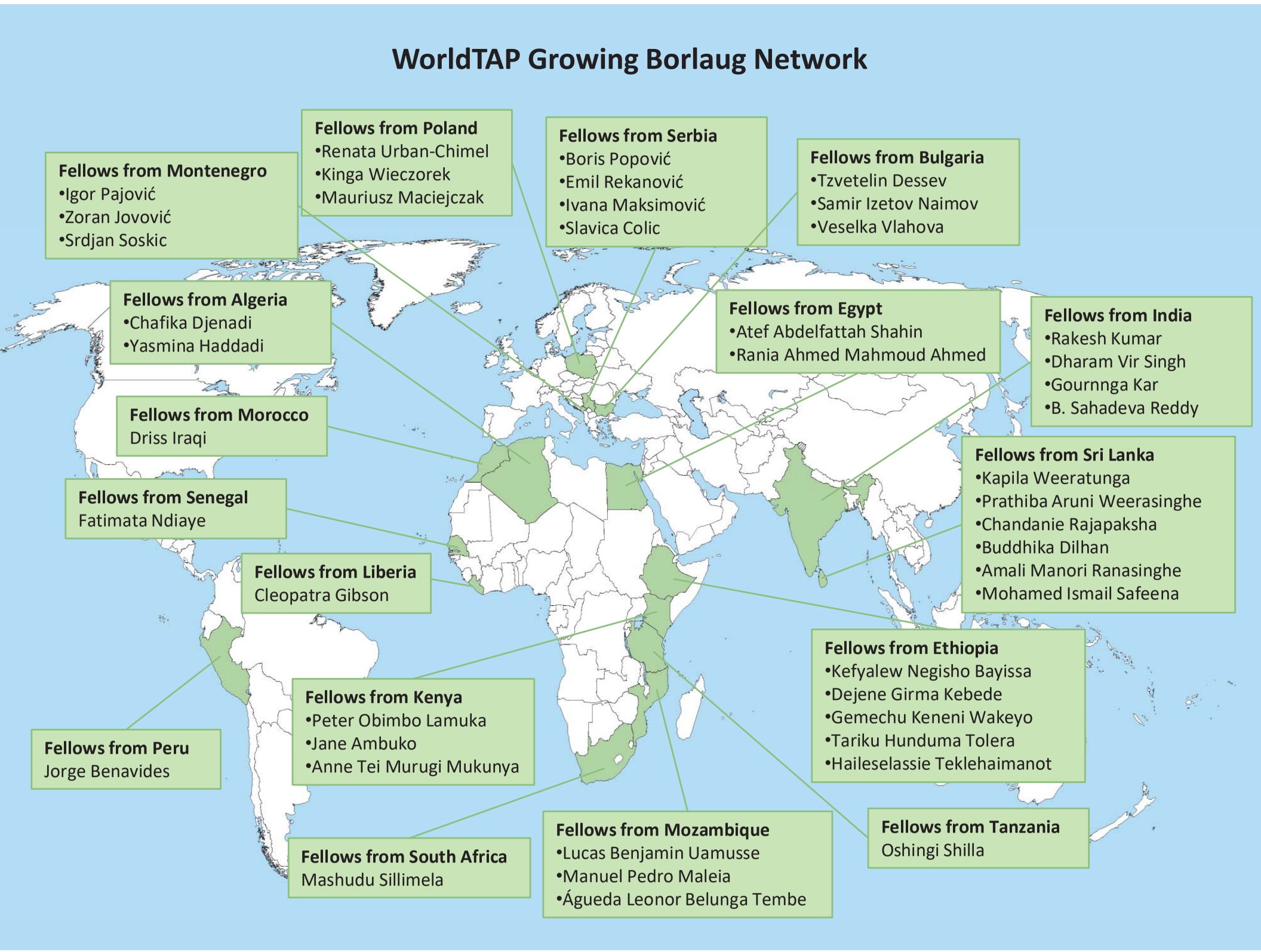
Focus Area:
Dr. Vlahova worked with Dr. Randy Beaudry from 08/27/05 – 09/30/05. Her research focused on food safety quality and packaging technologies. Her research in Bulgaria involves ecology, agroecological protection, and air pollution and its influence on ecological systems.

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