

# The First International Congress on Postharvest Loss Prevention

Rome, Italy • October 4-7, 2015



**ADM Institute for the  
Prevention of Postharvest Loss**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



**ILLINOIS**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

S U P P O R T E D   B Y



# UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ADM Institute for the Prevention of Postharvest Loss

1101 West Peabody Drive  
144 National Soybean Research Center, MC 637  
Urbana, Illinois 61801



## Errata

*There were a few errors in the initial printed program and some changes were made at the Congress. The following are the corrections.*

### General:

- On the planning committee list (page 4) Dr. Usha Barwale-Zehr's title with Mahyco should be Chief Technology Officer.
- On Page 17, regarding the banquet dinner, Mr. Mark von Pentz's title should be President, John Deere Agriculture and Turf Division – Europe, CIS, Asia, Africa and Global Tractor Platform. The name of the no-till planter on display is the John Deere 1025 2-row no-till planter.

### Technical Sessions:

#### Monday, October 5, 2015

- In Concurrent Session B, the keynote speaker was Mr. Fujun Li, who agreed to fill the slot of Mrs. Anne Mbaabu, who was unable at the last moment to attend. Mr. Li is was originally scheduled as a Tuesday opening speaker.  
Dr. R.K. Mittal, Rajendra Agricultural University, India, presented in place of Dr. Joseph Sherman-Kamara at 12:05 p.m. in Session B. His presentation was titled, "Overview of Post Harvest Losses and Its Implications in India".
- In Concurrent Session C, Dr. Corinne Alexander, Purdue University, USA, replaced Dr. Jess Lowenberg-DeBoer as session chair and as the second presenter in the session at 2:50 p.m.  
Dr. Toine Timmermans, Wageningen University, replaced Dr. Girma Demissie Bekele at 2:35 p.m. in Session C. His presentation was titled "Food Loss & Waste Protocol".
- In Poster Session P1B, Michael Adedotun Oke and Adebola Adedugbe were unable to attend.

#### Tuesday, October 6, 2015

- Mr. Fujun Li's presentation was rescheduled as discussed earlier. He presented his keynote in Session B.
- In poster session P2B, the session chair was Olivia Karanja of the Rockefeller Foundation.  
Mr. Mitchell Meier presented in place of Mr. David Blumberg for Blumberg Grain.
- Concurrent Session F was chaired by Dr. R.K. Mittal, Rajendra Agricultural University, India.
- Concurrent Session G was chaired by Dr. John Bowman, USAID.  
The correct title of Dr. Dirk Maier's keynote presentation in that session was "Intervention Strategies for the Reduction of Post-Harvest Loss – Case Studies"
- In poster session P3A, Mr. Antonio Acedo was unable to attend. Ilkay Dellal, Turkey, and Lizanne Wheeler, Postharvest Education Foundation, USA, were added to the poster session.
- In poster session P3B, Mr. Chukwudike Abraham and Ms. Helen Mant were unable to attend. Dr. Mireille Totobesola was unable to serve as session chair.  
Dieudonne Baributsa, Purdue University, USA, was added to this session with his poster presentation, "Reducing Post-Harvest Storage Losses to Improve Income and Food Security on Smallholder Farms"



# Welcome



Prasanta Kalita



Dirk E. Maier

Of a world population of 7.3 billion in 2015, nearly 1 billion people face hunger today. This problem would magnify when global population increases as projected by 1 billion in the next 12 years and reach 9.6 billion by 2050. The global food supply will need to be increased by more than 50% by 2050 to meet the growing food demand. Additionally, the problem of food insecurity is compounded by the fact that 1/3 of the produced food is lost or wasted. Reducing food loss by reducing postharvest losses is not an option, but a necessity for meeting food demand of the growing world population in a sustainable environment.

Postharvest loss reduction is a complex process that must be dealt within the context of different crops, cultures, economies, infrastructures, and climatic conditions among different countries as well as different regions within the same country. The First International Congress on Postharvest Loss Prevention is a unique event planned to provide a forum for various stakeholders to share, learn, and plan to develop action items for reducing postharvest losses. Along with major postharvest loss and reduction issues, this Congress aims to address various challenges and opportunities associated with postharvest losses within the framework of metrics and measurements that may enable development of better tools and interventions to reduce postharvest loss for smallholders in developing countries. At this first international Congress, we have representatives from public and private institutions, government organizations, philanthropic organizations, producers and industries, and others that share the same passion to improve the lives and livelihoods of our people on this planet. We offer sincere thanks and gratitude to each and every one of you for your active participation at this Congress.

The first theme of the conference, **Postharvest Loss Status & Emerging Issues**, highlights losses occurring in various countries, their specific needs, and technical, social, and policy regulatory factors causing these losses. The presentations from the second theme, **Intervention Strategies for PHL Mitigation**, cover topics of innovative/emerging postharvest technologies, farm mechanization and its effect on postharvest quality, economic assessment for sustainability of postharvest technologies, and critical stages in supply chain (focus of research). The PHL problem cannot be addressed and impact of interventions cannot be measured until losses are measured using scientific methods. The **Measurement Methods & Metrics of PHL** conference theme addresses tools and standards/protocols for postharvest quality and quantity loss assessment. The final theme of the conference, **Education Platform and Decision Support System**, focuses on the need to develop knowledge platforms and decision support systems, and discusses successful examples where effective tools and community



participation proved beneficial. Our program is rich with eight keynote speakers, 42 oral presentations, and 78 posters in various themes. Additionally, we have renowned global leaders discussing global postharvest loss reduction issues and initiatives through panel discussions. The final outcome of the four-day Congress is targeted to result in a **Roadmap for Global PHL Reduction** as a shared vision of all participants on the complex problem and future direction to reduce postharvest losses.

We sincerely thank all attendees for their participation and support. We sincerely thank the Archer Daniels Midland (ADM) Company for establishing the ADM Institute for the Prevention of Postharvest Loss and its support of this Congress. This program would not have come to fruition without the hard work and dedication of many individuals. We would like to thank all members of the Program, Planning, and Logistics committees. We would also extend special thanks to the ADM Institute staff. Without support, guidance, and inspiration from colleagues of the Food and Agriculture Organization (FAO) of the United Nations, the Rockefeller Foundation, the Bill & Melinda Gates Foundation, John Deere, United States Agency for International Development (USAID), University of Illinois at Urbana-Champaign, and the College of Agricultural, Consumer and Environmental Sciences (ACES) at the University of Illinois at Urbana-Champaign, this program would not have come together. We believe that all attendees of this Congress will enjoy the four-day meeting, make new connections, and develop and expand new or existing partnerships to build a stronger community to solve the challenges of postharvest loss.

**Dr. Prasanta Kalita**  
*Congress Program Chair*  
*Director*  
ADM Institute for the Prevention  
of Postharvest Loss  
University of Illinois at Urbana-Champaign

**Dr. Dirk E. Maier**  
*Conference Program Co-Chair*  
*Professor*  
Agricultural & Biosystems Engineering  
Iowa State University





## Planning Committee

**Dr. Phyllis Wise, Committee Chair**

*Professor*  
University of Illinois at Urbana-Champaign

**Dr. Subbana Ayyappan**

*Director General*  
Indian Council of Agricultural Research

**Dr. Usha Barwale-Zehr**

*Director, Office of Compliance and Ethics*  
Mahyco

**Dr. Jose Cuesta**

*Senior Economist*  
World Bank

**Mr. Dennis Fisher**

*Director, Office of Compliance and Ethics*  
Archer Daniels Midland Company (ADM)

**Mr. C.D. Glin**

*Associate Director*  
The Rockefeller Foundation

**Dr. Elise Golan**

*Director for Sustainable Development*  
U.S. Department of Agriculture

**Dr. Robert Hauser**

*Dean, College of Agricultural*  
University of Illinois at Urbana-Champaign  
Consumer and Environmental Sciences

**Dr. Ahmed Kablan**

*International Nutrition and Public Health,*  
Research Advisor  
U.S. Agency for International Development

**Mr. Eric Luftman**

*Director, Office of Agricultural Policy*  
U.S. Department of State

**Ms. Charlene McKoin**

*Senior Program Officer*  
Bill and Melinda Gates Foundation

**Mr. Divine Njie**

*Senior Officer*  
UN Food and Agriculture Organization

**Ms. Victoria Podesta**

*Vice President and Chief Communications*  
Officer  
Archer Daniels Midland Company (ADM)

**Dr. Robert Zeigler**

*Director General*  
International Rice Research Institute

## Program Committee

**Dr. Prasanta Kalita, Committee Co-Chair**

*Director of the ADM Institute for the*  
*Prevention of Postharvest Loss*  
University of Illinois at Urbana-Champaign

**Dr. Dirk Maier, Committee Co-Chair**

*Professor, Grain and Feed Operations and*  
*Processing*  
Iowa State University

**Dr. K. Alagusundaram**

*Deputy Director General, Agricultural*  
*Engineering*  
Indian Council of Agricultural Research

**Dr. Ben Bennett**

*Professor and Head of the Food and*  
*Markets Department*  
University of Greenwich Natural  
Resources Institute

**Mr. Tony Bennett**

*Agro-Food Industries Group, Livestock*  
*Industry Officer*  
UN Food and Agriculture Organization

**Mr. Mike Cecava**

*Research Director*  
Archer Daniels Midland Company (ADM)

**Dr. George Czapar**

*Associate Dean and Director of Extension*  
University of Illinois at Urbana-Champaign

**Ms. Amy Diggs**

*Foreign Service Officer, Agriculture,*  
*Biotechnology, Textile Trade Affairs,*  
*Bureau of Economic and Business Affairs*  
U.S. Department of State

## Program Committee (continued)

**Dr. Xia Kang**

*Professor*

Academy of State Administration of Grain

**Mr. Pradeep Khanna**

*Associate Chancellor for Corporate and International Relations*

University of Illinois at Urbana-Champaign

**Dr. Lisa Kitinoja**

*Founder*

The Postharvest Education Foundation

**Dr. Deepak Kumar**

*Post-Doctoral Research Associate, ADM*

*Institute for the Prevention of Postharvest Loss*

University of Illinois at Urbana-Champaign

**Ms. Anne Mbaabu**

*Director, Market Access Program*

Alliance for a Green Revolution in Africa

**Dr. Neal Merchen**

*Associate Dean for Research; College of Agricultural, Consumer and Environmental Sciences; Director, Experiment Station*

University of Illinois at Urbana-Champaign

**Dr. Elizabeth Mitcham**

*Director, Postharvest Technology Center*

*University of California – Davis;*

Department of Plant Sciences

**Dr. Suzanne Nielsen**

*Professor and Faculty Fellow, Office of Corporate and Global Partnerships*

Purdue University

**Dr. Kathy Partlow**

*Research and Grant Development*

*Specialist*

University of Illinois at Urbana-Champaign

**Ms. Patrina Pink**

*Communication and Partnerships*

*Consultant*

Global Initiative on Food Loss and Waste Reduction, UN Food and Agriculture Organization

**Dr. Daniel Queiroz**

*Department of Agricultural Engineering*

University of Vicosa

**Dr. Kent Rausch**

*Associate Professor, Department of*

*Agricultural and Biological Engineering*

University of Illinois at Urbana-Champaign

**Dr. Angela Records**

*International Agricultural Research Advisor*

U.S. Agency for International Development

**Ms. Kai Robertson**

*Lead Advisor, Food Loss and Waste Protocol*

World Resources Institute

**Mr. Eric Trachtenberg**

*Director, Food and Agriculture Sector*

McLarty Associates

**Mr. Robert van Otterdijk**

*Agro-industry Officer*

UN Food and Agriculture Organization

**Dr. Alex Winter-Nelson**

*Director, Office of International Programs,*

*College of Agricultural, Consumer and*

*Environmental Sciences*

University of Illinois at Urbana-Champaign

## Logistics Committee

**Megan Puzey, Committee Co-chair**

*Assistant Director*

Office of Corporate Relations

**Kari Wozniak, Committee Co-chair**

*Program Coordinator*

ADM Institute for the Prevention of Postharvest Loss

**Sarah Bingaman Schwartz**

*Communications Coordinator*

ADM Institute for the Prevention of Postharvest Loss





## Exhibition Room displays



### P4P Purchase for Progress

The World Food Programme (WFP) is the world's largest humanitarian agency fighting hunger worldwide.

By preventing the post-harvest losses of smallholder farmers WFP help decrease food waste, and increase the availability of food worldwide. This is a vital step toward meeting the world's growing food needs, and is one of the pillars of the Zero Hunger Challenge.

In Uganda, WFP has shown how improved on-farm storage structures – hermetic bags as well as metal and plastic silos – can dramatically reduce post-harvest losses at the farm level, when coupled with careful training. This is a critical entry point to minimizing food losses in the supply chain.

In this exhibition, WFP demonstrates some of these affordable household storage solutions, which have helped thousands of farmers reduce their post-harvest losses. On display are some of the drying equipment and hermetic storage options available to farmers supported by WFP in Uganda. Videos show beneficiary testimonials, as well as how metal silos are assembled by local artisans. The exhibition will also showcase the Blue Box – WFP's food quality field testing kit – which contains grain sampling and grading equipment, aflatoxin test kit and other supplies to allow on-the-spot screening of food quality parameters and grading.

## Dearman.

The lack of a comprehensive cold chain accounts for up to 200 million tonnes of postharvest food loss in emerging economies each year. Not only does this contribute to increased hunger and prices, but also represents a squandering of the labour, water and energy that go into its production.

Dearman technology uniquely harnesses liquid air to provide zero-emission power and cooling, in order to deliver significant reductions in operating cost, fuel usage and emissions, at low capital cost. The first application to market will be a zero-emission transport refrigeration unit, providing a much-needed solution to sustainable cooling for food storage and distribution. Clean cold technology can help meet growing demand for cooling, enabling emerging economies to leapfrog the polluting fossil-fueled technology of the past.



**ADM Institute for the  
Prevention of Postharvest Loss**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The ADM Institute is an information hub for evidence-based knowledge on postharvest loss issues and interventions. We conduct applied research to reduce postharvest losses and improve the lives and livelihoods of smallholder farmers around the world. Our research programs seek to transform supply chains, improve market functioning, and build capacity for farmers and communities. From its headquarters in central Illinois, at the University of Illinois at Urbana-Champaign, the ADM Institute works with partners and local institutions worldwide to reduce hunger and improve economic and environmental viability of food production systems.

This year, the institute launched a free online course through the Coursera platform, "Global Postharvest Loss Prevention: Fundamentals, Technologies, and Actors", which allows learners from

## Exhibition Room displays (continued)

all over the world to educate themselves about the issue and challenges of postharvest loss. The ADM Institute frequently hosts visitors for training programs and seminars and delivers presentations around the world.



The American Society of Agricultural and Biological Engineers (ASABE) is an educational and scientific organization dedicated to the advancement of engineering applicable to agricultural, food, and biological systems. ASABE comprises nearly 8,000 members in more than 100 countries.

ASABE has a long history of providing resources to help its member engineers solve problems in food, agriculture, natural resources, and the environment. Recognizing the need to connect its members and partner societies to address emerging challenges as a global community, ASABE is implementing a global initiative focused on three grand challenges that the world is facing: global food security, energy security, and water security in the context of sustainability and climate change.

ASABE welcomes partners to join in developing a series of global conferences, as one aspect of our global initiative. The next conference, "Engineering and Technology Innovation for Global Food Security" is scheduled for October 24-27, 2016, in Stellenbosch, South Africa.

### **Liaqat Corp, Ali Liaqat**

Liaqat Corp is a manufacturer and processor of value-added food products based in Gujranwala, Pakistan and established in 1975. The company is a supplier of dried foods, including halal chicken, mutton, beef, powders and other products to the agri-foods industry. They currently work with Nestle, Silvo Foods, and other large corporations and importers from the EU and USA.

Liaqat Corp can process foods per the specification of the customer to meet critical quality demands, including caloric breakdown, nutrition density, taste, aroma, mouth-feel, and safety. Products will demonstrate processes involved with producing these foods using sustainable practices. Liaqat Corp will display some of their dried ready-to-eat instant rice meals and be available to discuss their business operations, strategy, and role in reducing food losses through value addition."



The African Postharvest Losses information System (APHLIS) provides evidence-based estimates for cereal losses. It enables strategic targeting of investment in postharvest loss mitigation and R&D.

The APHLIS+ project provides an operational framework for collaboration contributing actively to improved postharvest management and loss reduction. The project responds to demands for:

1. Increased coverage (commodities and countries, quality, income and nutrition losses);
2. Predictions and food safety alerts;
3. Improved data gathering;
4. Improved architecture and user-interface, new functions, open access data and open source models;
5. Integration with the FAO Community of Practice

With the oversight of a Technical Board, representing the major loss assessment stakeholders, refining and improving methodology, quality assurance and harmonizing protocols, APHLIS+ will be powered by experts-validated models, backed by the best automatic and 'on the ground' data collection services; it will provide information and expertise to those who invest in optimized PH management and loss reduction.



Monday, October 5, 2015

---

## Day One Overview

8:00 - 9:00 am	<b>Registration and Continental Breakfast</b> Main Hallway
9:00 - 10:30 am	<b>Welcome to First International Congress on Postharvest Loss Prevention</b> Auditorium
10:00 - 10:30 am	<b>Networking Session and Coffee Break</b> (simultaneous with opening session) Main Hallway
10:30 - 12:30 pm	<b>Concurrent Session I: Postharvest Loss Scenario/Status</b> Auditorium, San Francisco
12:30 - 2:00 pm	<b>Lunch</b> Foyer
2:00 - 4:00 pm	<b>Concurrent Session II: Assessment Methods and Metrics of PHL Measurement</b> Auditorium, San Francisco
4:00 - 5:00 pm	<b>Poster and Networking Session I/Coffee Break</b> Foyer
5:00 - 6:00 pm	<b>Featured speaker: C.D. Glin, Rockefeller Foundation</b> "Global Initiatives for Reducing Postharvest Losses" Auditorium
7:00 pm	<b>Transportation from hotels to Casina di Macchia Madama</b> Via di Macchia Madama
7:30 - 8:30 pm	<b>Networking reception</b> Casina di Macchia Madama
8:30 pm	<b>Banquet dinner</b> Casina di Macchia Madama

---

## Opening session speakers



Pradeep  
Khanna



Dr. Robert  
Hauser



Dr. Robert  
Easter



Joe  
Taets



Daniel  
Gustafson



Dr. Judith  
Rodin



Dr. Ertharin  
Cousin

### Welcome

Mr. Pradeep Khanna, *Associate Chancellor for Corporate and International Relations, University of Illinois at Urbana-Champaign*

### University Opening Remarks

Dr. Robert Hauser, *Dean, College of Agricultural, Consumer, and Environmental Sciences, University of Illinois at Urbana-Champaign*

### Keynote Speech

Dr. Robert Easter, *President Emeritus, University of Illinois at Urbana-Champaign*

### Remarks

Mr. Joe Taets, *Senior vice president, President of ADM Agricultural Services business unit and President, Europe, Middle East and Africa*

Mr. Daniel Gustafson, *Deputy Director General, FAO*

Dr. Judith Rodin, *President, Rockefeller Foundation*

Dr. Ertharin Cousin, *Executive Director, World Food Programme*

### Moderated Question and Answer Session

Dr. Prasanta Kalita, *Director, ADM Institute for the Prevention of Postharvest Loss, University of Illinois at Urbana-Champaign*

### Roadmap Development Plan

Dr. Prasanta Kalita, *Director, ADM Institute for the Prevention of Postharvest Loss, University of Illinois at Urbana-Champaign*

### Concluding Remarks

Mr. Pradeep Khanna, *Associate Chancellor for Corporate and International Relations, University of Illinois at Urbana-Champaign*



## Concurrent Session I

### Session A

#### Postharvest Loss Scenario/Status

#### Auditorium

#### KEYNOTE PRESENTATION



#### Global Postharvest Loss and the ADM Institute: Using multi-stakeholder approaches

**Dr. Prasanta K. Kalita**, is the director of the ADM Institute for the Prevention of Postharvest Loss and a professor and leader of the Soil and Water Resources Engineering Division in Agricultural and Biological Engineering Department at the University of Illinois. He currently also serves as the Assistant Dean of Research in the College of Agricultural, Consumer and Environmental Sciences (ACES) and a Distinguished Teacher-Scholar at the University of Illinois. Kalita's research focus areas include water management and environmental sustainability, hydrology, watershed and water quality modeling, erosion and sediment control, and irrigation. He has worked extensively in educational development and capacity building and food security issues around the world.

#### ORAL PRESENTATIONS

**Session chair:** Mr. Robert van Otterdijk, FAO

**Summary:** This session covers the topics of status of postharvest loss in developing countries, perishable vs. non-perishable losses, technical, social, and policy regulatory factors causing losses, country specific needs to reduce losses, and variability in losses values from different studies.

- |                  |  |
|------------------|--|
| 11:05 – 11:20 am | <i>The Nature of Smallholder Agriculture in Paran State in Brazil and Implications for Alleviating Postharvest Loss</i><br>Dr. Mary Arends-Kuenning, University of Illinois at Urbana-Champaign, USA |
| 11:20 – 11:35 am | <i>Postharvest Loss Assessment of Vegetables in Kenya</i><br>Dr. Willis Owino, Jomo Kenyatta University, Kenya   |
| 11:35 – 11:50 am | <i>Postharvest Loss in Rwanda</i><br>Mr. Innocent Musabyimana, Government of Rwanda  |
| 11:50 – 12:05 pm | <i>Postharvest Losses of Perishables in Brazil: A Critical Review of an Old Problem</i><br>Dr. Gilmar Paulo Henz, EMBRAPA, Brazil  |
| 12:05 – 12:20 pm | <i>Gender Roles in Postharvest Management Along the Maize Value Chain in Southwestern Ethiopia</i><br>Dr. Chemedeta Abedeta Garbaba, Jimma University, Ethiopia                                      |

## Concurrent Session I

### Session B

#### Postharvest Loss Scenario/Status

San Francisco

#### KEYNOTE PRESENTATION



#### Postharvest loss status and emerging issues

**Mrs. Anne Mbaabu**, holds a Master's of Science in Food Science & Technology from the University of Nairobi, Kenya. She has many years of experience in the food industry and in development. Currently she is the Head, Markets and Harvest Management at the Alliance for a Green Revolution in Africa (AGRA), charged with market transformations to link smallholder African farmers of food staples to markets and value chains with special focus on harvest management including post-harvest loss management. She has undertaken various consultancies in management in the food industry for key UN agencies, SMEs development, and value chain analysis and structured trading systems.

#### ORAL PRESENTATIONS

**Session chair:** Dr. Dirk Maier, Iowa State University, USA

**Summary:** This session covers the topics of status of postharvest loss in developing countries, perishable vs. non-perishable losses, technical, social, and policy regulatory factors causing losses, country specific needs to reduce losses, and variability in losses values from different studies.

- |                  |  |
|------------------|--|
| 11:05 – 11:20 am | <i>Postharvest Losses Along the Citrus Value Chain: A Case Study of Benue State, Nigeria</i><br>Ms. Sarem Ugoh, University of Nottingham, UK                                 |
| 11:20 – 11:35 am | <i>Postharvest Losses in Vegetable Value Chain in Bangladesh, Cambodia and Nepal</i><br>Dr. Shriniwas Gautam, The World Vegetable Center (AVDRC), Thailand                   |
| 11:35 – 11:50 am | <i>Cross-Country Evidence of Post Harvest Loss in Sub-Saharan Africa: Insights from Purdue Improved Crop Storage (PICS)</i><br>Ms. Corinne Alexander, Purdue University, USA |
| 11:50 – 12:05 pm | <i>Emerging Issues in Postharvest Losses for Protein-Rich Perishables</i><br>Dr. Kumar Mallikarjunan, Virginia Tech University, USA  |
| 12:05 – 12:20 pm | <i>Postproduction Losses in Sierra Leone: The Case of Agricultural Business Centers</i><br>Dr. Joseph Sherman-Kamara, Njala University, Sierra Leone                         |

## Concurrent Session II

### Session C

#### Assessment Methods and Metrics of PHL Measurement Auditorium

##### KEYNOTE PRESENTATION



#### Postharvest loss measurement: context and new developments, focusing on the African Postharvest Losses Information System (APHLIS)

**Dr. Bruno Tran** is an expert on the postharvest management of durable agricultural commodities. He is an applied ecologist and biostatistician specialised in field research and consultancy, data analysis and communication, infographics, teaching and training.

Tran has more than 15 years of experience in scientific research, teaching and project management. Currently, his focus is on pest and quality control on-farm, in warehouses and during transport, including: participatory research, sustainable and acceptable pest control at farm level, rational use of insecticides and fumigants, storage pest ecology, extension and the communication of science.

##### ORAL PRESENTATIONS

**Session chair:** Dr. Jess Lowenberg-DeBoer, Purdue University, USA

**Summary:** This session focus on the challenges in measurement of postharvest losses and cover related topics, such as crop maturity indices, tools for postharvest quality assessment, quantity and quality of losses standards/protocols, and strategies to maintain postharvest quality

- |                |   |
|----------------|---|
| 2:35 – 2:50 pm | <i>Assessment of maize grain damage and weight losses caused by storage insect pests in Ethiopia</i><br>Dr. Girma Demissie Bekele, Ethiopian Institute of Agricultural Research, Ethiopia               |
| 2:50 – 3:05 pm | <i>Cost-effective measurement of the economic value of post-harvest losses in Africa</i><br>Dr. Jess Lowenberg-DeBoer, Purdue University, USA   |
| 3:05 – 3:20 pm | <i>Experience with Regard to Application of Exploratory and Quantitative Fish Loss Assessment Methodologies in Africa</i><br>Dr. Yahya Ibrahim Mgawe, Fisheries Education and Training Agency, Tanzania |
| 3:20 – 3:35 pm | <i>Losses in the Transportation of Fruits and Vegetables</i><br>Dr. Jose Caixeta-Filho, University of Sao Paulo, Brazil   |
| 3:35 – 3:50 pm | <i>Supply Chain Solutions to Reducing PHL in Nigeria's Tomato Value Chain</i><br>Mr. Harry Pastuszek, PYXERA Global, USA  |



## Concurrent Session II

### Session D

#### Assessment Methods and Metrics of PHL Measurement

San Francisco

#### KEYNOTE PRESENTATION



#### Systemic solutions for Food Losses and Waste reduction: experiences from pan-European collaborative approaches

**Dr. Toine Timmermans** is the Program manager of Sustainable Food Chains at the Research Institute Food & Biobased Research, part of Wageningen University & Research Centre. He obtained his MSc in Agricultural Engineering from the Wageningen University, with specialization in knowledge engineering and computer vision. He is the coordinator of the EU FP7 project FUSIONS (2012-2016) The project Food Use for Social Innovation by Optimising waste prevention Strategies will contribute to achieving a Resource Efficient Europe by significantly reducing food waste and losses. FUSIONS will establish a tiered European multi-stakeholder Platform to generate a shared vision and strategy to prevent food loss and reduce food waste across the supply chain.

#### ORAL PRESENTATIONS

**Session chair:** Dr. Ashok Gulati, former chairman, Commission for Agricultural Costs and Prices, India

**Summary:** This session focuses on the challenges in measurement of postharvest losses and cover related topics, such as crop maturity indices, tools for postharvest quality assessment, quantity and quality of losses standards/protocols, and strategies to maintain postharvest quality

- |                |   |
|----------------|---|
| 2:35 – 2:50 pm | <i>Rice Post-Harvest Losses in Sub-Saharan Africa: Advances by the Africa-Wide Processing and Value-Addition Task Force</i><br>Dr. Sali Atanga Ndindeng, AfricaRice Center, Benin |
| 2:50 – 3:05 pm | <i>Research Contributions to Estimation of Tomato Postharvest Losses in Brazil</i><br>Dr. Augusto Gameiro, University of Sao Paulo, Brazil  |
| 3:05 – 3:20 pm | <i>Mapping Food Insecurity</i><br>Dr. Craig Gundersen, University of Illinois at Urbana-Champaign, USA  |
| 3:20 – 3:35 pm | <i>Food Losses and Their Ecological Footprint in Rice Value Chains in Nigeria</i><br>Ms. Tanja Pickardt, GLZ, Germany   |
| 3:35 – 3:50 pm | <i>The Role of Metrics and Measurements of Food Loss within Value Chains to Influence Corporate Behavior</i><br>Ms. Margaret Henry, Sustainable Food Laboratory, USA              |

## Poster Presentation Session I

### Session P1A

#### PHL Scenarios and Measurement

##### Foyer

**Poster session chair:** Mr. Jorge Fonseca, FAO

- *An Overview of the State-of-the-Art Post-Harvest Losses in Brazil*  
Mr. Thiago Pera, University of Sao Paulo, Brazil
- *USAID Post Harvest Loss Reduction Innovation Lab (PHLIL), Bangladesh Component*  
Dr. Md. Monjurul Alam, Bangladesh Agricultural University, Bangladesh
- *Constraints and Opportunities for Increasing Adoption of Technologies for Preventing Postharvest Maize Losses in Africa*  
Mr. Mungule Chikoye, Zambian Center for Lifelong Learning, Zambia
- *Postharvest Loss: A Case Study of Sweet Cherry in Kashmir*  
Dr. Mohmad Arief Zargar, University of Kashmir, India
- *Addressing Climate Change Impacts Through PHL Reduction*  
Dr. Tanya Stathers, University of Greenwich, UK
- *Commodity Systems Assessment Methodology (Csam): A Potential Methodology for Post Harvest Losses Analysis*  
Mr. Vijay Tokala Yadav, Punjab Agricultural University, India
- *FAO Study on Postharvest Losses in Trinidad and Tobago, Guyana and St. Lucia: Marketing and Economics*  
Mr. Kelvin Craig, FAO, Guyana
- *Conclusions from 30 Years of Practical Postharvest Loss Prevention Work*  
Dr. Jurge Boye and Dr. Otto Mueck, BM Seminar and Consulting, Germany
- *PHL: Role of Transportation - Confront and Win Tomorrow Today*  
Col. (ret.) Ravi Dhingra, Annakshetra, India
- *Food Losses and Waste in Tajikistan, Country Report*  
Ms. Umeda Nabieva, ISD Consulting, Tajikistan
- *Survey of defects of orange in Egypt that affect its acceptability for exportation*  
Dr. Abdel-Moeti Salama, University of Kafrelsheikh, Egypt
- *Postharvest loss assessment and mitigation measures in the maize food supply chain in Uganda*  
Ms. Harriet Muyinza, National Agricultural Laboratories Kampala, Uganda
- *Causes for Postharvest Loss in Olive and Olive Oil Production in High Atlas-Morocco*  
Dr. Malika Bounfour, Plant Protection - National Office for Food Safety, Morocco

---

## Poster Presentation Session I

### Session P1B

#### PHL Scenarios and Measurement

##### Foyer

**Poster session chair:** Dr. Kent Rausch, University of Illinois at Urbana-Champaign, USA

- *Micro-nutrition Loss in Food Losses and Waste in Norway and Kenya*  
Warren T.K. Lee, FAO
- *Re-Thinking Post-Harvest Losses in Perishables: Contextualizing Losses with the Example of Pineapple in Uganda*  
Ms. Katharine Troeger, University of Kassel, Germany
- *Marketing of Tomatoes in Baskets in Gwagalada Area Council of the Federal Capital Territory Abuja*  
Mr. Michael Adedotun Oke, Michael Adedotun Oke Foundation, Nigeria
- *Greenhouse Gas Emissions Of Global Food Waste*  
Mr. Stephen Porter, University of Edinburgh, UK
- *Machine Vision: A New Opportunity for Advancing Quality of Agricultural Produce in Bangladesh*  
Dr. Md. Abdul Momin, Bangladesh Agricultural University, Bangladesh
- *Food Loss in Dominican Republic*  
Mr. Leandro Feliz Beltre, Consultores Estrategicos de Marketing SRL, Dominican Republic
- *Current Status and Determinants of Farmers Knowledge and Use of Postharvest Technology: Results from India*  
Mr. Hemant Pullabhotla, University of Illinois at Urbana-Champaign, USA
- *Evaluation of Postharvest Losses in the Production and Marketing Chain of Bananas (Musa Cavendish)*  
Dr. Murillo Freire, EMBRAPA, Brazil
- *Grappling With Postharvest Loss*  
Mr. Ali Liaqat, Liaqat Corp., Pakistan
- *FAO study on post-harvest losses of cassava, mango and tomato in three Caribbean countries: Trinidad and Tobago, Guyana and St. Lucia*  
Dr. Majeed Mohammed, FAO, Trinidad and Tobago
- *Food Systems and Postharvest Loss: Key Challenges and Concrete Solutions*  
Dr. Adebola Adedugbe, Farmideas Nigeria, Nigeria
- *Harvesting: Effects of Crop Maturity and Moisture on Losses*  
Dr. Marvin Paulsen, University of Illinois at Urbana-Champaign, USA
- *Evaluation of Piloted Postharvest Training and Services Center in Tanzania: Challenges and Successes*  
Mr. Richard Tracy and Mr. Corey Rosenbusch, World Food Logistics Organization, USA



## Featured Speaker

### Global Initiatives for Reducing Postharvest Loss *Auditorium*

#### KEYNOTE PRESENTATION



**Mr. C.D. Glin, Associate Director**, Africa Region, Rockefeller Foundation

Based in Nairobi, Kenya, Glin supports and leads the strategy development and execution of several initiatives to contribute to the Foundation's dual goals to advance inclusive economies and build resilience.

His grant-making and investment portfolio primarily focuses on agriculture and rural development and includes the Foundation's emerging initiative to increase economic opportunity, enhance food security and contribute to environmental sustainability by reducing waste and loss throughout agricultural supply chains.

Prior to joining the Rockefeller Foundation, Glin was a White House appointee in the Obama Administration where he served as the first Director of Intergovernmental Affairs and Global Partnerships for the Peace Corps. In that capacity, he established the office and led interagency collaboration and public-private partnership efforts on three key U.S. government initiatives, the Global Health Initiative; Feed the Future, the global hunger and food security initiative and the Global Climate Change Initiative to enhance and align the developmental impact of approximately 9,000 grassroots volunteers serving worldwide. Previously, Glin served as Vice President for Business Development at Pyxera Global, where he managed international development, business advisory, supply chain and corporate responsibility programs for Fortune 500 companies.

Glin previously worked with and consulted for the State Department, USAID and the World Bank while living in Ghana and Nigeria and served in the first Peace Corps South Africa group during the Presidency of Nelson Mandela. Glin holds a B.A. in Political Science from Howard University; a Master's in Business Management from Tulane University and Master's-level Diploma in Strategy and Innovation from Oxford University.

He is a term-member of the Council on Foreign Relations and the World Economic Forum's New Vision for Agriculture Transformation Leaders Network. In 2011, was designated by the White House as a "Champion of Change" for his commitment and contributions to international service and civic participation.



## Banquet Dinner

### Casina di Macchia Madama

#### BANQUET SPEAKER



**Mr. Mark von Pentz** is President, Agriculture and Turf Division – Europe, CIS, Asia, Africa and Global Tractor Platform, a position he's held since September 2012. Von Pentz is responsible for the customer-focused sales and marketing regions of Europe, CIS, Asia, and Africa, and all product platform groups for tractors.

Von Pentz began his career with John Deere in the European Office in 1990 as an internal auditor. He held a number of positions of increasing responsibility in the Agricultural Division's marketing organization in Europe. In 1999, he was named General Manager of John Deere International, and in 2003 was appointed Director, Market Development for the United States and Canada. In 2005, von Pentz was named Vice President for Agricultural Marketing for the United States and Canada. In January 2006, he returned to Europe and was named Senior Vice President, Marketing and Product Support – Europe, Africa, and the Middle East.

Von Pentz is a graduate of Hamburg University with an advanced degree in business administration. He is a board member of the VDMA (German Equipment Manufacturers' Association) and a member of the regional advisory board of Deutsche Bank AG, Mannheim.

### John Deere 025 2-row no-till planter on display

Sustainably increasing agricultural productivity for smallholders throughout Sub-Saharan Africa requires that we improve productivity across the value chain; from the production inputs going onto the field to the food being consumed on the plate.

Mechanization allows the operations along the supply chain to become less susceptible to human error, inconsistencies, and uncontrollable environmental conditions. John Deere products prepare and condition the land, plant and maintain the crop, harvest the crop and haul the produce for processing, distribution and consumption before the cycle starts over.

To provide a mechanized conservation agricultural solution to the smallholder customer segment, John Deere innovatively developed the 1025 2-row no-till planter. This planter supports a collaboration with the Howard G. Buffett Foundation and helps to promote a conservation-based cropping system. By providing market-appropriate equipment for smallholder farmers, John Deere is providing more efficient and consistent operations across the value chain to increase agricultural productivity.



# JOHN DEERE





Tuesday, October 6, 2015

## Day Two Overview

8:00 - 9:00 am

**Registration and Continental Breakfast**  
*Main Hallway*



Breakfast sponsored by Compatible Technology Inc. Compatible Technology International (CTI) is a global NGO, headquartered in St. Paul, Minnesota, that provides post-harvest handling and processing innovations for smallholder farmers in Africa. CTI designs and promotes simple, affordable technologies that reduce women's drudgery, minimize food loss, increase food quality and create economic opportunity. CTI collaborates with public and private sector partners to establish regional supply chains that can further adoption and business opportunities for smallholders in local food processing.

9:00 - 10:00 am

**Day 1 Summary and Keynote Speakers**  
*Auditorium*

10:00 - 11:00 am

**Poster and Networking Session II/Coffee Break**  
*Foyer*

11:00 - 12:45 pm

**Concurrent Session III: Intervention Strategies for PHL Mitigation**  
*Auditorium, San Francisco*

12:45 - 2:00 pm

**Lunch**  
*Foyer*

2:00 - 4:00 pm

**Concurrent Session IV: Case Studies in PHL Prevention**  
*Auditorium*  
**Concurrent Session IV: Education Platform and Decision Support Systems**  
*San Francisco*

4:00 - 5:00 pm

**Panel: Building a Community of Practice for Postharvest Loss Reduction**  
*Auditorium*  
**Panel leader: Charlene McKoin, Bill & Melinda Gates Foundation**

5:00 - 6:00 pm

**Poster and Networking Session III/Coffee Break**  
*Foyer*

6:00 - 6:30 pm

**Special remarks: Michael Scuse, Undersecretary, U.S. Department of Agriculture**  
*Auditorium*

6:30 - 7:30 pm

**Networking Reception**  
*Foyer*



---

## Morning session speakers

**Day 1 Summary:** ADM Institute for the Prevention of Postharvest Loss

### KEYNOTE SPEAKERS

#### Postharvest Loss Issues in China



**Mr. Fujun Li**

Fujun Li currently works as the Chief Engineer of Academy of State Administration of Grain, and the Chief Editor of the journal titled Science and Technology of Cereals, Oils and Foods in Chinese. He mainly engaged in the research of grain security strategy, grain storage and logistics. In addition, he acts as the Standing Director of Chinese Cereals and Oils association, as well as the Vice President of the Storage Branch of Chinese Cereals and Oils association. As Chief Engineer, he leads the innovative group of grain storage and transportation national engineering laboratory to implement a series of important scientific research projects.

#### Sustainable Cold Chains for Food Security in the Developing World



**Mr. Toby Peters**

Toby Peters is an award-winning strategist and advocate. He cofounded both Highview Power Storage (2004) and Dearman (2011) and with them established the concept of liquid air as an energy storage solution for both grid and transport delivering clean cold and power. Today, Peters leads Dearman and directs its vision. He also spearheads the company's business development and communications programmes, with a focus on international engagement and the development of the Cold Economy globally.

Under his leadership, Dearman has grown to employ more than 50 people, predominantly engineers, and the company's technology has progressed rapidly, with the first application nearing commercial deployment.

During his career, Peters has established liquid air within the mainstream energy debate and helped secure some £20 million of UK grant funding for liquid air development, as well as more than £12 million of inward investment into the UK for technology development.

Peters is also a Visiting Professor in Power and Cold Economy within the College of Engineering and Physical Sciences at the University of Birmingham. He is the academic lead of the 2015 'Doing Cold Smarter' Policy Commission.

## Poster Presentation Session II

### Session P2A

#### PHL Reduction Interventions

##### Foyer

**Poster session chair:** Mr. Robert van Otterdijk, FAO

- *Rice Storage Technologies for Smallholding Farmers of Bangladesh*  
Dr. Md. Abdul Awal, Bangladesh Agricultural University, Bangladesh
- *Qualitative Loss of Maize Under Different Bag Storage Modes*  
Mr. Vishal Kumar, Rajendra Agricultural University, Bihar, India
- *Assessment of Maize Dryers And Moisture Measurement in Ghana*  
Dr. Sam McNeill, University of Kentucky, USA
- *Using Palm Kernel Oil Against Cowpea Seed Beetle*  
Dr. Samuel Babarinde, Ladoke Akintola, Nigeria
- *Effect of Hydrocooling and Packaging on the Shelf Life in Cold Stored Destalked Litchis Variety Taiso at 5 C*  
Ms. Roop Soodha Munbodh, Mauritius
- *Alternative Hermetic Storage Containers for Use by Smallholder Farmers*  
Dr. Thomas J. Brumm, Iowa State University, USA
- *Wheat Supply Chain Optimization Post-Harvest Loss Minimization*  
Dr. Yogendra Shastri, ITT Bombay, India
- *Low-Cost Postharvest Storage Technology for Smallholder Fruit and Vegetable Farmers in Southwestern Nigeria*  
Dr. Olubukola Odeyemi, Federal University of Agriculture, Nigeria
- *Assessment of Different Storage Methods in Extending Shelf Life of Uapaca Kirkiana Fruits*  
Ms. Jacinta Nyaika, Lilongwe University of Agriculture and Natural Resources, Malawi
- *Effects of Force on the Development of Bruise on Strawberry Fruit*  
Dr. Louise Abayomi, University of Greenwich, UK
- *Simulated Ghost Fishing Experiment of Collapsible Crab Trap Fishery in Thailand*  
Dr. Anukorn Boutson, Kasetsart University, Thailand
- *Expanding Food Processing Capacity as a Tool for Ensuring Food Security and Safety*  
Ms. Mammie Hutchful, University of Ghana, Ghana
- *Molecular Camouflage: Natural Barrier Coatings to Increase the Marketable Shelf Life of Fresh Produce Without Refrigeration*  
Dr. James Rogers, APEEL, USA

## Poster Presentation Session II

### Session P2B

#### PHL Reduction Interventions

##### Foyer

**Poster session chair:** Ms. Olivia Karanja, FAO

- *Paddy Drying Technologies for Small Farmers and Traders in Bangladesh*  
Dr. Chayan Saha, Bangladesh Agricultural University, Bangladesh
- *Infrastructure Constraints In Developing Countries With High Postharvest Losses: Impacts On Design and Deployment*  
Mr. David Blumberg, Blumberg Grain, USA
- *Low-Cost Cold Storage Options for Smallholder Farmers to Reduce Postharvest Losses in Fruits and Vegetables*  
Dr. Jane Ambuko, University of Nairobi, Kenya
- *Effect of Evaporative Cooler Storages and Different Ripening Stages on Postharvest Quality of Tomatoes*  
Mr. Esa Abiso, Samara University, Ethiopia
- *The FTT-Thiaroye Processing Technique: An Innovation for Postharvest Loss Reduction in Fisheries and Aquaculture*  
Ms. Aina Randrianantoandro, FAO, Italy
- *Potential to Reduce Losses of Yam Tubers During Storage*  
Dr. Deborah Rees, University of Greenwich, UK
- *Optimizing Pesticide Delivery to Grain Using Entostat Technology*  
Ms. Freya Scoates, Exosect, UK
- *From Harvest to the Table: Maintaining the Nutritional Properties of Traditional African Vegetables*  
Dr. Charles Parkouda, IRSAT, Burkina Faso
- *Assessing Performance of Mechanical Aeration to Prevent Stored Grain Loss and Preserve Grain Quality*  
Dr. El Houssine Bartali, IAVM, Rabat, Morocco
- *Measuring Post-Harvest Losses in Wheat Logistics Chain: A Brazilian Study Case*  
Dr. Daniela Bartholomeu, University of Sao Paulo, Brazil
- *AflaSTOP: Off-Farm Testing of Alternative Storage Devices to Monitor Aflatoxins*  
Ms. Sophie Walker, ACDI/VOCA, USA
- *Changes in the Mite Populations in Garlic Bulbs*  
Dr. Edmundo Silva, Universidad Autonoma de Queretaro, Mexico
- *Innovative Solutions to Enable the Reduction of PHL*  
Mr. Andrew Gerard, Global Knowledge Initiative, USA



## Concurrent Session III

### Session E

#### Intervention Strategies for PHL Mitigation

##### Auditorium

**Session chair:** Dr. Elizabeth Mitcham, University of California - Davis, USA

**Summary:** This session covers the topics of emerging technology interventions for smallholders, economic assessment for sustainability of technologies, farm mechanization and its effect on postharvest quality, information technology (IT) intervention in agriculture to reduce losses, and assessment of losses to determine success of interventions.

- |                  |   |
|------------------|---|
| 11:05 – 11:20 am | <i>The Role of Post Harvest Loss Reduction in USAID's Feed the Future Initiative</i><br>Dr. John Bowman, USAID, USA   |
| 11:20 – 11:35 am | <i>Storing Up Trouble For Larger Grain Borer</i><br>Dr. Belinda Luke, CABI Europe, UK   |
| 11:35 – 11:50 am | <i>Market Linkages Key to Adoption of Improved Postharvest Practices for Horticultural Produce</i><br>Dr. Elizabeth Mitcham, University of California - Davis, USA                                |
| 11:50 – 12:05 pm | <i>Behavioral Explanations For Barriers To Adoption Of Postharvest Loss Technology</i><br>Ms. Pallavi Shukla, University of Illinois at Urbana-Champaign, USA                                     |
| 12:05 – 12:20 pm | <i>Towards a Strategy on Post-Harvest Loss in West Africa: Aligning a Regional Strategy to a Continental Framework</i><br>Dr. Hamady Diop, New Partnership for Africa's Development, South Africa |
| 12:20 – 12:35 pm | <i>Reducing Postharvest Losses: Impact of a Novel Tool, Zerofly Storage Bags, Within Current Intervention Strategies</i><br>Dr. David Signa, Vestergaard, Switzerland                             |

---

## Concurrent Session III

### Session F

#### Intervention Strategies for PHL Mitigation

*San Francisco*

**Session chair:** Mr. Eric Trachtenberg, McLarty Associates, USA

**Summary:** This session covers the topics of emerging technology interventions for smallholders, economic assessment for sustainability of technologies, farm mechanization and its effect on postharvest quality, information technology (IT) intervention in agriculture to reduce losses, and assessment of losses to determine success of interventions.

- 11:05 – 11:20 am    *Aflatoxin Biocontrol: Scaling up a Preharvest Management Tool to Reduce Postharvest Loss in Maize and Groundnut*  
Mr. Ranajit Bandyopadhyay, International Institute of Tropical Agriculture, Nigeria
- 11:20 – 11:35 am    *Hermetic Wheat Storage for Smallholder Farmers in India*  
Dr. Kent Rausch, University of Illinois at Urbana-Champaign, USA
- 11:35 – 11:50 am    *Development of Tomato Value-Added Products as an Alternative Use for Oversupply in Costa Rica*  
Ms. Laura Brenes Peralta, Tecnologico de Costa Rica, Costa Rica
- 11:50 – 12:05 pm    *Amaranth to Control Weevils*  
Dr. Carl Bern, Iowa State University, USA
- 12:05 – 12:20 pm    *Hermetic Storage and Solar Dryers Significantly Reduce Postharvest Losses*  
Dr. Philippe Villers, GrainPro, USA
- 12:20 – 12:35 pm    *Market Incentives for Food Safety and the Adoption of Postharvest Technologies*  
Dr. Vivian Hoffmann, IFPRI, USA

## Concurrent Session IV

### Session G

#### Case Studies in PHL Prevention

##### Auditorium

#### KEYNOTE PRESENTATION



#### Integrating postharvest development capacity into national extension services

**Dr. Dirk Maier** is Professor of Grain & Feed Operations & Processing in the Department of Agricultural and Biosystems Engineering, and serves as the Associate Director of the Global Food Security Consortium (GFSC) at Iowa State University. His research and outreach programs focus on post-harvest loss reduction/prevention, food security, grain operations management, feed technology, post-harvest engineering, value-added processing of crops and food/feed products, ecosystem modeling, stored products protection, alternative crop storage systems (grain chilling, hermetic storage), bulk materials handling, facilities planning and design, and continuing education and credentialing of professionals in the global grain and feed industry. He is the Founding Director of the USAID-funded Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss for which he served as the lead PI.

#### ORAL PRESENTATIONS

**Session chair:** Dr. Ahmed Kablan, USAID, USA

**Summary:** The session will focus on sharing the success stories of PHL reduction by technology interventions, change in policies and adopting good practices/technologies.

- |                |   |
|----------------|---|
| 2:35 – 2:50 pm | <i>Reducing Grain Losses Through the Introduction of Mechanized Pearl Millet Threshing Tools in Senegal</i><br>Ms. Alexandra Spieldoch, Compatible Technology International, USA                          |
| 2:50 – 3:05 pm | <i>Case Study: Lessons from Mitigating Postharvest Losses in Tanzania</i><br>Mr. John Mwarari Macharia, Alliance for a Green Revolution, Kenya  |
| 3:05 – 3:20 pm | <i>Economics of Postharvest Loss: A Case Study of the New Large Soybean-Maize Producers in Tropical Brazil</i><br>Dr. Peter Goldsmith, University of Illinois at Urbana-Champaign, USA                    |
| 3:20 – 3:35 pm | <i>Efficiency of the Scylla Serrata Crab Fishery Value Chain in Madagascar Boosted by Simple Low-Cost Interventions</i><br>Ms. Florence Wallemacq, Indian Ocean Commission SmartFish Programme, Mauritius |
| 3:35 – 3:50 pm | <i>WFP Special Operation: Reducing Post-Harvest Losses in Sub-Saharan Africa</i><br>Mr. Michael Dunford and Mr. Adrian van der Knaap, World Food Programme  |



## Concurrent Session IV

### Session H

#### Education Platform and Decision Support Systems

San Francisco

#### KEYNOTE PRESENTATION



#### Integrating postharvest development capacity into national extension services

**Dr. Lisa Kitinoja**, has been working in the field of postharvest extension since the 1990s, and currently serves as President of The Postharvest Education Foundation (Oregon, USA) and leads an annual e-learning program. She provides horticultural advisory services for the World Food Logistics Organization and is currently working with Rockefeller Foundation to develop postharvest training materials and an e-course for reducing food losses in developing countries.

#### ORAL PRESENTATIONS

**Session chair:** Dr. George Czapar, University of Illinois at Urbana-Champaign, USA

**Summary:** The session will cover the topics on importance of developing PHL related knowledge-sharing platform, education tools, technology dissemination strategies, and extension networks.

- |                |   |
|----------------|---|
| 2:35 – 2:50 pm | <i>Scientific Animation Without Borders (SAWBO)</i><br>Dr. Barry Pittendrigh and Dr. Julia Bella Bravo, University of Illinois at Urbana-Champaign, USA   |
| 2:50 – 3:05 pm | <i>Global Partnerships for Global Solutions: An Agricultural and Biological Engineering Global Initiative</i><br>Dr. Mary Leigh Wolfe, Virginia Tech University, USA  |
| 3:05 – 3:20 pm | <i>Education Platform for PHL, Extension and Implementation of Technologies in Fields in Latin America</i><br>Ms. Graciela Pereira, Centre for Marketing Information and Advisory Services for Fishery Products in Latin America and the Caribbean, Uruguay |
| 3:20 – 3:35 pm | <i>Benefits of Training Stakeholders Across the Grain Value Chain: A Capacity-Building Effort in Nigeria</i><br>Dr. Klein Ileleji, Purdue University, USA   |
| 3:35 – 3:50 pm | <i>Intensely Engage and Empower Your Postharvest Trainers for Impact</i><br>Dr. Nigel Banks, Postharvest Co. Limited, New Zealand   |

## Panel Session

### Building a Community of Practice for Postharvest Loss Reduction

#### *Auditorium*

This panel will discuss the importance of forming communities of practice to enable cross-sector collaboration, sharing of best practices, and capacity building for practitioners and stakeholders of postharvest loss reduction. The panel will include a live demonstration of the UN Food and Agriculture Organization Community of Practice on Food Loss and Waste Reduction and highlight a potential grant by the Gates Foundation that would form "APHLIS+" the expansion of the African Post Harvest Loss Information System. Discussion will allow participants to learn how they can contribute to and benefit from current communities of practice for loss prevention.

A joint initiative of the UN Food and Agriculture Organization, the International Fund for Agricultural Development, and the World Food Programme, and the Swiss Government, the Community of Practice on Food Loss and Waste mainstreams food loss reduction initiatives for smallholders in food deficit areas. The African Postharvest Losses Information System (APHLIS) is a transnational network of cereal grain experts that coordinates a grain loss measurement and information system on the postharvest losses of cereals through Africa.



**Ms. Charlene McKoin** is a Senior Program Officer at the Bill & Melinda Gates Foundation, where she works on the Farmer Services and Systems team focusing on integrated value chain development and post-harvest loss. Before joining the Gates Foundation in 2012, McKoin spent more than eight years working as "Chief of Party", managing a variety of USAID funded agri-business, financial, nutrition and HIV/AIDS projects for Abt Associates, Cardno Emerging Markets and AFRICARE. Prior to her years in international development, McKoin spent 20 years in corporate, international structured trade, and project finance working for Bank of America, JP Morgan and Wells Fargo. As an international banker, she worked with Fortune 500 companies, and managed relationships with Latin American banks, as well as some of the largest companies in Latin America such as Petrobras, Vale, PDVSA, Embraer, and Electricidad de Caracas. She has lived and worked in Africa and Latin America with specific expertise in Lusophone countries including Brazil, Mozambique, Angola and Guinea Bissau.

## BILL & MELINDA GATES *foundation*



**Dr. John Bowman** is a Senior Agriculture Adviser at the United States Agency for International Development's Bureau for Food Security based in Washington, D.C. He is Leader for the Nutritious and Safe Foods Program Area at USAID. Bowman manages and coordinates global projects for USAID's Office of Agricultural Research and Policy in the areas of horticulture, integrated pest management, food safety, post-harvest loss, nutrition, livestock, and aquaculture. Prior to this current assignment, Bowman worked in USAID's Office

of Nutrition where he was focused on building linkages between agriculture and nutrition. Bowman has more than 30 years of experience in international development having worked in more than 40 countries for international agricultural research centers (CIMMYT, CIAT), multinational food companies (PepsiCo, URC-Philippines, Technico-China), and international consulting firms (DAI, Chemonics, Nippon-Koei). He holds two Master's degrees (Latin American Studies, Plant Pathology) from the University of Wisconsin-Madison, and a Ph.D. in Plant Pathology from the University of Illinois- Urbana Champaign.



**Dr. Mirielle Totobesola-Barbier** is the Project Manager of the UN Rome-based Agencies, joint project 'Mainstreaming food loss reduction initiatives for smallholders in food deficit areas' (RBA/GLO/001/SWI) funded by the government of Switzerland. Totobesola holds a Ph.D in Agro-food Engineering (University of Montpellier II, 2008), graduate degrees in Food Science (University of Montpellier II, 2002) and Rural Economy and Agribusiness Management (Montpellier University of Law and Economics, 1994), as well as an engineering degree in agro-food industries. From 2010 to 2014, she served as the Regional Technical Advisor for Agriculture in the West Africa Regional Office of Catholic Relief Services (CRS), based in Ouagadougou, Burkina Faso. From 2006 to 2010 she was coordinator of the '*Fonds de soutien à la programmation*' for Canadian International Development Agency (CIDA) based in Ouagadougou. In addition to her extensive work experience in West Africa, she worked for CIAT (1998 to 2001) in the Rural Agro-enterprise Development Project as Research Associate for Central America, based in Honduras, and from 1995 to 1997 as Research Associate with Conservation International in Washington, D.C.



**Dr. Bruno Tran** of the Natural Resources Institute, University of Greenwich, UK, is an expert on the postharvest management of durable agricultural commodities. Tran is an applied ecologist and biostatistician specialised in field research and consultancy, data analysis and communication, infographics, teaching and training. Tran has more than 15 years' experience in scientific research, teaching and project management. Currently, his focus is on pest and quality control on-farm, in warehouses and during transport, including: participatory research, sustainable and acceptable pest control at farm level, rational use of insecticides and fumigants, storage pest ecology, extension and the communication of science. Tran has extensive developing country experience and is fluent in both English and French.



**Dr. Tanya Stathers** of the Natural Resources Institute, University of Greenwich, UK, has been working with smallholder crop postharvest systems across sub-Saharan Africa for more than 20 years, developing and promoting agricultural technologies through multi-stakeholder learning processes. Her research has also focused on agricultural adaptation to climatic and other changes, rural-urban interdependencies of food and agricultural systems, poverty impacts of market standards, and creative adult education approaches.



## Poster Presentation Session III

### Session P3A

#### Education Platform and Case Studies

##### Foyer

**Poster session chair:** Ms. Alexandra Spielloch, Compatible Technology International, USA

- *Learnings from Save Food Asia Pacific Campaign*  
Dr. Prabhat Kumar, ACISAI, Thailand
- *Do Farmers Benefit from Increased Access to Credit?: Evidence from Rural India*  
Mr. Tisorn Songsermsawas, International Fund for Agricultural Development, (IFAO) Italy
- *Training Small-Scale Handlers on Solar Drying Fruits and Vegetables*  
Ms. Odette Ngulu, MIVAF, Tanzania
- *Private Sector-Led Solutions to Reduce Postharvest Loss in Africa*  
Ms. Helen Mant, Initiative for Global Development, South Africa
- *Empowerment of Rural Youth Through Income and Knowledge Generation by Mechanization and Implement Banking*  
Dr. Satish Kumar, Bihar Agriculture University, India
- *Applying Farmer-Centered Design to Alleviate Women's Drudgery and Reduce Quality Losses in Groundnut*  
Ms. Alexandra Spielloch, Compatible Technology International, USA
- *Food Loss Assessments: Causes and Solutions Case Studies on Small-Scale Fisheries in Indonesia*  
Dr. Singgih Wibowo, Research and Development Center for Marine and Fisheries Product Processing, Indonesia
- *Effective Agricultural Extension Programs Can Prevent Postharvest Losses*  
Ms. Lola Gaparova, USAID Farmer Advisory Services, Tajikistan
- *Postharvest Loss Interventions for Smallholder Development*  
Dr. Antonio Acedo, AVRDC - The World Vegetable Center, Taiwan
- *E-Granary: Reducing Post Harvest Losses Through a Vertical Integration Platform*  
Mr. Stephen Muchiri, CEO of Eastern Africa Farmer Federation and Mr. Paul Thangata, FAO Senior Agribusiness Expert
- *PHL Best Practices in Developing Countries*  
Dr. Joseph Kabogoza, Action Line for Development, Uganda
- *Tunisian Network to Reduce Losses and Food Waste*  
Dr. Amira Ben Mosabah Sfaxi, FAO, Tunisia

---

## Poster Presentation Session III

### Session P3B

#### Education Platform and Case Studies

#### Foyer

**Poster session chair:** Dr. Mireille Totobesola, FAO

- *Local Knowledge for Food Security in Uganda: Postharvest Practices in Homegardens of the Ugandan Southwest*  
Mr. Cory Whitney, University of Kassel, Germany
- *Food Losses and Food Security Training for Georgian Farmers*  
Dr. Kakha Nadiradze, Association for Farmers' Rights, Georgia
- *Global Variations in Micro-nutrient Losses in the Fruit and Vegetables Supply Chains*  
Mr. Mauro Serafini, FAO, Italy
- *Postharvest Fish Loss Evaluation: Case Study of Boiled Salted Fish in Pati, Central Java, Indonesia*  
Mr. Syamdidhi, Research and Development Center for Marine and Fisheries Product Processing, Indonesia
- *Principles of Designing and Implementing Extension Programs for Post-harvest Loss Prevention*  
Dr. Joyous Tata, University of Illinois at Urbana-Champaign, USA
- *Mobile for Postharvest Management: Investigating the Opportunity of Low-Cost Communication Technologies Professional Warehouse*  
Mr. Jan Priebe, University of Greenwich, UK
- *Qualitative Discussion About the Utility of Staple Grain Logistical Platforms in Ghana, West Africa*  
Mr. William Lanier, Neveridle Farms, Ghana
- *Establishing a Trade-by-Barter Food Network with Dried Foods*  
Mr. Chukwudike Abraham, Society Against Poverty and Hunger, Nigeria
- *Economic Assessment for Sustainability of Postharvest Technologies*  
Dr. Alex Goncalves, Federal Rural University of Semi-Arid (UFERSA), Brazil
- *Assessing Responses to Food Loss Reduction of Public Investments in Postharvest Facilities*  
Ms. Nerlita Manalili, NEXUS Agribusiness Solutions, Philippines
- *Economics Consequences of Post-Harvest Losses in Rwandan Common Bean Markets*  
Mike Jones, North Carolina State University, USA

## Special Remarks

### Building Efficient and Flexible Markets to Reduce Post-Harvest Food Loss

*Auditorium*



**Michael T. Scuse**, Under Secretary for Farm and Foreign Agricultural Services, U.S. Department of Agriculture

Prior to this position, Scuse served as Deputy Under Secretary for the FFAS mission area from 2009 to 2011 with primary responsibility over our domestic programs (Farm Services Agency and Risk Management Agency). Before joining USDA, Scuse was Secretary of Agriculture for Delaware from May 2001 until September 2008, when Governor Ruth Ann Minner (D) named him as her chief of staff. From 1996 to 2001, Scuse served as both chairman of the Kent County (Delaware) Regional Planning Commission and chairman of USDA's FSA State Committee. Before that, he was Kent County Recorder of Deeds. In addition to serving as NASDA vice president while agriculture secretary, Scuse was also president of the Northeast Association of State Departments of Agriculture.

#### Summary of Remarks

Efficient and flexible markets are powerful tools for reducing post-harvest food loss. Good governance and public-sector investments in market infrastructures can make this happen. This is because investing in efficient production, processing, storage, transport and distribution systems lays the foundation for food-loss prevention. And good governance, research, and innovation help connect farmers to markets in flexible ways and stimulate the development of new value-added products, creating possibilities where none had existed before. USDA, which provides leadership on food, agriculture, natural resources, rural development, nutrition, and related issues, believes these efforts are fundamental to reducing post-harvest food loss and waste.





Wednesday, October 7, 2015

---

## Day Three Overview

8:00 - 9:00 am	<b>Continental breakfast</b> Main Hallway
9:00 - 11:30 am	<b>Day 1 and 2 Summaries</b> Auditorium <b>Roadmap for Global Postharvest Loss Reduction</b>
11:30 - 12:30 pm	<b>Closing remarks</b> Auditorium
12:30 - 2:00 pm	<b>Lunch and departure</b> Auditorium, San Francisco

---

### Co-organizing sponsors



**ADM Institute for the  
Prevention of Postharvest Loss**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



The  
**ROCKEFELLER  
FOUNDATION**

---

### Gold level sponsor

**BILL & MELINDA  
GATES *foundation***

---

### Silver level sponsors




**JOHN DEERE**

**ACES**

College of Agricultural,  
Consumer and  
Environmental Sciences



**FEED THE FUTURE**  
The U.S. Government's Global Hunger & Food Security Initiative



The ADM Institute for the Prevention of Postharvest Loss  
University of Illinois at Urbana-Champaign  
144 National Soybean Research Center MC 637  
1101 West Peabody Drive, Urbana, Illinois 61801  
(217) 244-3086  
[www.postharvest.illinois.edu](http://www.postharvest.illinois.edu)