

3rd AFRICAN CONFERENCE ON PRECISION AGRICULTURE

MAIN CONFERENCE SITE:

Marrakech, Morocco

3-5 • December • 2024



www.PAafrica.org | [#AfCPA2024](https://twitter.com/AfCPA2024)

PRECISION AGRICULTURE *in ACTION for AFRICA*

South Africa Satellite Site Program



UNIVERSITY OF
KWAZULU-NATAL

ORGANIZED BY:



UM6P

University
Mohammed VI
Polytechnic



AAPA
AFRICAN ASSOCIATION
for
PRECISION AGRICULTURE

ISPA
International Society of Precision Agriculture



AFRICAN CONFERENCE ON
**Precision
Agriculture**

DIAMOND SPONSORSHIP



OCP | NUTRICROPS

BRONZE SPONSORSHIP

METOS[®]

BY PESSL INSTRUMENTS

EXHIBITORS



OCP | NUTRICROPS

METOS[®]
BY PESSL INSTRUMENTS



ABOUT THE

African Conference on Precision Agriculture



The mission of the African Conference on Precision Agriculture (AfCPA) is to “connect the science and practice needed to put precision agriculture in action for Africa.” Through this mission, AfCPA seeks to provide a pan-African platform focused on highlighting new advances in the fields of experimental and applied precision agriculture.

The conference is aimed at strengthening and supporting the precision agriculture community within the African continent. AfCPA wishes to engage key stakeholders including scientists, policymakers, extension staff, crop consultants and advisors, agronomists, and service providers towards the common goal of building the capacity and resilience of African cropping systems.

AfCPA 2024 is one conference, multiple satellite site event offering a local opportunity to view presentations from the main conference while participating in a regional precision agriculture program organized by the site's host.

MAIN SITE:

Marrakech, Morocco

SATELLITE SITES:

- Abomey-Calavi, Benin
- Abidjan, Côte d'Ivoire
 - Cairo, Egypt
- Addis Ababa, Ethiopia
- Cape Coast, Ghana
 - Nairobi, Kenya
- Abeokuta, Nigeria
- Pietermaritzburg, South Africa
 - Harare, Zimbabwe



AfCPA is an initiative of the African Plant Nutrition Institute (APNI) in partnership with Mohammed VI Polytechnic University (UM6P), the International Society of Precision Agriculture (ISPA), and the African Association for Precision Agriculture (AAPA).



SATELLITE SITE HOSTS

Prof. Adima Amissa Augustin

National Polytechnic Institute
Félix Houphouët-Boigny, Côte d'Ivoire

Prof. Dr. Abdelaziz Belal

National Authority for Remote
Sensing and Space Sciences, Egypt

Dr. Temesgen Desalegn

Ethiopia Institute
of Agricultural Research

Prof. Kwame Frimpong

University of Cape Coast, Ghana

Femi Adekoya

Integrated Aerial Precision, Nigeria

Dr. Tafadzwa Mabhaudhi

University of KwaZulu-Natal, South Africa

Dr. V. Nicodeme Fassinou Hotegni

Genetics, Biotechnology &
Seed Sciences Unit (GBioS),
Abomey-Calavi Atlantique, Benin

Dr. Onesmas Kitonyo

University of Nairobi, Kenya

Dr. Regis Chikowo

Plant Production Sciences
and Technologies
University of Zimbabwe



AfCPA Program Chair

Dr. Steve Phillips

SENIOR CONSULTING SCIENTIST
African Plant Nutrition Institute (APNI)
e-mail: s.phillips@apni.net

Program - Day 1

All times listed are GMT +2

Conference Program Legend

Plenary Session	Keynote Presentation	Local Session	Panel Session	LS - Live at Site	LV - Live (virtual)	R - Pre-recorded
-----------------	----------------------	---------------	---------------	-------------------	---------------------	------------------

Day 1 – Tuesday, 3rd December		
09:30	Tea and registration	
10:30	Welcome address - Professor Neil Koorbanallys	LV
10:40	Opening address	LV
	Keynote Presentation 1	
11:00	Presentation by <i>Anthony Chapoto - Africa Network of Agricultural Policy Research Institutes</i>	LV
	Keynote Presentation 2	
11:30	Presentation by <i>Richard Ferguson - Rwanda Institute for Conservation Agriculture</i>	LV
12:00	LUNCH	
	General Session 2	
13:00	Enhancing the Estimation of Equivalent Water Thickness in Neglected and Underutilized Taro Crops using UAV acquired Multispectral Thermal Image data and Index-Based Image Segmentation <i>Ms Snethemba Ndlovu</i>	LS
13:20	The Use of Unmanned Aerial Vehicle (Uav) Remotely Sensed Data and Biophysical Variables to Predict Maize Above-Ground Biomass (Agb) in Small-Scale Farming Systems <i>Mr Celuxolo Dlamini</i>	LS
13:40	Assessing the Potential of UAV-Acquired Multispectral Imagery Combined with Machine Learning Techniques in Mapping the Spatial Distribution of Taro And Sweet Potato in Smaller Holder Farms <i>Ms Mishkah Abrahams</i>	LS
14:00	Assessing the Utility of Image Segmentation Techniques and Leaf Area Index in Improving Taro Yield Prediction Based on UAV-Acquired Multispectral Data in Smallholder Croplands <i>Ms Siphiwokuhle Buthelezi</i>	LS
14:00	Evaluation of remotely sensed evapotranspiration products in irrigated arid agricultural landscapes using a suit of ground observations <i>Mr Phathutshedzo Eugene Ratshiedana</i>	
14:40	Break/Posters/Exhibits	
	Keynote Presentation 3	
15:00	Presentation by <i>Gottfried Pesse - Pessl Instruments GmbH</i>	LV

Program - Day 1

Day 1 – Tuesday, 3rd December

	Plenary Session 1 – Precision Ag Service for Smallholders	
15:30	Presentation by <i>Abdellah Hamma - OCP Nutricrops</i>	LV
15:50	Presentation by <i>Musa Mishamo - Hexagon Agriculture</i>	LV
16:10	Presentation by <i>Robert Blair - Blair Farms (virtual)</i>	LV
16:30	Human-Powered Proximal Soil Sensing for Small Farms <i>Eric Lund - Veris Technologies, Inc.</i>	LV
17:00	Adjourn	

Program - Day 2

Day 2 – Wednesday, 4th December		
08:00	Welcome Session	LS
Plenary Session 2 – Precision Ag Adoption in Africa		
09:00	Presentation by <i>Samuel Njoroge - African Plant Nutrition Institute (APNI)</i>	R
09:20	Yield of Maize (Zea Mays L.) Varieties as Affected by Neem Oil Coated Urea Application in Southern Benin <i>Vodjo Nicodeme FASSINOU HOTEgni - University of Abomey-Calavi (UAC)</i>	R
09:40	Scalable Artificial Intelligence, Geospatial Big Data Analytics and Digital Agriculture: a Focus on Lessons Learnt and Their Implication for Improved Production <i>Kwabena Niketia - University of Saskatchewan</i>	R
10:00	Presentation by <i>Tomisin Adefare - GBFoods</i>	R
10:30	Break/Posters/Exhibits	
Plenary Session 3 - Remote Sensing Applications		
11:00	Assessment of Nitrogen Fertilization in Tunisian Wheat Production Using Proximal and Remote Sensing <i>Mouna Mechri - National Institute of Field Crops (INGC)</i>	LV
11:20	Engineering Technology for Crop Monitoring and Disease Identification <i>Manuel Perez Ruiz - Smart Biosystems Laboratory, University of Sevilla</i>	LV
11:40	Presentation by <i>Anthony Hall - Dronelytics (virtual)</i>	LV
12:00	Assessing African Smallholder Cereal Farming Using Sentinel-2A Spectral Reflectance <i>Steve Phillips - APNI</i>	LV
12:30	Lunch – Break in Livestream	
General Session 3		
13:30	Investigating the Interaction Between Soil Moisture and Clay Content for Enhanced Soil Moisture Prediction: A Lab-Based Approach with Implications for African Agriculture <i>Ms Yonwaba Atyosi</i>	LS
13:50	Leveraging UAV Remotely Sensed Data to Estimate Crop Water Stress of Underutilised Taro Crops in Smallholder Croplands <i>Dr Mbulisi Sibanda</i>	LS
14:10	Assessing The Potential Of Drone Remotely Sensed Data In Detecting The Soil Water Content, And Taro Leaf Chlorophyll Content Across Different Phenological Stages <i>Ms Reitumetse Masemola</i>	LS
14:30	Benefits of Precision Agriculture in Sugarcane Farming: A case of KwaZulu-Natal, South Africa <i>Ms Nokuphila Gumede</i>	LS

Program - Day 2

Day 2 – Wednesday, 4th December		
15:00	Break/Posters/Exhibits	
15:30	Keynote Presentation 4 Presentation by <i>Dr. Donald Kelechi Madukwe - OCP Africa</i>	LV
15:50	Keynote Presentation 5 Presentation by <i>Pauline Chivenge - IRRRI</i>	LV
16:20	Panel 1 – Women in Precision Agriculture Women in Precision Agriculture - Panel Discussion <i>Tangi Aziza - UM6P and APNI</i> <i>Mouna MECHRI - National Institute of Field Crops (INGC)</i> <i>Tomisin Adefare - GBFoods</i> <i>Pauline Chivenge - IRRRI</i>	LV
17:00	Adjourn	

Program - Day 3

Day 3 – Thursday, 5th December		
08:00	Welcome Session	L
09:00	Keynote Presentations 6 (pre-recorded) Precision Water Management Strategies for Africa <i>George Vellidis - University of Georgia</i>	R
09:30	Plenary Session 4 - Precision Water Management (pre-recorded) Presentation by <i>Yafit Cohen</i>	R
09:50	Application of Remote Sensing for Drought Monitoring Using Vegetation Indices in Pineapple Growing Areas in the Central Region of Ghana <i>Emmanuel Hanyabui - University of Cape Coast</i>	R
10:10	Presentation by <i>Zakaria Hazzoumi - UM6P</i>	R
10:30	Break/Posters/Exhibits	
11:00	Keynote Presentation 7 Presentation by <i>TBD - OCP Nutricrops</i>	LV
11:30	Plenary Session 5 – Precision Nutrient Management iSDA's Virtual Agronomist – Expert Advice for Every Farmer <i>Paul Chunga - iSDA</i>	LV
11:50	Use of "FertiEdge" Application for Optimizing Wheat Fertilization <i>Ibtihel Sbai - National Institute of Field Crops</i> <i>Mohammed Hmimou</i> <i>Faissal SEHBAOUI - AgriEdge SA, Benguerir, Morocco</i>	LV
12:10	Presentation by <i>Amine Jamal - OCP Nutricrops</i>	LV
12:30	Keynote Presentation 8 National Agricultural Data Infrastructure As Bedrock for Precision Agriculture <i>Benjamin Kwasi Addom - Commonwealth Connectivity Agenda for Trade & Investment (CCA)</i>	LV
13:00	Closing Session and Awards - APNI - Kaushik Majumdar	LV
13:30	Adjourn	



UNIVERSITY OF
KWAZULU-NATAL



University
Mohammed VI
Polytechnic
um6p.ma



AAPA
AFRICAN ASSOCIATION *for*
PRECISION AGRICULTURE
www.ispag.org



International Society of Precision Agriculture
www.paafrica.org/AAPA

PRECISION AGRICULTURE *in* ACTION *for* AFRICA