FACULTY OF FOOD AND AGRICULTURE  
THE UNIVERSITY OF THE WEST INDIES  
ST.AUGUSTINE

International Breadfruit Conference  
“Commercialising Breadfruit for Food and Nutrition Security”  
Hyatt Regency Trinidad  
Port of Spain, Trinidad and Tobago

6 – 10 July 2015

Programme

Monday 06 July, 2015

8.00 – 9:15  Opening Ceremony

9:15 – 10:00  Keynote Address:  
Breadfruit for Food and Nutrition Security in the 21st Century  
Dr. Diane Ragone, The Breadfruit Institute, National Tropical Botanical Garden, USA

10:00 – 10:30  COFFEE BREAK

Plenary Session 1 – Historical Perspectives and Agricultural Policies
Chairperson - Dr. Lystra Fletcher-Paul, Food and Agriculture Organisation (FAO) Representative in Trinidad and Tobago, Port of Spain, Trinidad and Tobago

10:30 – 10:45  The Introduction of the Breadfruit (Artocarpus altilis) to the Caribbean – the Role of Sir Joseph Banks  
Colin Leakey¹ and Laura Roberts-Nkrumah², ³ Minster Yard Lincoln LN2 1PJ; Life Fellow of the Society of Biology, c/o Charles Darwin House, London WC1N 2JU, ² Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

10:45 – 11:00  A historical perspective on the role of plant propagation in the distribution, development and commercialisation of breadfruit  
Laura Roberts-Nkrumah¹, Judy Rouse-Miller², Rita Pemberton, Julian Duncan³  
¹Department of Food Production, Faculty of Food and Agriculture, The University of
Breadfruit development in Jamaica
Norman Grant, Jamaica Agricultural Society, Jamaica

Breadfruit development in St. Kitts and Nevis
Heiko Bammann¹, Conrad Kelly² and Racquel Williams-Ezquea³, ¹Food and Agriculture Organisation of the United Nations (FAO), Barbados, ²Department of Agriculture, St. Kitts and Nevis, ³Food and Agriculture Organisation of the United Nations (FAO), St. Kitts and Nevis

Discussion

LUNCH

Plenary Session 2: Health and Nutrition
Chairperson- Professor Fitzory Henry, School of Public Health and Health Technology, University of Technology, Jamaica

Nutritional and health effects of the consumption of breadfruit
Sa’eed Bawa and Marquitta Webb, Department of Agricultural Economics and Extension, Faculty of Food and Agriculture, The University of the West Indies, St Augustine Campus, Trinidad and Tobago

Lifestyle diseases and food and nutrition security in the Caribbean
Christine Bocage, Caribbean Public Health Agency, Port of Spain, Trinidad and Tobago

Nutraceutical and medicinal value of breadfruit (Artocarpus altilis)
Mukesh S. Sikarwar, Unit of Pharmaceutical Chemistry, Faculty of Pharmacy, AIMST University, Semeling, Kedah Darul Aman, Malaysia

Artocarpus altilis (Parkinson)-derived Geranyl Dihydrochalcone binds Janus Kinases and inhibits STAT3 phosphorylation in Prostate Cancer DU145 Cell
Oyekanmi Nashiru, National Biotechnology Development Agency (NABDA), Abuja, Nigeria

Discussion

COFFEE BREAK
Plenary Session 3: Germplasm Evaluation and Plant Propagation
Chairperson - Professor Julian Duncan, Professor Emeritus, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine, Trinidad and Tobago

15:15 – 15:30  Colour and texture variation among breadfruit cultivars (Artocarpus altilis)
Oral O. Daley¹, Laura B. Roberts-Nkrumah¹, and Angela T. Alleyne², ¹Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St Augustine Campus, Trinidad and Tobago, ²Department of Biological and Chemical Sciences, Faculty of Science and Technology, The University of the West Indies, Cave Hill, Barbados

15:30 – 15:45  Working toward a global view of breadfruit genetic diversity
Nyree Zerega, Northwestern University and the Chicago Botanic Garden, USA

15:45 – 16:00  Utilizing analytics and breadfruit germplasm data to create and enhance business opportunities in the Caribbean
Travis Paul and Laura Roberts-Nkrumah, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St Augustine Campus, Trinidad and Tobago

16:00 – 16:15  Increasing breadfruit production in Jamaica through the collection, conservation and distribution of germplasm
Seymour Webster¹, Christopher Mundle¹, Paul Virtue² and S. Michael McLaughlin², ¹College of Agriculture, Science, and Education (CASE), Jamaica, ²Trees that Feed Foundation (TTFF), USA

16:15 – 16:30  An evaluation of a propagation technique (marcotting) on breadfruit (Artocarpus altilis) variety ‘Balekana ni Samoa’ for mass multiplication of planting material in Fiji
Kaitu Erasito¹ and Livai D. Tora², ¹Secretariat of the Pacific Community, Nadi, Fiji Islands, ²Pacific Breadfruit Project, Nadi, Fiji Islands

16:30 – 16:45  Ex vitro grafting of breadfruit microcuttings on chataigne rootstock
Frankie K. Solomon Jr.¹, Judy A. Rouse-Miller² and Laura B. Roberts-Nkrumah¹, ¹Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago, ²Department of Life Sciences, Faculty of Science and Technology, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

16:45 – 17:00  Using improved micropropagation system for breadfruit can support sustainable development
Valerie Saena Tuia and Arshni Sanjita Shandil, Secretariat of the Pacific Community Land Resources Division, Suva, Fiji
17:00 – 17:15 Discussion

17:15 – 17:30 Book launch – Breadfruit Flavours: The Ultimate Breadfruit Cookbook
Chanelle Joseph, Instructor, Department of Agricultural Economics and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine, Trinidad and Tobago

18:30 – 21:00 Cultural evening

**Tuesday 07 July, 2015**

**Plenary Session 4: Country/Organisational Papers**
Chairperson - Mr. Bruce Lauckner, Head Strategic Alliances, Caribbean Agricultural Research and Development Institute (CARDI)

8:00 – 8:10 Montserrat
Ronald Barzey

8:10 – 8:20 Grenada
Roderick St. Clair and Randolph Shears

8:20 – 8:30 St. Lucia
Gasper George and Euthalia Philogene

8:30 – 8:40 Antigua & Barbuda
Pamella Thomas

8:40 – 8:50 Dominica
Leslie Shillingford and Augustus Bannis

8:50 – 9:00 Cuba
Marlene Garcia Collado

9:00 – 9:10 Haiti
Lidwine Hyppolite

9:10 – 9:20 Kenya
Quincy Burgess

9:20 – 9:40 PCS Nitrogen
Karl Burgess
9:40 – 10:00  Discussion

10:00 – 10:30  COFFEE BREAK

Plenary Session 5: Production Management
Chairperson - Dr. Gaius Eudoxie, Lecturer in Soil Science, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

10:30 – 10:45  Evaluation of regrowth responses of breadfruit cultivars ‘yellow’ and ‘Ma‘afala’ to different levels of pruning
Laura Roberts-Nkrumah, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Camus, Trinidad and Tobago

10:45 – 11:00  Effects of planting material on early growth and development responses of breadfruit (Artocarpus altilis) cultivar ‘yellow’ in studies at two locations on Trinidad
Michael C. Gloster and Laura Roberts-Nkrumah, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Camus, Trinidad and Tobago

11:00 – 11:15  Air layering (marcotting) of breadfruit (Artocarpus altilis)
Puran Bridgemohan, Musa El S. Mohamed, Arjune Ramoutar, Kimberly Singh, and Ronell Bridgemohan, Biosciences Agriculture and Food Technology Centre, University of Trinidad and Tobago

11:15 – 11:30  A preliminary evaluation of growth and physiological responses of breadfruit cultivars to waterlogging
Gem Thomas, Laura Roberts-Nkrumah and Mark Wuddivira, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Camus, Trinidad and Tobago

11:30 – 11:45  Breadfruit (Artocarpus altilis) production and processing research initiative in Costa Rica
Gustavo Angulo and Paul Zink, Earth University, San José, Costa Rica

11:45 – 12:00  Commercialisation of breadfruit (Artocarpus altilis Fosb) in Mauritius
D. Abeeluck, I. Boodhram, K. Koopla and S. Subramanian, Food and Agricultural Research and Extension Institute (FAREI), Mauritius

12:00 – 12:15  Discussion

12:15 – 13:00  LUNCH
**Plenary Session 6: Postharvest Technology**

Chairperson - Ms. Shawntae Rodney, Research Scientist, Scientific Research, Council (SRC), Jamaica

13:00 – 13:15  
*Physiological manifestations of chilling injury in breadnut (Artocarpus camansi)*  
Majeed Mohammed and Lynda Wickham, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

13:15 – 13:30  
*Postharvest of breadfruit*  
Clement Sankat¹ and Rohanie Maharaj², ¹Office of the Campus Principal, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago, ²Univesstiy of Trinidad And Tobago, Trinidad

13:30 – 13:45  
*Breadfruit exports from St. Lucia and the OECS and harvesting and postharvest handling*  
Ronald Pilgrim, Caribbean Agricultural Research and Development Institute (CARDI), St. Lucia

13:45–14:00  
*Post-harvest breadfruit innovations: low cost solutions for processing and drying aimed at small-scale entrepreneurs*  
Camille George, University of St. Thomas, St. Paul Minnesota/Meghan Fleckenstein-Compatible Technology International, St. Paul Minnesota, USA

14:00 – 14:15  
*A hybrid solar dryer for processing breadfruit*  
S. Michael McLaughlin, Trees that Feed Foundation, USA

14:15 – 14:30  
*Processing chataigne or jack fruit*  
Rodney Harnarine and Ryan Salick, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, Faculty of Engineering, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

14:30 – 14:45  
Discussion

14:45 – 15:15  
**COFFEE BREAK**

---

**Plenary Session 7: Processing and Utilisation**

Chairperson – Mr. Livai Tora, Farmer, Kokosiga Pacific Limited, Fiji

15:15 – 15:30  
*Effects of drying and rehydration on product quality of breadnut*  
Lisa Harrynanan¹ and Clement Sankat², ¹Inter-American Institute for Co-operation on Agriculture (IICA), ²Office of the Campus Principal, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago
15:30 – 15:45  
Assessment of the sensory characteristics and acceptability of breadfruit flours in quick and yeast breads  
L. Pierre¹, I. Francis-Granderson¹, L. Roberts-Nkurmah², G. Bacchus-Taylor³ and J. Yarde-Blackman¹, ¹Department of Agricultural Economics and Extension, ²Department of Food Production, Faculty of Food Production, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago, ³Department of Chemical Engineering, Faculty of Engineering, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

15:30 – 15:45  
Quality response of meatloaf to different levels of Artocarpus altilis pulp flour  
V. Attoh-Kotoku¹, F. Appiah² and O. Adjei³, ¹Departments of Animal Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, ²Department of Horticulture, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

15:45 – 16:00  
Evaluation of physicochemical properties and digestibility of breadfruit varieties in Ghana  
F. Appiah¹, I. Oduro² and W.O. Ellis¹, ¹Departments of Horticulture and ²Food Science and Technology, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

16:00 – 16:15  
The characterization of starch from selected breadfruit (Artocarpus altilis) cultivars at two stages of maturity  
Jacklyn Broomes, Neela Badrie and Laura Roberts-Nkrumah, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

16:15 – 16:30  
The application of pregelatinized starch extracted from Artocarpus altilis (Breadfruit) as a direct compression binder in tablets  
Shawntae Rodney¹,², Amusa Sarafadeen Adebayo³ and Cliff K. Riley², ¹College of Health Sciences, University of Technology, Jamaica, ²Scientific Research Council, Jamaica, ³College of Pharmacy, Roosevelt University, Illinois, USA

16:30 – 16:45  
Effects of binding agents on the compositional and physicochemical properties consumer as well as acceptance of breadfruit nut (Artocarpus camansi) patties  
Hana Hosein and Neela Badrie, Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

16:45 – 17:00  
Discussion

17:00 – 17:45  
Poster Session

17:45 – 18:00  
BREAK

18:00 – 19:00  
Panel Presentation
Moderator: Mr. Maurice Wilson, Head, Resource Mobilisation, Monitoring and Evaluation, Caribbean Agricultural Research and Development Institute (CARDI), The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

Presentation
Pacific Region Breadfruit Initiative: Cultural village/community-based economic development building upon traditional wisdom and modern knowledge in the Pacific Region

Papaalii Failautusi Avegalio, M. Kalani Souza, Alvin Huang, Jeff Gwirtz, Bob Gough and Craig Elevitch, Pacific Region Breadfruit Initiative, University of Hawaii, Manoa, USA

18:45 – 19:00 Discussion

Wednesday 08 July, 2015

8:00 – 17:00 Field Trip
- University Field Station, Faculty of Food and Agriculture, UWI
- Food Technology Unit Laboratory, Faculty of Engineering, UWI
- La Reunion Propagation Station, Ministry of Food Production
- PCS Nitrogen Orchard
- NAMDEVCO
- Exporter

Thursday 09 July, 2015

Plenary Session 8: Organisational Papers/Marketing and Consumption
Chairperson – Mr. Heiko Bammann, Trade and Markets Officer, Food and Agriculture Organisation of the United Nations (FAO), Sub-regional Office of the Caribbean, Christ Church, Barbados

8:30 – 8:45 Global Breadfruit: Food security for a growing world
Josh Schneider, Global Breadfruit, USA

8:45 – 9:00 Revitalizing Breadfruit in Hawaii – A model for encouraging the cultivation and use of breadfruit in the tropics
Diane Ragone¹, Craig Elevitch ² and Andrea Dean ², ¹Breadfruit institute, National Tropical Botanical Garden, ²Hawaii Homegrown Food Network
9:00 – 9:15  Trinidadian consumers’ willingness to pay for breadfruit products
Emelene S. Hassanally, Department of Agricultural Economics and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

9:15 – 9:30  The case of the breadfruit chip: An entrepreneurial opportunity
Candace Brathwaite, Jairzenho Bailey and Brandon Hamid, Arthur Lok Jack School of Business, Trinidad and Tobago

9:30 – 9:45  Distribution and utilization of breadfruit: Case study Barbados
Marion Hart, Seven of Harts, Bridgetown, Barbados

9:30 – 9:45  Jeffrey Town: A small player in the breadfruit industry
Ivy Gordon, Jeffrey Town Farmers Association, Jamaica

9:45 – 10:00  Breadfruit: A hidden treasure yet to be discovered
Penelope Harris, Carnegie School of Home-Economics, Guyana

10:00 – 10:10  Discussion

10:10 – 10:30  COFFEE BREAK

Plenary Session 9: Economics and Value Chain
Chairperson – Dr. Diane Ragone, Director, National Tropical Botanical Garden, Hawaii, USA

10:30 – 10:45  The comparative advantage of breadfruit as an orchard crop in the face of climate change: The experience of the Pacific islands
Andrew McGregor1, Livai Tora2, Kaitu Erasito3 and Kyle Stice2, 1Koko Siga Pacific, Suva, Fiji, 2Koko Siga Pacific, Nadi, Fiji, 3Secretariat of the Pacific Community, Suva, Fiji

10:45 – 11:00  Developing commercial breadfruit orchards in Fiji. A financial and economic analysis.
Livai Tora1, Kaitu Erasito3, Andrew McGregor2 and Kyle Stice1, 1Koko Siga Pacific, Nadi, Fiji, 2Koko Siga Pacific, Suva, Fiji, 3Secretariat of the Pacific Community, Suva, Fiji

11:00 – 11:15  Economics of processing breadfruit
Oliver Wills and Olivia Wills, Livy’s Food Limited, Jamaica and USA

11:15 – 11:30  Breadfruit and breadnut export from Guyana
Richard Parasam, Guyana
11:30 – 11:45  
**Agrotourism**
Ena Harvey, Inter-American Institute for Co-operation on Agriculture, Barbados

11:45 – 12:00  
Discussion

12:00 – 13:00  
**LUNCH**

13:00 – 14:45  
Stakeholders forum

14:45 – 15:15  
**COFFEE BREAK**

15:15 – 16:30  
Stakeholders Forum

16:30 – 17:00  
Launch of International Breadfruit Network

18:30 – 21:00  
Awards Ceremony and Dinner

---

**Friday 10 July, 2015**

Venue: JFK Auditorium and Quadrangle, The University of the West Indies, St. Augustine, Trinidad and Tobago

9:00 – 18:00  
Breadfruit Festival and Exhibition