ISSCT Entomology Section Webinar

Programme

Thursday 9 July 2026
11 am to 1 pm GMT

Chair: Mrs N Behary Paray

Speaker 1: 11 am GMT – 11:15 am GMT

Dr Carolina Camargo (CENICAÑA - the Colombian Sugarcane Research Center)

Biodata

Carolina Camargo is the Leader of the Entomology Group at CENICAÑA (the Colombian Sugarcane Research Center). She holds a Ph.D. in Entomology from the University of Nebraska–Lincoln, USA, and completed postdoctoral training at the University of Florida, USA. She has more than 15 years of experience in integrated pest management across a wide range of agricultural systems, including corn, soybean, potato, fruit, and aromatic herb crops. Throughout her career, she has contributed to the development and implementation of sustainable pest management strategies, with a strong emphasis on applied research and field-based solutions. Over the last five years, her work has focused on sugar cane pest management in Colombia, particularly on biological control programmes and surveillance and monitoring strategies for key insect pests. Her current research contributes to advancing integrated pest management approaches that support the sustainability and productivity of sugar cane production.

Current Advances in Management Strategies of* Diatraea *spp.
This presentation provides an overview of the latest advances in the integrated management of *Diatraea* spp., one of the most important insect pests affecting sugar cane production in Latin America. Management strategies have traditionally relied on surveillance and monitoring programmes, biological control, and varietal resistance management approaches. Recent research has explored innovative alternatives, including the use of *Bacillus thuringiensis* (Bt) as an entomopathogenic agent and the development of genetically engineered sugar cane plants with enhanced resistance to stem borers. The webinar will present recent findings, discuss the challenges, and opportunities associated with these approaches, and highlightt their contribution to sustainable integrated pest management in sugar cane.

Speaker 2: 11:20 am GMT – 11:35 am GMT

Mr Quentin Macé (TPC Ltd, Tanzania/CIRAD, Montpellier, France)

Biodata

Quentin Macé is a young scientist and agronomist who graduated from the school VetAgro Sup. He is currently pursuing a PhD in Tanzania under the supervision of Dr François-Régis Goebel, a senior entomologist and crop protection specialist at CIRAD, Montpellier, France. His research is focused on the bioecology of the white grub *Cochliotis melolonthoides*, a major pest of sugar cane in Tanzania and on the development of biological control solutions for its management. Quentin has already published several scientific articles and has delivered oral presentations at the last ISSCT Congress, held in Colombia in 2025, and at the joint entomology-pathology workshop in Argentina in 2024.

Management of sugar cane white grubs

White grubs are pests of economic importance in sugar cane production systems. This presentation will provide an overview of their global significance, biology, damage and yield losses and the various management strategies proposed for their control. Particular focus will be on recent results obtained in Tanzania on the species *Cochliotis melolonthoides* (Coleoptera, Scarabaeidae), a major pest at the TPC sugar estate. The presentation will examine the interaction between white grubs, the soil environment and their natural enemies, with particular emphasis on parasitoids and entomopathogenic fungi as potential biocontrol agents will be discussed. The overall objective is to promote conservation biological control and sound agricultural practices that effectively reduce grub populations in the soil.

Speakers 3 & 4: 11:40 am GMT – 12:05 am GMT

Dr Lawrence Nkosikhona Malinga (SASRI, South Africa) & Mrs. Nalini Behary Paray (MSIRI/ MCIA, Mauritius)

Biodata

Dr Lawrence Nkosikhona Malinga is a Senior Research Entomologist and Programme Manager: Crop Protection at the South African Sugarcane Research Institute and an Honorary Research Fellow at the University of KwaZulu-Natal. With over 20 years of research experience in entomology and crop protection, his current work focuses on integrated pest management, the sterile insect technique, biological control, biopesticides, insect ecology, and sustainable crop protection, with particular emphasis on the management of *Eldana saccharina* and other economically important agricultural pests. He leads several national and international collaborative research initiatives, including projects with the International Atomic Energy Agency and the Food and Agriculture Organization, and has published in the fields of entomology and pest management. Dr Malinga is also actively involved in postgraduate supervision and mentorship, having supervised and co-supervised Master's and PhD students while contributing to capacity development and agricultural research advancement across Africa.

Nalini Behary Paray is heading the Entomology Unit at the Mauritius Sugarcane Industry Research Institute. She holds an MSc from the Imperial College of Science, Technology and Medicine, University of London, UK. With more than 40 years of experience in sugar cane entomology, Nalini has expertise in Integrated Pest Management especially in the development and implementation of sustainable pest control strategies pertaining to biological control, varietal resistance, and pest monitoring/surveillance for key insect pests. She has led and implemented several international collaborative projects funded by FAO/IAEA and the European Union, participated in local and international forums and authored/co-authored research papers. During her career, she provided consultancy services in sugar cane entomology in Tanzania and Ivory Coast. She has also wide experience in IPM and bioecology of major insect pests in food crops such as potato, beans, groundnut and maize.

Research progress in the application of the sterile insect technique (SIT) for sugar cane borers

This presentation will highlight recent advances in the application of the Sterile Insect Technique (SIT) for the management of *Eldana saccharina*, the African sugar cane stalk borer and the most economically damaging sugar cane pest in South Africa. During the webinar, discussion will take place on the development of an inherited sterility (F1-SIT) programme at the South African Sugarcane Research Institute (SASRI), including the use of remote gamma and X-ray irradiation systems to produce competitive sterile insects. Key research findings on irradiation biology, mass rearing, transport logistics, and field-cage evaluations will be presented. The presentation will also explore the potential integration of SIT into area-wide integrated pest management (AW-IPM) programmes, its potential for commercialization, and the relevance of the South African model to lepidopteran pest management programmes in Africa and elsewhere.

In Mauritius, the potential for integrating SIT as a complementary and sustainable tool alongside the well-established biological control programme for the sugar cane spotted borer, *Chilo sacchariphagus,* is also being investigated. Current work focuses on the development of a mass rearing system, including the formulation of nutritious artificial diets, which will enhance the quality and competitive ability of the insects. Findings indicate that the approach to effective insect diet development for SIT, especially for insect pests exhibiting high host specificity, requires continuous attempts to modify and improve the promising artificial diets to meet the insect nutritional needs.

Speaker 5: 12:10 GMT – 12.25 GMT

Dr Blake Wilson (Louisiana State University, USA)

Biodata

Blake Wilson obtained his BS in Biology (2009), MS in Entomology and Statistics (2011) and PhD in Entomology (2016) from Louisiana State University. He joined the faculty of the LSU in 2017 as a research/extension entomologist with responsibilities for sugar cane and rice insect management. He currently holds the Sterling Bain Endowed Associate Professorship in Sugar cane Production in the LSU AgCenter Department of Entomology. He has 16 years experience in invasive species ecology and integrated pest management, his research focuses on pests of rice, sugar cane, and other row crops. He has authored or co-authored 73 refereed research articles and obtained US$3.8 million in grant support. He has published more than 70 extension articles and delivered approximately 400 presentations at grower meetings and conferences.

Management of sugar cane borers in Louisiana: recent findings

Two stem borers in the family Crambidae, the sugar cane borer (*Diatraea saccharalis*) and the Mexican rice borer, (*Eoreuma loftini*) are the most economically damaging insect pests of sugar cane (*Saccharum* spp. hybrids) in Louisiana. Current management of the borers rely on resistant cultivars and judicious use of the insecticide, chlorantraniliprole. However, recent evidence suggests that resistance to this insecticide may be emerging in some borer populations, highlighting the need for additional management strategies. On-going research is investigating new resistant cultivars and improved scouting practices.

Emerging Pests: Panel discussion

Panel: ISSCT Entomology Section Committee members

Attendees wishing to make a country update on emerging pests, are invited to contact the Entomology Section Chair (nalini.beharyparay@msiri.mu), to be included in the panel discussion. This session will provide participants with an opportunity to share information on emerging pests in their country or region and discuss potential opportunities for collaboration.