

CONFERENCE BROCHURE

(Detailed Programme)

Global Conference on

Sustainable Agricultural Mechanization

EFFICIENCY, INCLUSIVENESS AND RESILIENCE

FAO Headquarters, Rome (Italy)

27–29 September 2023

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INTRODUCTION

The Food and Agriculture Organization of the United Nations (FAO) is hosting the Global Conference on Sustainable Agricultural Mechanization (GAMC) with the theme "Efficiency, Inclusiveness and Resilience", from 27 to 29 September 2023. This event provides a neutral forum for FAO Members, farmers, academia, mechanization service providers, development agencies, policy makers, extension specialists, civil society, opinion leaders and private sector for focused dialogues to prioritise actions and strengthen technical networks for sustainable development of agricultural mechanization. Recent significant progress has been achieved in sustainable agricultural mechanization (SAM), including appropriate tools, equipment and machines adapted to sustainable plant production and protection, land management, and precision agriculture. These advances need to be scaled, according to local contexts, to achieve sustainable agricultural production and transformation of agrifood systems, protect the environment, manage natural resources, mitigate and adapt to climate change while creating decent jobs, social equity and achieving food security and improved nutrition.

ABOUT THE CONFERENCE

The current global challenges present a unique situation requiring a transformation of agrifood systems. In 2021, globally, over two billion people lacked regular access to safe, nutritious, and adequate food, a trend that continues to increase food insecurity and malnutrition. FAO is scaling up actions to reverse these trends by implementing its Strategic Framework 2022-31 through the transformation to MORE efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind. These actions will make a critical

contribution to achieving the United Nations' Sustainable Development Goals (SDGs), in particular to SDGs 1, 2, 10, 12 and 13.

Sustainable plant production plays a pivotal role in transforming agrifood systems. FAO convened the Global Conference on Green Development of Seed Industries in 2021, which synthesized evidence for enhancing farmers' access to high-quality seeds and improved planting materials for diverse crop varieties. To effectively drive this transformation, it is crucial to translate sustainable crop production

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systems into tangible outcomes at the field level, ensuring their integration into comprehensive systems packages delivered directly to farmers. Accordingly, FAO organized its first-ever Global Conference on Sustainable Plant Production (GPC) in 2022, with the theme 'Innovation, Efficiency and Resilience'. Building on this momentum, FAO's Global Conference on Sustainable Agricultural Mechanization is a continuation of the series of FAO's global events to support the transformation of agrifood systems worldwide.

SAM is an important pillar in the efforts to transform agrifood systems to become more productive, diverse and resilient to shocks and stresses. SAM is playing a key role in:
(i) scaling sustainable crop production, (ii) promoting environmentally friendly agriculture, (iii) creating decent jobs, social equity, and reducing drudgery, and (iv) enhancing farm inputs optimization by promoting timely, precise application methods, implementing labour and energy-saving practices. This will reduce costs and enhance livelihoods, ultimately building more resilient agrifood systems.

Despite ongoing efforts to enhance the availability, accessibility, affordability and utilization of SAM, along with the prominent development of mechanization technologies, especially in developed countries, there remain several challenges that need to be addressed, including socioeconomic and institutional factors. Today, the agricultural sector has entered a new era of development thanks to integrating new technologies in various fields where digitalization has been of particular interest. Digital technologies offer great potential for productivity and sustainability within agrifood systems, creating more opportunities

for innovation in the agricultural sector, including in low-income countries.

The **GAMC** will highlight ways for context-specific interventions to maximize the utilization of agricultural equipment and harness its benefits, while mitigating adverse environmental impacts. These interventions will contribute to achieving the FAO Strategic Framework 2022- 31 with a focus on sustainability: fostering the production of nutritious food, generating income, safeguard the environment, providing decent jobs and promoting social equity.

The **GAMC** will discuss context specific interventions that enable the optimization of agricultural mechanization efficiencies combined with the minimization of the deleterious effects of agricultural mechanization systems on the environment. These will feed into the realization of the FAO Strategic Framework 2022-31. The GAMC will allow participants to discuss the potential opportunities and challenges of SAM technologies in improving global agricultural productivity, across seven themes: (i) The theme on Mechanization for Sustainable Crop Production will enable discussions on how to enhance crop productivity of field and high-value crops, fostering timeliness and efficiency, by using the SAM technologies related to different operation levels and production systems. (ii) The theme on Postharvest Management and Agroprocessing will demonstrate their important roles in improving the efficiency and timeliness of operations, leading to the reduction of postharvest losses and enabling value addition and agroprocessing, with a particular attention of supporting women and youth. (iii) The theme on Conservation and Precision Agriculture will focus on identifying practices that lead to

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optimal use of soil, water, and nutrients and highlighting farm management that considers temporal and spatial variability to improve sustainability of agricultural production. (iv) The theme on Digitalization and Automation will provide an opportunity to discuss the great potential for productivity gains and sustainability for agrifood systems, and for innovation, which is very promising for the agricultural mechanization sub-sector, including in lowincome countries. (v) The theme on Supply Chain and Standards will involve machinery and equipment suppliers as well as machinery testing institutions to make equipment and machinery more available, and of good quality, especially for small-scale farmers. (vi) The theme on Business Models and Multistakeholder Engagement will address various issues related to small-scale farmers, women and youth, and suggest ways to develop new business models by engaging multistakeholder players in the promotion, management and operation of modern agricultural equipment and machinery. (vii) Finally, the theme on Enabling Environment for Sustainable Agricultural Mechanization and Digitalization will focus on the promotion of the SAM through supportive policies and strategies, capacity development, extension services, research and investment support.

The perspectives of farmers' and mechanization service providers' will be maintained during the GAMC as a continuous thread across all sessions, elevating their voices. Each theme will place a common emphasis on systems, practices and technologies that increase resilience to climate change, promote food security, improve nutrition, and protect the environment and biodiversity. The focus of the GAMC is on

sustainable mechanization in plant production. Additional topics related to mechanization in other sub-sectors, such as the livestock sector and other areas, may also be explored in view of the Global Conference on Sustainable Livestock Transformation scheduled for 25–27 September 2023.

Mechanization and livestock GAMC exhibition

In addition to the conference, there will be the opportunity to explore and learn about mechanization in practice. For the first time in FAO's history, an exhibition of equipment and machinery will be held in the Atrium, Flag Hall and the parking area between building A and Viale Aventino. It will display some of the latest technical developments in agricultural mechanization across the food value chain alongside traditional farming equipment that have provided solutions to economic, social and environmental challenges.

At the GAMC exhibition you will:

- Learn about cutting edge technologies and their positive impact on farming communities and the environment.
- Understand the progress in sustainable agricultural mechanization by exploring the advancements made to establish sustainable agrifood systems.
- Discover innovative solutions and technologies related to high-quality agricultural equipment developed by private sector partners.

Objectives

The GAMC will bring together a wide spectrum of relevant stakeholders to debate and synthesize evidence concerning innovative approaches that confer efficiency, inclusivity and resilience to the various components of SAM systems. These innovations aim to facilitate possible expansion and adoption, particularly in developing countries, the core of FAO's work, with **four** objectives:

i. Increase awareness of the contribution of SAM in implementing the FAO Strategic Framework 2022-31, to achieve the SDGs at global, regional and national levels.

- **ii. Share information and knowledge** on the strategic direction and technological developments in SAM worldwide.
- **iii. Demonstrate** FAO's technical leadership and ability to convene, supporting its Members in utilizing SAM as an important pillar for the transformation towards sustainable agrifood systems.
- iv. Provide a neutral platform and strengthen technical networks focus on SAM, fostering demand-driven and context-specific multistakeholder dialogues.

Expected outputs

The GAMC will bring the following **four** expected outcomes:

- Priorities established for the targeted mobilization and pooling of scientific, technical and financial resources to achieve global SAM systems.
- ii. Evidence debated and knowledge shared shared through the creation and management of functional technical networks.
- **iii.** A global knowledge product published as an evidence-based guide to promote SAM through the adoption of appropriate practices, partnerships and policies.
- iv. A set of recommendations proposed to guide active innovation for SAM worldwide.

THEMES

The conference is made up of four plenary sessions (opening, six keynote addresses, reports on conference themes and recommendations, high-level ministerial segment and closing), six parallel thematic sessions, two for each of the themes: Mechanization for Crop Production, Post-Harvest and Agroprocessing, Climate Change and Resilience, Digitalization and Automation, Supply Chain and Standards, Business Models and Multistakeholder Engagement; a seventh thematic session, Enabling Environment, takes place in a single session before the plenary sessions of the final day.

Mechanization for crop production

Sustainable agricultural mechanization plays a pivotal role in achieving sustainable food production by addressing the arduousness of field work and enhancing output. It involves the establishment of effective methods that synthesise mechanization with environmental preservation, safeguarding soil health, water reservoirs, and biodiversity.

It is imperative to establish an inclusive approach that empowers small-scale farmers with access to appropriate technologies and support systems. This enables the incorporation of groundbreaking technologies like precision agriculture, remote sensing, and data analysis, optimizing crop cultivation while minimizing environmental repercussions. Furthermore, an essential aspect of sustainability involves advocating for the integration of renewable energy sources, such as solar power and biofuels, into agricultural machinery to reduce reliance on fossil fuels and mitigate greenhouse gas emissions.

Emphasizing the significance of investments in research and development is crucial. This drives the innovation of cost-effective technologies adaptable to diverse cropping systems and the requirements of farmers of all scales, ensuring food security and economic growth.

Sustainable agricultural mechanization is key for sustainable food production, tackling the drudgery of field work and boosting productivity, developing efficient practices that reconcile mechanization with environmental conservation, preserving soil health, water resources and biodiversity.

Post-harvest and agroprocessing

Integrating sustainable mechanization into post-harvest management reduces drudgery and adds value to agricultural produce. Proper post-harvest operations and technologies,

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together with advanced processing equipment, preserve the quality of harvested crops, and enable the development of new food products. These technological advancements contribute to elevated food safety, facilitate market access and increase economic returns for farmers.

Efficient harvesting, post-harvesting and agroprocessing technologies and operations can reduce food losses, minimize greenhouse gas emissions and increase food availability for both rural and urban populations. In some cases where arable land and natural resources are limited, reducing food losses can be a more cost-effective strategy to enhance food availability compared to increasing food production.

Agroprocessing technologies play a transformative role in converting perishable produce into value-added products with longer shelf lives. This promotes diversification of income and imptoves market stability, while reducing reliance on seasonal fluctuations Implementing processing, preservation, and storage technologies, can improve the availability, accessibility, utilization, and stability of food supplies, thereby influencing food security and nutritional well-being.

Appropriate promotion of postharvest and agroprocessing generates economic opportunities, empowers marginalized groups, develops new skills, improves market access, and embraces sustainable practices.

Climate change and resilience

Conservation agriculture plays a critical role in mitigating the impact of climate change. It involves utilizing techniques that store carbon and decrease greenhouse gas emissions. This is achieved by minimizing soil disturbance, cultivating cover crops, and implementing agroforestry, which all help to retain carbon in the soil, thereby preventing its release into the atmosphere.

In addition, by including climate-smart technologies such as precision irrigation and weather forecasting tools, the resilience of conservation agriculture systems can be enhanced. This empowers farmers to optimize water usage, prevent water-related hazards, and react promptly to weather changes and extreme events that result from climate change. By adopting conservation agriculture practices and integrating climate-smart technologies, we have the potential to establish a more sustainable and climate-resistant agricultural future that protects our planet for future generations.

Farmers can achieve sustainable and fruitful agricultural practices by implementing soil conservation, precision agriculture, and fertilization techniques that lead to soil health, efficient resource utilization, and effective nutrient management.

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Digitalization and automation

Embracing technology is essential for advancing sustainable agriculture and modernizing farming practices. The emphasis on data-informed decision making is paramount to optimizing productivity and reducing needless resource consumption. By utilizing data to inform targeted interventions, we can ensure that our efforts are effective and efficient. To truly revolutionize the agricultural sector, it is essential to provide training and skill development opportunities for farmers enabling them to successfully adopt and integrate digital technologies.

Furthermore, it is crucial to establish a robust digital infrastructure in rural areas to bridge the divide between urban and rural regions and offer equitable opportunities to all farmers. To ensure the equitable implementation of digitalization in agriculture, inclusive policies that involve all shareholders are essential. By collaborating, governments, organizations, and communities can create policies that guarantee inclusive access to technology and its advantages. This collaborative effort can result in a sustainable and technology-driven future for agriculture that will benefit everyone involved, including farmers, communities, and the environment.

By integrating technology into agriculture, we can engender sustainable practices. Through the fusion of data-guided decision-making, farmer upskilling, and a robust

digital infrastructure, we can create a technology-centered future that benefits all stakeholders.

Supply chain and standards

An effective supply chain is essential for agricultural mechanization, which means ensuring that spare parts are readily available so that production capacities are optimized. This plays a crucial role in enhancing the productivity and sustainability of the agricultural sector. Furthermore, by adopting standardized practices in agriculture, stakeholders can benefit from a plethora of advantages, including fair competition and a balanced market.

Certification and testing of new agricultural technologies can make a big difference in operator safety, reducing the use of harmful substances, and promoting efforts towards decarbonization. Adherence to established standards demonstrates the farming industry's commitment to safety and environmental consciousness. The establishment of testing stations for agricultural machinery is vital because they serve as a crucial centre for evaluating equipment performance and ensuring compliance with safety standards. Additionally, when the agricultural industry incorporates standardized rules, regulations, and certification processes in a transparent manner, it can achieve sustainable growth that benefits all stakeholders and the environment.

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The implementation of harmonized standards in agriculture comes with multiple benefits, including promoting fair competition and aiding in informed investment decisions. These standards also encourage the adoption of safety and environmental practices through rigorous testing and certification processes.

Business models and multistakeholder engagement

Inclusive business models on agricultural mechanization promotes equitable benefits and participation for all stakeholders, including women, youth, and marginalized communities, fostering livelihood development in rural communities. In favor of women access to sustainable mechanization, there is the need for tailor-made innovations, solutions and business models driven by the demand. Customized business models that incorporate mechanization, such as contract farming, can generate new employment opportunities and economic prospects for producers and entrepreneurs.

While mechanization should be private sector driven, multistakeholder engagement is critical for its sustainability. Government institutions require to have longer-term vision to coordinate and network sustainable agricultural mechanization efforts. Civil society also plays a crucial role in advocating for mechanization-

related demands and translating them into collective voices to influence policies, ensuring inclusivity and responsiveness to stakeholders' needs. The private sector can support economic efficiency through in-house innovation, and access to information, leading to greater success in agricultural mechanization.

Inclusive business models on mechanization bring economic and social benefits to rural community members by creating jobs, increasing incomes, and optimizing agricultural production systems. To this end and for achieving sustainable agricultural mechanization development multistakeholder engagement from the private and public sector is paramount.

Enabling environment

Policymakers have a crucial responsibility in promoting sustainable supply chains in agriculture by prioritizing responsible practices. Alongside this, it is imperative to establish collaborative institutions that focus on sustainable agricultural mechanization and digitalization. This will facilitate the exchange of knowledge and effective implementation of these practices. Furthermore, embracing innovation is necessary for a paradigm shift towards the timely and efficient provision of mechanization inputs and services, effectively addressing the everevolving needs of farmers of all scales.

To realize the full potential of sustainable

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agricultural mechanization, the active involvement of all stakeholders, including policymakers, businesses and local communities, is essential. It is imperative to address challenges related to financing, knowledge dissemination and the implementation of new business models to make sustainable practices more widespread. By collaborating to tackle these challenges, we can promote a durable and environmentally friendly future for agricultural mechanization and digitalization, ultimately benefiting the entire agricultural landscape.

Policymakers are working towards creating

sustainable supply chains and promoting collaborative institutions to facilitate agricultural mechanization. This entails embracing innovation to cater to the needs of farmers to secure a resilient and efficient future.

Comprehensive policies underpinned by scientific advances in agricultural mechanization and realistic and profitable business models are needed to promote transformation to more efficient, inclusive and resilient sustainable agricultural mechanization.

ORGANIZATION

The Global Conference on Sustainable Agricultural Mechanization (GAMC) is organized by FAO with the support of an Organizing Committee (OC) and a Secretariat.

Organizing committee

The specific role of the Organizing Committee is to: (i) Develop a programme covering the main conference topics, with proposals for the names of potential keynote speakers, presenters, panelists, chairs and rapporteurs; (ii) In developing the programme, follow guidance from the Secretariat to ensure balance with respect to gender, geographic areas and stakeholder groups of speakers/chairs/panelists; (iii) In developing the programme, request inputs from professional colleagues and agree on the final programme through consensus from the OC; (iv) Provide advice to the Secretariat, when requested; (v) Provide advice on resource mobilization, when requested; (vi) Act as the event's ambassador among organizations/networks/countries of members; (vii) Encourage people to attend the conference; and (viii) Provide advice on potential follow-up actions to the conference.

COMPOSITION

Chair:

 Beth Bechdol, Deputy Director-General, Food and Agriculture Organization of the United Nations (FAO).

Co-chair:

Josse De Baerdemaeker, Professor, Katholieke Universiteit Leuven.

Vice-chairs:

- H.E. Josefa Leonel Correia Sacko, Commissioner for Agriculture, Rural Development, Blue Economy, and Sustainable Environment, the African Union Commission.
- Bram Govaerts, Director-General, International Maize and Wheat Improvement Center (CIMMYT).
- Alessandro Malavolti, Vice-President, European Agriculture Machinery Industries Association (CEMA).
- Chunjiang Zhao, Professor, National Engineering Research Center for Information Technology in Agriculture (NERCITA), Beijing, China.
- Louisa Parker-Smith, Director, Global Sustainability, AGCO Corporation.

Technical sessions chairpersons and Co-chairpersons:

- Rabe Yahaya, Senior Scientist, Mechanization and Postharvest Management, International Rice Research Institute (IRRI), Utter Pradesh, India.
- Regina Birner, Chair, Social and Institutional Change in Agricultural Development, University of Hohenheim.
- Chakib Jenane, Practice Manager, Agriculture and Food Global Practice, Western and Central Africa, World Bank.

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- Dinh Thi Tran, Head of Department, Food Processing Technology, Vietnam National University of Agriculture (VNUA).
- **Akylbek Kurishbayev**, Rector of the National Agricultural Research University, Kazakhstan.
- Mohammad Esmaeil Asadi, Senior Research Scientist, Golestan Agricultural and Natural Resources Research and Education Center, Gorgan, Iran.
- **Salah Sukkarieh**, Professor, Robotics and Intelligent Systems, Sydney University.
- Cornelia Weltzien, Professor, Department of Agromechatronics, Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Germany.
- **Ignacio Ruiz**, General Secretary, Agrievolution; Vice President, European Agriculture Machinery Industries Association (CEMA).
- Anshuman Varma, Deputy-Head, United Nations Economic and Social Commission for Asia and the Pacific's' (ESCAP) Centre for Sustainable Agricultural Mechanization (CSAM).
- **Saidi Mkomwa**, Executive Secretary and Chief Executive Officer, African Conservation Tillage Network (ACT).
- Hiroyuki Takeshima, Senior Research Fellow,
 Development Strategy and Governance Division,
 International Food Policy Research Institute (IFPRI).
- **Geoffrey C. Mrema**, Professor, Sokoine University, Tanzania; Former Director, FAO (retired).
- Tom Goddard, Former Senior Government Advisor, Sustainable Land Development, Alberta, Canada.

External members:

- **Arianna Giuliodori**, Secretary General, World Farmer's Organisation (WFO).
- Gerald Masila, Executive Director, East Africa Grain Council.
- Bing Zhao, Director, Agricultural Partnerships & Multilateral Engagement, Strategic Partnerships Division, World Food Programme (WFP).
- Robert Delve, Lead Global Technical Advisor, Agronomy, Sustainable Production, Markets and

- Institutions Division, Strategy and Knowledge Department, International Fund for Agricultural Development (IFAD).
- Varma Anshuman, Deputy-Head, ESCAP-CSAM.
- Chakib Jenane, Practice Manager, Agriculture and Food Practice for West and Central Africa, World Bank, Washington, US.

Internal members:

- **Selvareju Ramasamy**, Senior Agricultural Officer, (OIN), FAO.
- **Mohamed Manssouri**, Director, Investment Centre (CFI), FAO.
- **Giulia Santarelli**, Programme Support Specialist (CFI), FAO.
- Guilherme Brady, Head of Family Farming Engagement and Parliamentarian Networks Unit (PSUF), FAO.
- Ivan Prusina, Senior Programme Officer, Resource Mobilization and Private Sector Partnerships (PSR), FAO.
- Lauren Phillips, Deputy-Director, Inclusive Rural Transformation and Gender Equality (ESP), FAO.
- Anping Ye, Director, South-South and Triangular Cooperation (PST), FAO.
- **Divine Njie**, Deputy-Director, Food Systems and Food Safety (ESF), FAO.
- Lynnette Neufeld, Director, Food and Nutrition (ESN), FAO.
- Marco Sánchez Cantillo, Deputy-Director, Agrifood Economics (ESA), FAO.
- Thanawat Tiensin, Director, Animal Production and Health (NSA), FAO.
- Lifeng Li, Director, Land and Water (NSL), FAO.
- Wu Zhimin, Director, Forestry (NFO), FAO.
- Xinhua Yuan, Deputy-Director, Fisheries and Aquaculture (NFI), FAO.

Focal points from FAO regional offices:

Nomathemba Mhlanga, Regional Office for Africa (RAF).



- **Bo Zhou**, Regional Office for Asia and the Pacific (RAP).
- Daniela Di Gianantonio, Regional Office for Europe and Central Asia (REU).
- Soroush Parsa, Regional Office for Latin America and the Caribbean (RLC).
- Ahmad Mukhtar, Regional Office for the Near East and North Africa (RNE).

Executive secretary:

 Jingyuan Xia, Former Director, FAO Plant Production and Protection Division.

Secretariat

The overall responsibilities of the Secretariat are to: (i) Facilitate the work of the Organizing Committee (OC) (Draft ToRs, facilitate organization of meetings, ensure drafting of minutes); (ii) Follow up on recommendations of the OC; (iii) Support the technical officers to develop an innovative and inspiring programme covering the main conference topics, with proposals for the names of potential keynote speakers, presenters, panelists, chairs and rapporteurs for the different sessions; (iv) Any other task as required.

COMPOSITION

Executive secretary:

 Jingyuan Xia, Former Director, Plant Production and Protection Division (NSP), Food and Agriculture Organization of the United Nations (FAO).

Coordinator:

• Josef Kienzle, Agricultural Engineer, NSP, FAO.

Assistant coordinator:

- Karim Houmy, Agricultural Engineer, NSP, FAO.
- Hafiz Muminjanov, Technical Adviser, NSP, FAO.
- **Haekoo Kim**, Technical Adviser, NSP, FAO.

Focal points of thematic sessions:

- Mayling Flores-Rojas, Agricultural Engineer, NSP, FAO.
- **Buyung Hadi**, Agricultural Officer, NSP, FAO.
- Wilson Hugo, Agricultural Officer, NSP, FAO.
- **Ronnie Brathwaite**, Senior Agricultural Officer, NSP, FAO.
- Joseph Mpagalile, Investment Support Officer, CFIA, FAO.
- **Santiago Santos-Valle**, Agricultural Engineering Consultant, NSP, FAO.
- **Shangchuan Jiang**, Project Manager, NSP, FAO.
- **Ivan Landers**, Agricultural Officer, NSP, FAO.

Core members for operations and support:

- Alessia Laurenza, Office Assistant, NSP, FAO.
- Elena Guilavogui, Office Assistant, NSP, FAO
- **Bruno Telemans**, Sustainable Crop Production Consultant, NSP, FAO.
- **Paul Howard**, Office Assistant, NSP, FAO.
- Shangchuan Jiang, Project Manager, NSP, FAO.
- Nadine Aschauer, Sustainable Plant Production Consultant, NSP, FAO.
- Vuyo Maphango, Sustainable Agricultural Mechanization Consultant, NSP, FAO.



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- **Godfrey Omulo**, Agricultural Engineer, NSP, FAO.
- Tania White, Programme Associate, NSP, FAO.
- **Elena Rotondo**, Office Assistant, NSP, FAO.
- Laura Ciccariello, Office Assistant, NSP, FAO.
- **Diana Gamal**, Office Assistant, NSP, FAO.

Working groups:

- Programme: Josef Kienzle, Hafiz Muminjanov, Karim Houmy, Mayling Flores-Rojas, Buyung Hadi, Wilson Hugo Joseph Mpagalile, Santiago Santos-Valle, Haekoo Kim and Ivan Landers.
- Communication: Haekoo Kim, Linda Perella, Isabella Trapani, Denise Martinez-Breto, Francisco Martinez, Diana Gutierrez Mendez, Micah Goldsmith and Lucia Albanese.

- Operations/Logistics: Alessia Laurenza, Bruno
 Telemans, Paul Howard, Shangchuan Jiang,
 Nadine Aschauer, Vuyo Maphango, Godfrey Omulo,
 Tania White, Elena Rotonda, Elena Guilavogui,
 Laura Ciccariello and Diana Gamal.
- **Exhibition:** Josef Kienzle, Santiago Santos-Valle, Karim Houmy, Alessia Laurenza, Bruno Telemans and Diana Gutierrez-Mendez.

Observer:

- Ariella Glinni, Senior Technical Officer, NSP, FAO.
- Dina Rahman, Senior Coordinator, ODG, FAO.
- Diana Gutierrez-Mendez, Communications Officer, DDGB, FAO



DETAILED PROGRAMME

JOINT AGRICULTURAL MACHINERY AND LIVESTOCK EXHIBITION Monday 25 to Friday 29 September 2023

Tuesday, 26 September 2023

18:15-19:00

INAUGURATION OF THE JOINT AGRICULTURAL MACHINERY AND LIVESTOCK EXHIBITION (Atrium | Outside building A)

Master of ceremony: Beth Bechdol, FAO Deputy Director-General

Inauguration remarks

QU Dongyu, Director-General, FAO

Alessandro Malavolti, Vice-President, CEMA Farmers' Association Representative (TBC)

19:00

Exhibition cocktail (FAO Atrium, ground floor)



GLOBAL CONFERENCE ON SUSTAINABLE AGRICULTURAL MECHANIZATION

Wednesday 27 to Friday 29 September 2023

Wednesday, 27 September 2023

09:30-10:00

PLENARY SESSION 1: OPENING REMARKS

Green room

Moderator: Beth Bechdol, Deputy Director-General, FAO

Opening remarks

QU Dongyu, Director-General, FAO

Opening statement

H.E. Mr Francesco Lollobrigida, Minister of Agriculture, Food Sovereignty and Forests of Italy

10:00-12:30

PLENARY SESSION 2

Green room

Keynote address section A

Moderator: Maria Helena Semedo, Deputy Director-General, FAO

- A.1 Farmer-led Sustainability, Resiliency, and Climate-Smart Agriculture (10 minutes)
 Robert Bonnie, Under Secretary for Natural Resources and Environment at USDA
- A.2 Mechanization for sustainable agrifood systems (10 minutes)
 Professor Jerome Afeikhena, Senior Adviser to H. E. Josefa Sacko, Commissioner, African Union Commission (speaking on her behalf)
- A.3 Climate change and mechanization (10 minutes)
 Bram Govaerts, Director-General, International Maize and Wheat Improvement Center (CIMMYT)
- A.4 Farm power and energy source innovations (10 minutes)
 Alessandro Malavolti, Vice-President, European Agriculture Machinery Industries Association (CEMA)
- Discussion (35 minutes)

Keynote address section B

Moderator: Vincent Martin, Director, Office of Innovation, FAO

- B.1 Digitalization for agrifood systems transformation (15 minutes)
 Chungjiang Zhao, Professor, National Engineering Research Center for Information Technology in Agriculture (NERCITA), Beijing, China
- B.2 Automation trends in agriculture (15 minutes)
 Louisa Parker-Smith, Director, Global Sustainability, AGCO Corporation
- B.3 Policies and regulations for sustainable agricultural mechanization and digitalization Josse De Baerdemaeker, Professor, Katholieke Universiteit Leuven
- Discussion 17

12.30-14.00

Lunch break

Joint agricultural machinery and livestock exhibition

THEMATIC SESSIONS 1.1 AND 2.1

Thematic session 1: **Mechanization for crop production**

Green room

14:00-15:30

Session 1.1: Efficiency and productivity

Chair:

- Rabe Yahaya, Senior Scientist, Mechanization and Postharvest Management, International Rice Research Institute (IRRI), Uttar Pradesh, India Key panellist:
- Andreas Hastedt, CEO, Machines Ring Harburg

Rapporteurs:

- Wilson Hugo, Agricultural Officer, FAO
- Ivan Landers, Agricultural Officer, FAO
- Opening remarks (5 minutes)
- Sustainable agricultural mechanization and crop production unmanned farm (10 minutes) Xiwen Luo, Professor, Academician, South China Agricultural University, China
- Smallholder agricultural mechanization in developing countries bridging the agricultural gap (10 minutes)

 Stanley Silwimba, Senior Manager Programs and Commercialisation
- Empowering women and marginalized groups through agricultural mechanization (10 minutes)

 Eva Valencia, Scaling Coordinator, CIMMYT, CGIAR
- Mechanization at the service of new environmentally friendly practices (10 minutes)
 Peter Groot Koerkamp, Professor in Biosystems Engineering / Agrotechnology and managing chair holder at the Farm Technology Group of Wageningen University
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)



Thematic session 2: **Post-harvest and agroprocessing**

Red room

Session 2.1: Harvest and post-harvest

Chair:

Chakib Jenane, Practice Manager, Agriculture and Food Global Practice, Western and Central Africa, World Bank

Key panellist:

• Dieudonne Baributsa, Associate Professor of Entomology, Purdue University

Rapporteurs:

- Mayling Flores-Rojas, Agricultural Engineer, FAO
- Joseph Mpagalile, Agricultural Engineer, FAO
- Opening remarks (5 minutes)
- Integrated approach for a better harvest and postharvest management and technologies (10 minutes)
 Romina Pedreschi, Associate Professor, School of Agronomy, Pontificia Universidad Católica de Valparaíso, Peru
- Innovations and advanced technologies to reduce post-harvest losses and increase income (10 minutes)

 Bart Nicolai, Full professor, Department of Biosystem, KU Leuven, Belgium
- Drying and storage technologies for grains (10 minutes)
 Guangqiao Cao, Deputy Director, Nanjing Reseach Institute for Agricultural Mechanization, China
- Importance of washing/hygiene/drying/precooling and correct packaging for better operational and supply chain management (10 minutes)
 - John Christopher Duffill, CEO, John Crop Development International and John Crop Development, Viet Nam
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

15:30-16:00

Break

THEMATIC SESSIONS 1.2 AND 2.2

Thematic session 1: **Mechanization for crop production**

Green room

16:00-17:30

Session 1.2: Innovative technologies

Chair:

• Regina Birner, Chair, Social and Institutional Change in Agricultural Development, University of Hohenheim

Key panellist:

 Gajendra Singh, Director, Chair, Science Committee, Appropriate Scale Mechanization Consortium of University of Illinois, Michigan State University, Kansas State University and NC A&T State University

Rapporteurs:

- Wilson Hugo, Agricultural Officer, FAO
- Ivan Landers, Agricultural Officer, FAO
- Opening remarks (5 minutes)
- Alternative power/fuel sources combined with automated solutions (10 minutes)
 Giulia Catini, Head of EU Affairs, CNH Industrial
- Innovations in precision planting: the role of seed pelleting (10 minutes)
 Christine Hazel, Global Regulatory Lead for Seed Applied Technologies, Corteva, USA
- Innovations in crop protection: precision application technologies for agrochemicals and options for mechanical weed control (10 minutes)

Virender Kumar, Senior Weed Scientist, IRRI

- Innovations in protected cultivation: automation and robotics for crop production (10 minutes)
 Naoshi Kondo, Professor, Sensing technologies and automation for biological and agricultural products, Kyoto University, Japan
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Thematic session 2: **Post-harvest and agroprocessing**

Red room

Session 2.2: Agroprocessing

Chair:

• Dinh Thi Tran, Head of Department, Food Processing Technology, Viet Nam National University of Agriculture (VNUA)

Key panellist:

• Esther Obadiah, Secretary, Women Mechanised Agro Service Provider Cooperative

Rapporteurs:

- Mayling Flores-Rojas, Agricultural Engineer, FAO
- Joseph Mpagalile, Agricultural Engineer, FAO
- Opening remarks (5 minutes)
- Agroprocessing global perspective drivers and triggers for transformation (10 minutes)
 Umezuruike Linus Opara, Chair, DSI-NRF SARChI Postharvest Technology | Director, Africa Institute for Postharvest Technology
- Protein transition food (examples from Kenya/Mexico) (10 minutes)
 Dorte Verner, Lead Agriculture Economist, WorldBank
- Agroprocessing business on cocoa processing to export (standards, traceability, financing, sourcing, quality control) (10 minutes)

Patricia Poku-Diaby, Businesswoman, cocoa merchant and the CEO of Plot Enterprise Ghana Limited

• Waste valorization into added-value food products (use of bioproducts, environmental perspectives, efficiency) (10 minutes)

Quan Vuong, Senior Lecturer, School of Environmental and Life Sciences, the University of Newcastle

- Combining indigenous knowledge and emerging technologies

 Tania Eulalia Martínez-Cruz, Associate researcher, Vrije Universiteit Brussel
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

18:00-20:00

Reception (FAO 8th Floor/Fountain bar)

THEMATIC SESSIONS 3.1 AND 4.1

Thematic Session 3: **Climate change and resilience**

Green room

9:00-10:30

Session 3.1: Conservation agriculture

Chair:

• Akhylbek Kurishbayev, Rector of the National Agricultural Research University, Kazakhstan

Key panellist:

• Gottlieb Basch, President, European Conservation Agriculture Federation (ECAF)

Rapporteurs:

- Hafiz Muminjanov, Technical Adviser, NSP, FAO
- Haekoo Kim, Technical Adviser, NSP, FAO
- Opening remarks (5 minutes)
- Adopting conservation agriculture: facing the challenges and grasping the opportunities for sustainable agriculture (10 minutes)

Marie Bartz, Researcher, Centre for Organic and Regenerative Agriculture (CARe-Bio)

- Small scale mechanization for conservation agriculture (10 minutes)
 Enamul Haque, Adjunct Associate Professor, Murdoch University, Australia; Coordinator of Conservation Agriculture Project Bangladesh
- The impact of agricultural machines innovation and policy for conservation agriculture development (10 minutes)

Hongwen Li, Leader / Professor at the Conservation Tillage Research Center (CTRC), College of Agricultural Engineering, China Agricultural University, Beijing, China

• Enhancing agricultural resilience: exploring agricultural innovations in drylands through mechanization practices (10 minutes)

Alfred Micheni, Director, Kenya Agricultural & Livestock Research Organization (KALRO-Embu)

- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Thematic session 4: **Digitalization and automation**

Red room

Session 4.1: Digital technology and ICT

Chair:

• Salah Sukkarieh, Professor, Robotics and Intelligent Systems, Sydney University

Key Panellist:

• Maria Gabriela Cruz, Farmer, Member of European Conservation Agriculture Federation (ECAF)

Rapporteurs:

- Santiago Santos-Valle, Agricultural Engineer, FAO
- Vuyo Maphango, Sustainable Agricultural Mechanization Consultant, FAO
- Opening remarks (5 minutes)
- Low-cost IoT devices along with ICT can help irrigation decisions for smallholder farmers (10 minutes)

 Clémence Uwamutarambirwa, master's student Seed Potato Fund, Catholic University of Rwanda
- ICT and telematics its role in supporting the future of on-demand service and automation of smallholder farm assets (10 minutes)

Jehiel Oliver, CEO, Hello Tractor

• Digital technologies and the use of ICT can empower smallholder farmers to boost their yield and increase their income (10 minutes)

Worlali Senyo/Princess Anita Asabere, Farmerline, Country Manager Ghana

- "Agriculture digital twins" are the next form of digital technologies which have the potential to provide individualised information and suggestions for smallholder farmers (10 minutes)
 Simon van Mourik, Researcher, Wageningen University & Research (WUR)
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

10:30-11:00

Break

THEMATIC SESSIONS 3.2 AND 4.2

Thematic session 3: **Climate change and resilience**

Green room

11:00-12:30

Session 3.2: Precision agriculture

Chair:

- Mohammad Esmaeil Asadi, Senior Research Scientist, Golestan Agricultural and Natural Resources Research and Education Center, Gorgan, Iran Key panellist:
- Theodor Friedrich, Conservation Agriculture Expert, Former FAO

Rapporteurs:

- Hafiz Muminjanov, Technical Adviser, NSP, FAO
- Haekoo Kim, Technical Adviser, NSP, FAO
- · Opening remarks
- Integrating precision agriculture technologies in conservation agriculture: enhancing sustainability and resource efficiency (10 minutes)
 - Lyudmila Orlova, Chair of the National Movement on Conservation Agriculture, Russia
- Precision nutrient management in conservation agriculture: optimizing fertilizer use for sustainable crop production (10 minutes)
 - Hamza Rkha Chaham, Co-founder & COO of SOWIT, Morocco
- Optimizing seed coulters for no-till direct seeding (10 minutes)
 Maik Freitag, Sales & Product Manager Novac
- Precision irrigation management for water conservation in conservation agriculture: tools and strategies (10 minutes)
 - Alberto Puggioni and Stefano Ballerini, Country Manager, Netafim Italia
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Thematic session 4: **Digitalization and automation**

Red room

Session 4.2: Automation and Al

Chair:

- Cornelia Weltzien, Professor, Department of Agromechatronics, Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Germany Key panellist:
- Jelle Filip Van Loon, Associate Program Director for Sustainable Agrifood systems, Latin America, CIMMYT

Rapporteurs:

- Santiago Santos-Valle, Agricultural Engineer, FAO
- Vuyo Maphango, Sustainable Agricultural Mechanization Consultant, FAO
- · Opening remarks
- Al and SmartApp technologies can provide scalable and automated plant health advice to farmers around the world (10 minutes)

Simone Strey, CEO, Plantix

• The automation of precision spray applications with AI support can deliver crop protection from drones for small-holder farmers in a scalable and robust manner (10 minutes)

Tawanda J. Chihambakwe, Director at PRECISION AERIAL GROUP, Flying Labs

- Experiences and learnings of an agriculture robotic and Al startup in Latin America (10 minutes)
 Leonardo Tadeu Fumes Carvalho, Chief Global Strategy Office, Solinftec Solix Hunter
- Building resilience from the grassroots in arid and semi-arid lands (ASAL)
 Paulo Petersen, Executive Director, Assessoria e Servicos a Projetosem Agricultura Alternativa (ASPTA)
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

12:30-14:00

Lunch break

Side event: Voices of the youth for sustainable mechanization & digitalization (Sheikh Zayed Centre)

THEMATIC SESSIONS 5.1 AND 6.1

Thematic session 5: **Supply chain and standards**

Green room

14:00-15:30

Session 5.1: Supply chains and services

Chair

- Ignacio Ruiz, General Secretary, Agrievolution; Vice President, European Agriculture Machinery Industries Association (CEMA)

 Key panellist:
- Saruth Chan, Undersecretary of State, Ministry of Agriculture, Forestry and Fisheries, Cambodia

Rapporteurs:

- Godfrey Omulo, Agricultural Engineer Consultant, FAO
- Shangchuan Jiang, Programme Expert, FAO
- Opening remarks (5 minutes)
- Major trends and opportunities in agricultural mechanization supply chains (10 minutes)
 Charlie O'Brien, Secretary General, Agrievolution
- Overcoming constraints in spare parts supply and machinery maintenance services (10 minutes)

 Yahia Khalifa, CLAAS/CNH Marketing responsible for Africa and Near East
- Business models for mechanization supply chain integration (10 minutes)
 Li Tie, Chairman, CAMCO
- MAC protocol: international framework for asset-based financing of equipment (mining, agriculture, and construction) (10 minutes)
 Ignacio Tirado, Secretary General, UNIDROIT
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Thematic session 6: **Business models and multistakeholder engagement**

Red room

Session 6.1: Inclusive business models

Chair:

• Saidi Mkomwa, Executive Secretary and Chief Executive Officer, African Conservation Tillage Network (ACT)

Key Panellist:

• Maartje Pronk, Business Development Manager Asia; IDE, Bangladesh

Rapporteurs:

- Mayling Flores-Rojas, Agricultural Engineer, FAO
- Vuyo Maphango, Sustainable Agricultural Mechanization Consultant, FAO
- Opening remarks (5 minutes)
- Enhancing partnership with smallholder farmers, dealers, and financial institutions in agricultural mechanization (10 minutes)

Paul Christopher Richards, CEO, AgLeaseCo, Zambia

- Contract farming for enhancing mechanization services (10 minutes) **Hassan Mounir**, CEO, Cosumar, Morrocco
- Business model for women to access agricultural mechanization (10 minutes)
 Minli Yang, Professor, College of Engineering, China Agricultural University; Director, China Research Center for Agricultural Mechanization Development
- Emerging mechanization business models (10 minutes)
 Hujjat Nadarajah, CEO, Tun Yat
- Panel discussion and Q&A (40 min)
- Concluding remarks

15:30-16:00

Break

THEMATIC SESSIONS 5.2 AND 6.2

Thematic session 5: **Integrated pest management**

Green room

16:00-17:30

Session 5.2: Regulations and standards

Chair:

 Anshuman Varma, Deputy-Head, United Nations Economic and Social Commission for Asia and the Pacific's' (ESCAP) Centre for Sustainable Agricultural Mechanization (CSAM)

Key panellist:

• Sandro Liberatori, Machinery Standards Specialist, UN-ANTAM, Terni, Italy

Rapporteurs:

- Godfrey Omulo, Agricultural Engineer Consultant, FAO
- Shangchuan Jiang, Programme Expert, FAO
- Opening remarks (5 minutes)
- Benefits of standards (operators' safety, efficiency and reduction of food loss, harmonization, trade enhancement, networking among testing stations) (10 minutes)
 Julia Nielson, Deputy Director, Trade and Agriculture (OECD)
- Newly established testing stations perspective on standards and regulations; challenges and needs (10 minutes)
 Shreemat Shrestha, Chief, National Agricultural Engineering Research Centre, Nepal Agricultural Research Council; Vice-chair ANTAM 2023
- Agriculture machinery regulations and standards: extension services, capacity building, and farmers' needs (including gender perspectives) (10 minutes)
 - Margaret Mangheni, Professor for Extension, Makerere University, Uganda
- Benefits of standardization for safety; robotics and innovation; regulations and subsidization for decarbonization and reduction of toxic substances (10 minutes)
 - **Shyam Narayan Jha**, Deputy Director-General, Indian Council of Agricultural Research, Department of Agricultural Research & Education, Ministry of Agriculture and Farmers' Welfare, New Delhi
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Thematic session 6: **Business Models and multistakeholder engagement**

Red room

Session 6.2: Multistakeholder engagement

Chair:

- Hiroyuki Takeshima, Senior Research Fellow, Development Strategy and Governance Division, International Food Policy Research Institute (IFPRI)

 Key panellist:
- Sunita Nhemaphuki, Chair, R&D Innovative Solution, Kathmandu, Nepal

Rapporteurs:

- Mayling Flores-Rojas, Agricultural Engineer, FAO
- Vuyo Maphango, Sustainable Agricultural Mechanization Consultant, FAO
- Opening remarks (5 minutes)
- Partnership for the development of agricultural mechanization (10 minutes)
 Marco Silvestri, Programme Officer of ESCAP's Centre for Sustainable Agricultural Mechanization (CSAM)
- Creating sustainable institutions and long-term vision frameworks (10 minutes)
 El Hassane Bourarach, Technical Advisor, SAM Pillar, ACT Network, Africa
- Multistakeholder engagement for promoting growth of mechanization professionals and instilling public trust (10 minutes)
 - Lawrence Gumbe, Chairperson of the Kenya Society of Environmental, Biological and Agricultural Engineer (KeSEBAE)
- How to influence gender-sensitive policies in the domain of sustainable mechanization? (10 minutes)
 Yamuna Ghale, Senior Research Fellow, Institute for Integrated Development Studies
- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

Friday, 29 September 2023

THEMATIC SESSIONS 7

Thematic session 7: **Enabling environment**

Green room

Moderator: Beth Bechdol, Deputy Director-General, FAO

9:00-10:30

Session 7: Enabling environment

Chair:

• Geoffrey Mrema, Professor, Sokoine University, United Republic of Tanzania

Co-chair

• Tom Goddard, Former Senior Government Advisor, Sustainable Land Development, Alberta, Canada

Key panellist:

 Renata Bueno Miranda, Secretary of Innovation, Sustainable Development, Irrigation and Cooperativism, Ministry of Agriculture, Livestock, and Food Supply (MAPA), Brazil

Rapporteurs:

- Josef Kienzle, Agricultural Engineer, FAO
- Joseph Mpagalile, Agricultural Engineer, FAO
- Opening remarks (5 minutes)
- Enabling sustainable agricultural mechanization through farmer-led initiatives and collaboration (10 minutes)

 Arianna Giuliodori, Secretary General World Farmers Organization (WFO)
- Transforming agriculture in Africa: farmers' organization-driven strategies for an enabling environment in sustainable agricultural mechanization (10 minutes)

Gerald Masila, Executive Director; East African Grain Council (EACG)

- Governments' role in enabling sustainable agricultural mechanization for economic growth and food sustainability in zimbabwe: a case study (10 minutes)
 - Edwin Zimunga, Chief Director Agricultural Engineering, Mechanization and Soil Conservation
- Government's role in enabling sustainable agricultural mechanization for economic growth and food sustainability in the Philippines: a case study (10 minutes)
 - **Rossana Marie C. Amongo**, Dean, Agricultural Machinery Division, Institute of Agricultural Engineering, College of Engineering and AgroIndustrial Technology; University of the Philippines
- Fostering an enabling environment for sustainable agricultural mechanization from the perspective of supply chain actors (10 minutes)
 - Vanessa Stiffler-Claus, Vice President International Policy and Strategy
- Agricultural mechanization systems (10 minutes)
 Zhenxing Xu, Deputy Director, Centre of Agricultural Machinery Development and Extension, Ministry of Agriculture and Rural Affairs (MARA), P.R. China

Friday, 29 September 2023

- Panel discussion and Q&A (40 min)
- Concluding remarks (5 minutes)

10:30-11:00

Break

11:00-12:30

PLENARY SESSION 3: REPORTS ON THEMATIC SESSIONS AND CONFERENCE RECOMMENDATIONS

Green room

Moderator: Jingyuan Xia, Former Director, NSP, FAO

Reports on thematic sessions

- Introduction
- Highlights from each thematic session by chair or co-chair from 7 thematic sessions (5 minutes each)

Conference recommendations

- Presentation of recommendations by GAMC-secretariat/organizing committee (10 minutes)
- Discussions and conclusion

12:30-14:00

Lunch break

Side Event: Using precision seeding to optimize crop yields (Iran room)

Friday, 29 September 2023

14:00-15:30

PLENARY SESSION 4: HIGH-LEVEL MINISTERIAL SEGMENT AND CLOSING

Green room

Moderator: Beth Bechdol, Deputy Director-General, FAO

High-level ministerial segment

- H.E. Eng. Khaled Huneifat, Minister of Agriculture of Jordan (TBC)
- H.E. Voitov Aziz Botirovich, Minister for Agriculture, Uzbekistan (TBC)
- The Honourable Mtolo Phiri, Minister for Agriculture, Zambia (online)
- H.E. Mohan Priyadarshana De Silva. Hon. State Minister of Agriculture, Colombo, Sri Lanka
- Mr. Redouane Arrach, Secretary General of the Department of Agriculture, Morocco
- Ms Renata Bueno Miranda, Secretary of Innovation, Sustainable Development, Irrigation and Cooperativism, Ministry of Agriculture and Livestock (MAPA), Brazil
- Mr Eric Renaud, Director-General of National Society of Agricultural Mechanization (SoNaMA), Benin
- Discussion (20 Minutes)

Closing remarks

QU Dongyu, Director-General, FAO (10 minutes)

GUIDELINES FOR PARTICIPANTS

This Hybrid Conference will be broadcasted using the FAO Webcast platform. Interpretation will be available in Arabic, Chinese, English, French, Russian and Spanish for all plenary sessions.

The in-person sessions will take place in the Green and Red Rooms at FAO Headquarters, Rome.

Virtual participants can access FAO Webcast and contribute/engage online from all devices via the GAMC website: https://www.fao.org/events/detail/global-conference-on-sustainable-agricultural-mechanization/en

CONTACTS

For more information visit:

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