

Vuna AgriFoodTech Conference

10th - 12th June 2020 Gallagher Convention Centre



Who should attend?

Target Audience

- Agriculture Technologies and Innovations
- Plant Science Faculty, Students, Scientists
- Animal science Faculty, Students, Scientists
- Agricultural Universities
- Horticulture and Landscaping professionals
- Agriculture and Plant Associations and Societies
- Food & Agro-allied Company
- Management Agricultural and food industries
- Farmers and growers
- Training Institutes
- Seed Science and Technology
- Soil science and soil-plant nutrition
- Food Safety & Security Professionals
- Manufacturing Agricultural Devices Companies
- R&D Laboratories
- Water Management

Target Industry

- Crop Protection
- Tractors & Implements
- Aquaculture
- Forestry
- Horticulture
- Farm Construction
- Governmental Departments
- Academics
- Seed
- Animal Husbandry
- Water Industry
- Farm Tools & Equipment
- Agriculture Related Services
- Fertilizing & Irrigation
- Biotechnologies & Science
- Farm Automotive
- Harvesting
- Smart Farming

About the Conference

With 60% of all jobs in Africa expected to come from the agriculture sector, there has been unprecedented levels of growth in the number of agritech solutions to help farmers to continue to grow and work in the face of unpredictable weather, an exploding population and an uncertain economic landscape.

In order to deliver valuable real-time agricultural insights and forecasts at national and regional levels the future of agriculture industry will need to use sophisticated technologies such as robots, temperature and moisture sensors, aerial images, weather data, powerful big data analytics GPS technology, farmer advisory services or access to finance via smart phone, and many more. With these advanced devices and precision agriculture and robotic systems, it will allow farming to be more profitable, efficient, safe, and environmentally friendly.

Vuna- AgriTech media conference will discuss the impact of smart technologies to farming in Africa. It will also cover the influence of these innovative technologies to various sectors in agriculture, including aqua-farming, horticulture, livestock farming, plant and crops amongst others

Highlights Include:

- **(Case Study from Africa's first Award winning AgriTech Company to combine IOT, Data analytics & AI to inform the Agri industry.**
- **Global Postharvest Loss Prevention: Fundamentals, Technologies, and Actors**
- Workshop on Digital soil mapping. (SACNASP accredited for CPD points) & another on water management
- **Presentation - Has technology enhanced the marketing of agriculture in Africa**
- Leveraging new technologies to prevent food loss in agriculture
- **Ultrasonic Sound used in drip irrigation line cleaning**
- Using technology to link the small holder farmer to funding and investment
- **Data protection, ownership and ethical use: protecting farmers and enabling markets**
- EMERGING TECHNOLOGIES IN *Agricultural and Biological Engineering*
- **Advancing the Aquaculture Agenda in Africa**
- High-Precision GNSS for Agriculture- Case Study
- **The impact of integrated agricultural research for development on food security among smallholder farmers of Southern Africa**
- Leveraging Vertical farming for Sustainable agriculture and Food Security
- **Has technology enhanced the marketing of agriculture in Africa**

Profiles of some of your Speakers



Anton Scheepers is a leading and highly respected agricultural economist and consultant based out of South Africa. Anton's

33 years within the Southern African agricultural and agricultural trading/food trading environment. Anton was a director within the Department of Agriculture where he spearheaded multiple trade and promotional initiatives until 2000.



Adrian Piers currently provides a consulting service and new entrant through his company, African Fish Ltd. His clients Aquaculture and NGO spheres.

He is a widely recognized expert on Fisheries, Aquaculture and Environmental issues in Africa, with over 40 years of experience as a researcher and commercial aquaculturist. His main focus is on fish production within the SADC and COMESA regional groupings, and has worked extensively in South Africa, Mozambique, Swaziland, Namibia, Botswana, Zambia, Malawi, Kenya, Uganda, Ethiopia, Nigeria, Ghana and Sudan.



Louis Meintjes He held the post of Chairperson of various community based organizations over the time and joined TAU SA in 1994. Since 1994 he held the position of Chairperson of the Cullinan Farmers Union, Chair of TAU SA Central region and Chairperson of TAU SA Economic committee. He held the post of elected Vice President of TAU SA for 3 years. He was elected as President of TAU SA in 2012 and held the post since then.



Adamou Nchange Kouotou, founder and CEO of Agrix Tech. He is an entrepreneurship lover who launched and worked with several startups since 2010. As entrepreneur, he has received several awards for his accomplishments. Adamou was granted the Tony Elumelu Entrepreneur fellowship in 2016 and he was awarded the Kofi Annan Fellowship (KABSF) in 2018 as the recognition of the social impact of his initiatives in Africa.



Prof. Dr. Johannes Sauer (TUM) | Production and Resource Economics
Vice Dean of TUM School of Life Sciences Weihenstephan, Technical University of Munich
Head of Department Agricultural Production and Resource Economics at Technical University of Munich (TUM)



Johan Habig Senior Researcher Microbiology
agritechnovation MicroLife Research Centre,



Doreen Holcroft PhD, Holcroft Postharvest Consulting, Board member of The Postharvest Education Foundation

Expertise on a wide range of fruits, vegetables, including fresh-cut or minimally processed produce, and ornamental crops. Clients include fruit, vegetable, and flower growers, freshcut processors, seed companies, tissue culture labs, packaging, technology providers, logistics resources, equipment suppliers, solar cold storage manufacturers, and trade groups. Clients located in USA, Europe and Africa.

Also worked in South Africa, both at University of Kwazulu-Natal and University of Stellenbosch as a lecturer.



Prof. Megh R. Goyal, PhD, P.E.

He is now a Retired Professor in Agricultural and Biomedical Engineering from the College of Engineering at University of Puerto Rico – Mayaguez Campus; and Senior Technical Editor-in-Chief in Agricultural and Biomedical Engineering for Apple Academic Press Inc. (CRC Press), USA. Father of Irrigation Engineering in Puerto Rico for the twentieth century" has received awards such as: Scientist of the Year, Blue Ribbon Extension Award, Research Paper Award, Nolan Mitchell Young Extension Worker Award, Agricultural Engineer of the Year.



Ms Bolo Ministry of Agriculture Botswana is a Space Scientist, Space for Women Ambassador to Botswana, She has developed a Precise Crop Farming Geospatial Information System framework based on Unmanned Aerial Vehicle and GNSS data acquisition system. The framework will assist farmers to manage their farm activities using GNSS technology, Space science, Space applications, geospatial information system and technology



Dr Leanne Wiseman is Associate Director of Australian Centre for Intellectual Property in Agriculture (ACIPA) and an Associate Professor in Law at Griffith University, Brisbane Australia, Leanne was the lead Legal researcher on a large Australian Commonwealth Government funded research grant: Accelerating Precision Agriculture to Decision Agriculture, 2016-2018.

Mr Arie van Ravenswaay - Western Cape Government
Assistant Director: Innovation, Technology Design and Transfer
Technology Transfer Services
Office of the Chief Director: Research and Technology Development
Department of Agriculture
Western Cape Government

Day 1

08:15 – 09:00 Future of Farming in South Africa

- Farming in South Africa – Past to present
- Factors driving change in Agriculture
- Tendencies dictating the future
- South Africa realities
- The Future of Farming in South Africa

Louis Meintjes President of TAU SA

09:00 – 09:45

Adoption of Digital Technologies in African Agriculture – Measures and Recommendations

- Technology and Agricultural Development
- (Digital) Technology Adoption and Diffusion
- Basic Conditions for Digital Transformation
- Effects of (Digital) Technology Adoption
- Use of Digital Technologies in Agriculture in Africa

Prof. Dr. Johannes Sauer (TUM) | Production and Resource Economics

**Vice Dean of TUM School of Life Sciences Weihenstephan, Technical University of Munich
Head of Department Agricultural Production and Resource Economics at Technical University of Munich (TUM)**

09:45 – 10:15 Using technology to link the small holder farmer to funding and investment

- Reasons why banks look at farming as a risky business venture.
- Complicated land tenure systems preventing farmers from use of land title deeds as collateral for bank loans.
- Strict requirement for banking history preventing farmers access to bank loans.
- The gap in banking policies from regulators no allowing banks to offer better management of the loans they offer to farmers.

Peter Wafula CEO Crowdy AgriTech is a former bank and microfinance professional. Crowdy AgriTech is a tech startup company that enables smallholder farmers to get financing for their farming projects via a combination of peer to peer and crowdfunding initiatives.

10:15 – 10:30 Coffee and Networking Break

10:30 -11:00 Combining biological data with other Precision Farming data to assist farmers in making better informed decisions regarding their farming practices, sustainability and profitability

- Of all the measured parameters in Precision Agriculture, the soil microbiological component has been neglected the most.
- Soil microorganisms perform crucial functions in the soil environment to sustain plant and soil health.
- Soil microorganisms are very sensitive to changes in agricultural practices – useful indicators of soil health status.
- Agri Technovation combines all their measured parameters in Precision Agriculture with microbial analyses data.
- Client receives comprehensive reports to assist them in making informed decisions regarding sustainability of their farming practices.

Johan Habig Senior Researcher Microbiology agritechnovation MicroLife Research Centre

Day 1 Contd

11:00 – 11:45 Data protection, ownership and ethical use: protecting farmers and enabling markets

- Uncertainty and concerns around data ownership is hindering the uptake of digital technologies in Agriculture;
- Finding solutions for the use of big data in agriculture increasing the profitability of producers
- There are also increasing concerns over privacy and security of farm and agricultural data;
- While new business models and markets are emerging and are hungry for agricultural data;
- How can we ensure farmers and their businesses are protected, while ensuring the potential gains from digital technologies can be realized?

Dr Leanne Wiseman is Associate Director of Australian Centre for Intellectual Property in Agriculture (ACIPA)

11:45 -12:30 Artificial Intelligence in Agriculture - Help African Small farmers tackle crop and pest diseases

Summary:

- Pests and agricultural plants diseases - a threat for food security in Africa.
- Limit of government policies to help smallholder farmers to protect their farms against pests and crop diseases.
- How to use artificial intelligence to instantly equip farmers with agricultural plant disease skills.
- How can African AgTech companies collaborate to achieve a greater impact toward the common goal of food security in Africa.

Adamou Nchange Kouotou, founder and CEO of Agrix Tech

12:30 – 13:00 The business case for sustainable technologies in agriculture

Inge Kuschke, Analyst, Green Cape

13:00 – 14:00 Lunch Network

14:00 -14:45 Precision Planting: Technologies for Improved Yield & Productivity

- Precision in Planning
- Precision in Soil
- Precision in Placement
- The Precision Process:
 - Analysis
 - Application
 - Recording
 - Reacting
- Manning the Electronics
- Future Precision
 - AI – Artificial Intelligence
 - IoT – Internet of things
- Robotics
 - Advancements in Robotics – Towards the Internet of Fields and Plants

Robotic Systems to automate and improve agricultural process
Rinus Willemse X-Farm - experienced precision seeding consultant with over 21 years consulting in Africa as an engineer, manufacturer and farmer.

Day 1 Contd

14:45 – 15:30 Agriculture entrepreneurship in the fourth industrial revolution

- Zooming in on the position of Africa
- How we can capitalize on the technological revolution.
- Innovation and entrepreneurship on fostering social economic development in Africa

Vanessa Kisowile Sahara Sparks tech-enthusiast, impact-catalyst, entrepreneur.

15:30 -15:45 Coffee Network Break

15:45 -16:30 The Future of Weed Management

Representative from Bayer TBA

End of Day 1

Day 2 - 07:30-08:315Registration

08:15 – 09:00 The future of the Western Cape Agricultural sector in the context of the 4th Industrial Revolution

**Mr Arie van Ravenswaay - Western Cape Government
Assistant Director: Innovation, Technology Design and Transfer
Technology Transfer Services**

09:00 – 09:45 EMERGING TECHNOLOGIES IN Agricultural and Biological Engineering

- What is Agricultural and Biological Engineering (ABE) and how to apply it.
- Problems and opportunities presented by living things and the natural environment in agriculture.
- **Current & Future Trends**
 1. Emerging technologies
 2. Biotechnology applications in agricultural engineering,
 3. Energy source engineering,
 4. Food and bioprocess engineering,
 5. Forest engineering, Hill land agriculture,
 6. Human factors in engineering, Information and electrical technologies,
 7. Irrigation and drainage engineering,
 8. Micro irrigation engineering,
 9. Nanotechnology applications in agricultural engineering, Natural resources engineering, Nursery and greenhouse engineering, Potential of phytochemicals from agricultural and wild plants for human health.

Dr. Goyal (Distinguished speaker and Father of Irrigation Engineering in Puerto Rico)

09: 45 – 10: 30 Mitigating Climate Change in Crop Farming using Precision Agriculture/ Technology

- Contribution of current crop farming method to climate change
- Precision agriculture role in general planning efficiency by farmers and stakeholders
- Precision agriculture technology options for reducing climate change
- Adoption of precision agriculture by farmers

Jephias Dera

Principal Research Officer

**Department of Research & Specialist Services
Ministry of Lands and Agriculture in Zimbabwe.
Matopos Research Station**

Day 2 Contd

10:30 – 10:45 Coffee Break

10:45 – 11:30 Digital Trends & Technologies that Are Impacting Agriculture and Farming

Dawie Maree

Head: Communication & Marketing | FNB Agriculture

11:30 – 12:15 The Role of satellite imagery & sensors in Agriculture:

- Application
- Limitations & Challenges
- Way Forward

Juan van Loggerenberg (Lead Scientist) and Team @ GeoFarm, a division of Geospace International

12:15 – 12:30 Ultrasonic Sound used in drip irrigation line cleaning.

- Challenges of cleaning drip irrigation pipes
 - Clogging
- Chemical-free cleaning
- Benefits
- Case Studies

Leon Lingau Greendrum

12:30 – 13:00 Developing climate-smart agriculture to face climate variability; Challenges and lessons learnt

- Promoting food security with the climate-smart agriculture

Nonhlanhla Joye is the founder of Umgibe Farming Organics 2017 SAG-SEED Award Winner Sustainable Agriculture Durban, South Africa. She is a social entrepreneur who is passionate about community development especially in the areas of agriculture and food security.

13:00 -14:00 Lunch Network

14:00 -14: 45 The impact of integrated agricultural research for development on food security among smallholder farmers of Southern Africa

- What is **Integrated Agricultural Research for Development (IAR4D)**? This is an action research approach for investigating and facilitating the organisation of groups of stakeholders to innovate more effectively in response to changing complex agricultural and natural resources management contexts, in order to achieve developmental outcomes.
- IAR4D improved the quality of food dietary diversity and improved smallholders' coping strategies at household level, hence food security in areas where it was implemented compared to those it was not implemented in.
- Institutional links and mechanisms, joint analysis and reflective learning are critical to the operationalisation and effectiveness of IAR4D as a tool for improving food security among smallholder farmers in SSA.

Nothando Dunjana (M.Phil, BSc.)

PhD Researche (Soil Physics and Soil Nutrition)

**School of Agricultural, Environmental and Earth Sciences
University of KwaZulu Natal**

Day 2 Contd

14:45 – 15:30 Leveraging new technologies to prevent food loss in agriculture

- Closing the loop: Recycling nutrients to agriculture
- The role that organic fertilizers and plant pest controls can play in preventing food loss in Agriculture
- How innovative technology is able to process food losses into these inputs.

Roger Jaques CEO Waste to Food (PTY) LTD is an entrepreneur working in the fields of environmental services and sustainable development. His business *Closing the Loop CC* provides sustainable solutions for organic waste.

15:30 – 15:45 Coffee Network Break

15:45 -16:30 Confluence of Innovation - IoT, Data and AI (Case Study from Africa's first Award winning AgriTech Company to combine IOT, Data analytics & AI to inform the Agri industry.

- How the adoption of IoT, predictive data and AI help improve operational planning and accelerate decision making
- Combining artificial intelligence (AI), Internet of Things (IoT), and predictive analytics with industry expertise and years of research aids stakeholders across the agriculture ecosystem in gaining insights into projected yields and potential problems, helping to enable better decisions.

**Brian Bosire
Co-founder & CEO ~ UjuziKilimo**

End of Day 2

Day 3

08:15 – 09:00 Global Postharvest Loss Prevention: Fundamentals, Technologies, and Actors

- This presentation provides an overview of the issue of postharvest loss in agriculture by exploring essential physical, technical, and social dimensions of postharvest supply chains and loss prevention methods globally.
- Tools & technologies for Reducing Postharvest Losses
- Packaging Technologies

Deirdre Holcroft PhD, Holcroft Postharvest Consulting, Board member of The Postharvest Education Foundation

09:00 – 09:45 High-Precision GNSS for Agriculture- Case Study

- The technology of Global Navigation Satellite System (GNSS) are capable for providing precise real time navigation and locating positions that are geo-referenced to the real world. A Case study of GNSS technology for provision of real time precise geospatial agricultural information.
- The accuracy of GNSS allowed mapping of field boundaries, farm maps with precise acreage for field areas, calculated planted areas, and the distances measurement between areas of interest and areas planted per a crop
- GNSS precision navigation in crop farming is very important for agricultural precise data collection, farm planning and management. Farmers can navigate to the areas of interest in a field. GNSS can be used for tractor guidance, yield mapping, crop scouting and fertilizer application. Aircraft pest control can use the technology to control pests without using farmers to guide them.
- The GNSS data collection system integrated with Unmanned Aerial Vehicle data collection systems can provide real time precise agricultural geospatial information.

**Ms Basuti Gerly Bolo
Head , GIS UNIT - Min of Agriculture Botswana**

Day 3 Contd

09 : 45 – 10 : 30 Precision Agriculture Technologies in Citrus Aerobotics SA – Speaker TBA

10 :30 – 10 :45 Coffee Break

10 : 45 – 11 :15 Leveraging Vertical farming for Sustainable agriculture and Food Security

Josephine Favre, President of AAVF, Veronica Shangal i Aswani, VP

African Association for Vertical Farming- AAVF

11 : 15 – 12 : 15 Panel Discussion Recent Innovations with Aquaculture in Africa/ Advancing the Aquaculture Agenda in Africa

- Commercial fish farming and Research in Africa
- Conducting Investigations and Development on new and upcoming aquaculture species
- Policy and Planning of their Fisheries and Aquaculture policy in Africa
- Developing Export Markets for African produced high value Seafood products
- Fish feed as another technology in the Aquaculture industry
- Production and market trends for the last 10 years and beyond: Africa and each region
- Gender perspective
- Environmental perspective
- the move towards intensification
- improved genetics
- remote monitoring systems
- aquaponics

**Adrian Piers
Fisheries, Aquaculture and Environmental Consulting**

**Leslie Ter Morshuizen,
CEO
Aquaponics Innovations**

**John K. Walakira (PhD)
Aquaculture Research and Development Center-Kajjansi,
National Fisheries Resources Research Institute- National
Agricultural Research Organization (NARO)**

12:15 – 13:00

“Has technology enhanced the marketing of agriculture in Africa – if so what future trends you foresee? ”

- Impossible to secure production finance without bankable markets. Markets rarely provide bankable instruments such as letters of credit. This suggest that exporters increasingly make use of in country trade finance products. Technology options exist in this regard.
- Farmers on the African continent have very little institutional support in order to trade. Critically important to have an online market information service in order to service the needs of farmers that are aggregated in a region or in an industry. Trade needs to be aggregated in the supply chain in order to reduce transactional costs. The more farmers that participate in an aggregated supply chain the more specialist services can be made available to the individual farmers at vastly reduced costs.

**Anton Scheepers Marketing Manager
Agricultural & Industrial Marketing cc**

REGISTRATION FORM

Vuna AgriFoodTech Conference

10th – 12th June 2020 Gallagher Convention Centre

Total cost per delegate: R7, 999.00

Kindly select your preferred options:

Early Bird before 17th April 2020 – R6999.00

2 day – R6999.00

Small Holder (Small Scale Farmer) – R5999 for 3 days.

Please Note: This fee includes workshop materials, certification, morning and afternoon Refreshments and lunch.

CN

Attendee (1)

Full Name: Mr./Mrs./Ms _____

Position: _____

Cell: _____

Email: _____

Attendee (2)

Full Name: Mr./Mrs./Ms _____

Position: _____

Cell: _____

Email: _____

Attendee (3)

Full Name: Mr./Mrs./Ms _____

Position: _____

Cell: _____

Email: _____

Attendee (4)

Full Name: Mr./Mrs./Ms _____

Position: _____

Cell: _____

Email: _____

AUTHORISING PARTY

Full Name: Mr./Mrs./Ms _____

Position: _____

Dept: _____

Email: _____

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Terms & Conditions

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Delegates are responsible for the arrangement and payment of their own travel and accommodation. Please contact us for further details. Cancellations

The following charges will apply for written notice received:

30+ days before the course: 10%

15–30 days before the course: 50%

1–15 days before the course: 100%

Estate Farm reserves the right to offer a conference voucher instead of a refund for any cancellations either by the client or by the event organizer, after payment has been done.

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