ISSCT

INTERNATIONAL SOCIETY OF SUGAR CANE TECHNOLOGISTS









ISSCT AGRICULTURE COMMISSION WEBINAR

27 October 2026 from 11 am to 1 pm GMT

The International Society of Sugar Cane Technologists (ISSCT) is pleased to invite scientists, agronomists, agricultural engineers, extension specialists, technology developers and farmers to participate in a webinar to be organised by the Agriculture Commission. The webinar will explore how emerging technologies and innovative approaches are transforming sustainable sugar cane production.

Sugar cane production is increasingly challenged by climate change, resource limitations, labour shortages, environmental concerns and the need to improve productivity while reducing production costs. Advances in digital technologies, precision agriculture, mechanization and regenerative farming practices are creating new opportunities to address these challenges and strengthen the resilience of sugar cane production systems.

This webinar under the theme, **Sustainable Sugar Cane Production: Innovative Technology in Agronomy, Engineering and Extension to Deal with a Changing Future**, will bring together leading international experts to share recent research, practical experiences and successful case studies that demonstrate how innovation can support productive, profitable and environmentally responsible sugarcane farming systems.

Webinar

1. Advances in Digital Agriculture and Artificial Intelligence

Crop and soil monitoring (including remote sensing), Precision agriculture, Prediction and Forecasting, Machine learning applications, Robotics and autonomous field operations, Internet of Things (IoT)

Developments in automation, mechanization, planting and harvesting technologies, smart weed control.

2. Climate-Smart and Environmentally Sustainable Sugar Cane Production

Climate change adaptation and mitigation (including water, carbon and energy footprint), Efficient use of resources (water, nutrients, energy), minimizing environmental impacts, conservation/regenerative agriculture, soil health.

3. Technology Adoption: Extension Approaches and Case Studies

Extension innovations, Knowledge transfer, Farmer adoption, Participatory approaches, Success stories and case studies. Digital extension and farmer engagement.

The webinar will be chaired by **Prof. Hardev Sandhu, Chair ISSCT Agriculture Commission**, with presentations as follows:

Presenter / Country / Organisation	Presentation Title
Natalie Furniss, SASRI, South Africa	Advancing multispectral UAS ("drone") imagery for precision sugarcane quality management
Emanuel Ligonja, Kilombero Sugar Company, Tanzania	Drone based spot spray
Raphael Pilloni, CIRAD, Réunion Island	Genotypic variability in transpiration efficiency: an opportunity for breeding drought-resilient sugarcane
Bongiwe Chonco, SASRI, South Africa	Future of Extension in the Digital Era – Cane Quality Improvement using Drone Spraying Technology

A short biodata of each presenter is given below.

FORMAT OF THE WEBINAR:

Each presentation will last 15 minutes

5 minutes will be allocated to questions following each presentation

After the final presentation, a 20-minute panel discussion will be held with all speakers

Total duration of the session will be up to 2 hours.

THE FACILITATORS/ORGANIZERS ARE:

Prof. Hardev Sandhu, USA

Dr. Abraham Singels, South Africa

Dr. Riekert Van Heerden, South Africa

Mr. Dirk Mcelligott, South Africa

Mr. Laurent Barau, Réunion Island

Dr. Priyanka Singh, India

LANGUAGE

The Webinar will be conducted in English.

REGISTRATION

The Registration Form for the Webinar may be accessed through the following link:
https://us06web.zoom.us/meeting/register/-fcNFUD7S8GObveTfi1Gow#/registration

The Webinar is open to ISSCT complaint members as well as to non-members.

ISSCT AGRICULTURE COMMISSION

WEBINAR

Compliant Members

Compliant members are those who have already settled their membership dues for the period 2025-2028.
For those who have not yet done so, they may settle their dues of USD 150 through the following link:

https://members.issct.org/appform/issct_guatemala_2028.aspx

Non-Members

If a participant wishes to register for ONLY the webinar, he/she should settle a registration fee of USD 50 through the following link:

https://members.issct.org/webinar/overview.aspx

After having settled either your ISSCT membership dues or only the registration fee for the webinar, an e-mail, with the meeting details (Username and Password to access the Webinar), will be sent to you.

Further information

For further information, please contact the ISSCT Agriculture Commissioner, Prof. Hardev Sandhu - hsandhu@ufl.edu
or the ISSCT Secretariat at issctsecretariat@gmail.com / issct@intnet.mu

ISSCT AGRICULTURE COMMISSION

WEBINAR

Short biodata of presenters

Advancing multispectral UAS ("drone") imagery for precision sugarcane quality management – Natalie Furniss, SASRI, South Africa

Natalie Furniss is a Crop Physiologist and licensed drone pilot at the South African Sugarcane Research Institute (SASRI). She leads and supports multidisciplinary research, with a focus on cane quality management, digital agriculture, variety management and crop modelling. Her research includes the application of drone-based technologies to support ripening management, harvest decision-making, pest and disease management, and genotype selection in breeding.

Drone based spot spray -Emanuel Ligonja, Kilombero Sugar Company, Tanzania

Emanuel Ligonja is an Irrigation and Water Resources Engineer with experience in sugar cane production, irrigation systems, agricultural engineering, and precision agriculture. He works with Kilombero Sugar Company in Tanzania, where he is involved in irrigation management, crop production, field operations, and the application of innovative technologies to improve agricultural productivity and resource efficiency. His areas of interest and experience include irrigation development and management, precision agriculture, drone technology, crop production, water management, and agricultural mechanization. He has also been actively involved in professional knowledge-sharing through the Tanzania Society of Sugar and Cane Technologists (TSSCT) and was awarded Best Presenter, earning an opportunity to represent TSSCT and Sugar Board of Tanzania (SBT) at the 98th South African Sugar Technologists' Association (SASTA). Emanuel is passionate about applying practical engineering and innovative technologies to address challenges in the sugar cane industry and improve sustainable agricultural production.

ISSCT AGRICULTURE COMMISSION

WEBINAR

Genotypic variability in transpiration efficiency: an opportunity for breeding drought-resilient sugarcane – Raphael Pilloni, CIRAD, Réunion Island

Raphael Pilloni is a Plant Ecophysiologist interested in plant–environment interactions, with a particular focus on how environmental conditions affect plant water use. After conducting research on dryland cereals in West Africa, Raphael is now developing research on drought tolerance in sugar cane on Réunion Island. He is particularly interested in the genetic variability of transpiration efficiency and the associated traits and proxies that could help explain or predict it.

Future of Extension in the Digital Era – Cane Quality Improvement using Drone Spraying Technology –Bongiwe Chonco, SASRI, South Africa

Bongiwe Chonco is an accomplished Extension Specialist with over 15 years of experience in sustainable agriculture, land reform facilitation, and community development. She currently works at the South African Sugarcane Research Institute (SASRI), where she leads extension services across three key districts in KwaZulu-Natal. Her work focuses on supporting small-scale and land reform growers through agronic advisory services, training facilitation, pest and disease awareness, and stakeholder engagement. Ms. Chonco holds a Master's Degree in Sustainable Agriculture and a Postgraduate Diploma in the same field from the University of Free State. Her academic foundation is further supported by a B-Tech in Business Management and National Diplomas in Public Management and forestry. She is a registered Professional Natural Scientist with SACNASP and holds various technical certifications in crop protection, project management, and environmental law. A passionate advocate for inclusive and sustainable agricultural systems. Bongiwe plays a vital role in bridging scientific research with on-the-ground extension efforts. She has mentored agricultural advisors, developed regionally tailored programmes of work, and facilitated business planning for land reform beneficiaries. Her collaborative approach and leadership have earned her recognition within the sugar industry and among broader rural development stakeholders.