



**COCOA RESEARCH CENTRE**  
**ANNUAL RESEARCH AND**  
**DEVELOPMENT SYMPOSIUM**

Cocoa Research Centre  
The University of the West Indies, St. Augustine Campus

# Research and Innovations to Support Development of the Cocoa Sector

Wednesday 13<sup>th</sup> July 2022  
8:00 am – 4:00 p.m.  
Auditorium, School of Education  
Faculty of Humanities and Education  
The University of the West Indies  
St. Augustine Campus



## SESSION ONE: Conservation and Genetic Diversity

Moderator: Dr. Darin Sukha

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|---------------|--|
| 10:30 – 10:45 | The role of the Cocoa Research Centre in supporting research and development in cocoa in Latin America and the Caribbean.<br><b><u>Pathmanathan Umaharan</u></b>   |
| 10:45 – 10:50 | Q&A  |
| 10:50 – 11:05 | SNP genetic diversity in the international cacao genebanks of Costa Rica and Trinidad and Tobago.<br><b><u>Lambert Motilal, Amrita Mahabir, Allan Mata Quirós, David Gopaulchan, Rena Kalloo, Michel Boccara, Antoinette Sankar, Saila Ramkissoon, Anna Toussaint, Sedique Graham, Kadine David, Dominique Deesauw, Rolando Cerda, and Pathmanathan Umaharan</u></b> |
| 11:05 – 11:10 | Q&A  |
| 11:10 – 11:25 | Revitalising the International Cocoa Genebank Trinidad to support breeding and development.<br><b><u>Annelle John and Errol Davis</u></b>  |
| 11:25 – 11:30 | Q&A  |
| 11:30 – 11:45 | Evaluation of germplasm enhanced for black pod resistance to identify genotypes combining multiple favourable traits.<br><b><u>Frances L. Bekele, Gillian G. Bidaisee and Junior J. Bhola</u></b>  |
| 11:45 – 11:50 | Q&A  |
| 11:50 – 12:05 | Genetic variation in high light responses of six Trinitario genotypes of <i>Theobroma cacao</i> L.<br><b><u>Vernessa Lewis, Aidan Farrell, Pathmanathan Umaharan and Adrian Lennon</u></b>   |
| 12:05 – 12:10 | Q&A  |
| 12:10 – 12:25 | Developing a repeatable screening method for breeding black pod resistance in <i>Theobroma cacao</i> L.<br><b><u>Romina Umaharan, Lambert Motilal, Kadine David, Nirvahn Maharaj, Caleb Lewis, Josiah Henry, Shania Yip Ying, Vindra Singh, Marissa Moses and Pathmanathan Umaharan</u></b>  |
| 12:25 – 12:30 | Q&A  |

12:30 – 12:45 General Discussion

12:45 – 1:45 **LUNCH BREAK**

## SESSION 2: Quality Management and Certification

Moderator: Mrs. Frances Bekele

- 1:45 – 2:00 Estimating carbon footprint of cocoa estates using remote sensing techniques and soil analysis.  
*Marvin Lewis, Sabrina Sankar, Patrick Hosein and Pathmanathan Umaharan*
- 2:00 – 2:05 Q&A
- 2:05 – 2:25 A sense of place - unravelling flavour diversity of cacao (*Theobroma cacao* L.) fermentations across Trinidad.  
*Naailah Ali, Darin Sukha, David Gopaulchan, Vickeisha Lall, Krystal Daniel, Lincoln McDonald and Pathmanathan Umaharan*
- 2:25 – 2:30 Q&A
- 2:30 – 2:45 Pulp moisture content as a critical determinant of fermentation dynamics and bean quality in *Theobroma cacao* L.  
*(Darin Sukha, Naailah Ali, Vickeisha Lall, Krystal Daniel, Lincoln McDonald, Larry Abraham, Shania Yip Ying, Vinosh Jadoo and Pathmanathan Umaharan)*
- 2:45 – 2:50 Q&A
- 2:50 – 3:05 The effect of foliar applications of zinc and manganese on cadmium uptake in *Theobroma cacao* L.  
*(Gideon Ramtahal and Pathmanathan Umaharan)*
- 3:05 – 3:10 Q&A
- 3:10 – 3:25 Exploring the challenges, kinetics and potential solutions to optimise quality in post-harvest drying of fine or flavour cocoa (*Theobroma cacao* L.) in Trinidad and Tobago.  
*(Priscilla Sahadeo, Ricardo Clarke, Xsitaaz Chadee, Darin Sukha and Pathmanathan Umaharan)*
- 3:25 – 3:30 Q&A
- 3:30 – 3:45 New era, new relationships: Market exchange in a deregulated industry.  
*Amrita Saha*

- 3:45 – 3:50 Q&A
- 3:50 – 4:00 Summary and conclusions  
*Pathmanathan Umaharan*

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