



National Conference on Eritrean Agricultural Studies 2026

To strengthen agriculture as a driver of economic growth, an income generator, and a reliable supplier of food and raw materials, continuous and rigorous research is essential. Agricultural research stabilizes national and rural economies by boosting productivity and creating opportunities across agricultural value chains. Therefore, sustained investment in research is crucial for building a productive, resilient, and economically sound agricultural sector.

It is with these objectives in mind and based on the experience gained from the National Eritrean Studies Conference conducted on January 2025, that the Ministry of Agriculture of the State of Eritrea held a two-day National Conference on Agricultural Studies from 20 to 21 August 2026, under the theme “Advancing Sustainable Agri-food Systems for National Economic Growth.” at Asmara, the National Confederation of Eritrean Workers

(NCEW) halls. To appreciate this endeavor, it is important to place it in historical context. The Ministry’s vigorous research efforts date back to the post-independence period. Since then, the government has prioritized science-driven agricultural development, establishing the National Agricultural Research Institute (NARI) in 1994 to coordinate research in crop production, livestock, and natural resource management.

Building on this long-standing commitment to agricultural research and development, the conference brought together a wide range of stakeholders. In the presence of more than 300 participants a welcome address was delivered by the chairman of the Conference Dr. Efrem Gebremeskel.

In his address, after thanking all participants, research paper presenters, and professionals, Dr.



Dr. Efrem Gebremeskel

Efrem noted that the National Conference on Eritrean Agricultural Studies 2026 aims to break ground for research, generate research findings, examine current agricultural challenges and opportunities, deliberate on innovative methods and techniques, and identify practical directions that will support the sustainable growth of Eritrea’s agricultural sector.

Dr. Efrem noted that the scientific papers presented highlighted the



following eight key thematic areas:

1. Agricultural Policy, Regulatory Frameworks and Governance
2. Extension and Farmer's Adoption
3. Agricultural Digitalization
4. Agriculture Value Chain and Agribusiness
5. Climate Change Adaptation and Mitigation
6. Agricultural Biotechnology and Laboratory Services
7. Genetic Resources and Biodiversity Conservation
8. Food Safety, Security and Nutrition

Dr. Efrem further explained that the conference was designed to bring together researchers, agricultural experts, policymakers, farmers, private sector representatives, development partners, and community stakeholders. He highlighted that conducting such a national event is crucial to exchange research findings, hold discussions on detrimental practices, and ultimately identify sustainable solutions to steer Eritrea's agricultural sector toward practical directions. However, he emphasized that achieving meaningful agricultural development requires a shared understanding among all parties, which is why the decision was made to hold this conference.

He further explained that, in addition to the 76 formal scientific presentations, the conference featured three guest-speaker presentations and an exhibition of 10 scientific posters. A series of technical sessions and panel discussions were also conducted to identify priority areas requiring further attention and intervention.

In conclusion, Dr. Efrem extended, on behalf of the Ministry of Agriculture, sincere appreciation to all members of the Organizing

Committee for their commitment, cooperation, and hard work in preparing the conference. He also recognized the Ministry's development partners, including IFAD, FAO, and others, for their valuable support and contributions, which played an important role in the successful organization of the event. He also expressed his appreciation to all participants for their attendance and valuable contributions. He wished everyone productive discussions, meaningful deliberations, and a successful conference.

Then a keynote address of the Minister of Agriculture, H.E. Mr. Arefaine Berhe was presented by Mr. Tekleab Mesghena, the Director General of Regulatory Services Department.

Minister Arefaine underscored that this conference, built upon the foundational ideas established during the Eritrean Studies conference in January 2025, testifies to a renewed commitment to transforming Eritrean agriculture and solidifying its role as the cornerstone of the nation's economic prosperity. He added that agriculture has been the lifeblood of Eritrean communities and the national economy for generations, emphasizing that simply maintaining existing practices is not enough to meet the challenges of a rapidly changing world, including climate change, population growth, economic instability, and ecological degradation.

Given these fundamental facts, Mr. Arefaine noted, the conference plays a vital role not only in sharing experiences and lessons learned to modernize agricultural practices, but also in providing a platform to demonstrate continuous research, groundbreaking solutions, and



Mr. Tekleab Mesghena

strategic planning. Ultimately, it aims to realize these ambitious goals, translate commitment into tangible action, and drive sustainable agri-food systems that fuel our economic growth and development.

Mr. Arefaine highlighted that the theme of the conference recognizes that long-term prosperity is not simply about increased yield, but about building resilience and equitable food systems capable of meeting present needs while safeguarding resources for future generations.

Minister Arefaine further underscored that the Ministry's five-year strategic plan (2024–2028) operates under the vision of "Safe and Nutritious Food for Everyone, Everywhere." To improve farmers' livelihoods and realize this vision, the strategy centers on three main approaches: the Small and Medium Commercial Farmers Strategy (SMCFS), the Minimum Integrated Household Agricultural Package (MIHAP), and the Comprehensive, Small and Productive Farm Plot (SPFP) strategy. Together, these initiatives provide farmers with access to advanced technologies and extensive extension services.

In his concluding remarks, Minister Arefaine reminded attendees that it is incumbent upon everyone to embrace innovation, champion sustainable practices, and dedicate themselves unreservedly to building a vibrant, thriving agricultural sector that serves as a powerful engine for national economic advancement.

The Minister warmly thanked the Organizing Committee, for their dedicated preparation over the last 18 months. He further commended the researchers and collaborators for presenting their work, expressed hopes for fruitful discussions, and anticipated actionable recommendations to maintain research momentum.

(Full speech of the Minister is presented on page eight.)

During the two days event each presented paper was supported



H.E. Arefaine Berhe

by Q&A sessions, broad debates, and in-depth discussions. Short video presentations reinforcing the conference's core theme were also showcased and well received by participants.

Post-Presentation Reflections on the Importance of the Research Outcomes

Presenters at the conference expressed their conviction that the research outcomes presented will contribute significantly to addressing livelihood challenges and environmental concerns. Their reflections highlighted the practical relevance of the studies and their potential to support



Zeremariam Yosief

sustainable development, agricultural productivity, environmental management, and national economic growth.

For instance, Zeremariam Yosief's research paper, Synergizing Sustainable Energy Production and Climate-Smart Agriculture, demonstrates how sustainable energy solutions can help farmers manage the impacts of climate change in a cost-effective manner, particularly by reducing dependence on fuel. The study also seeks to raise awareness among smallholder farmers about the benefits of renewable energy, particularly solar energy, through media campaigns and other awareness-raising mechanisms.

Similarly, Kiflom Micheal's paper, How to Establish an Institutional Repository, recommends the establishment and implementation of institutional repositories to facilitate evidence-based decision-making on issues related to national development



Kiflom Micheal

planning, food production and security, and economic growth. Furthermore, institutional repositories can promote knowledge sharing, collaboration, and stronger connections with the international community.

In addition, the findings of Yolian Fissehation's research, Assessment of Earthworm Production Using Livestock Manure, demonstrate that earthworms can serve multiple purposes. Besides providing an additional source of income and contributing to waste management, earthworms can also be used as a valuable source of feed for poultry, fish, and pigs. Accordingly, the study recommends raising farmers' awareness of the benefits of earthworm production through extension services.



Yolian Fissehation

Moreover, Yemane Gebreulul's research paper, Mobilizing Diaspora in Agricultural Information, draws on the experiences of China, Rwanda, India, and South Korea. Based on these international experiences, the study recommends greater mobilization of the diaspora as a means of contributing

to national economic development and transforming the agricultural, manufacturing, and service sectors.



Yemane Gebreulul

Another important contribution was Naomi Tekeste's study, Evaluation of Fish Amino Acid and Seaweed Liquid Fertilizer on the Growth and Yield of Barley. The study finds that the excessive use of synthetic fertilizers has contributed to land degradation and declining yields of cereal crops. In contrast, the use of liquid organic fertilizers can not only enhance crop productivity but also improve land-



Naomi Tekeste

management practices and help maintain soil fertility. Consequently, the findings point to the potential of environmentally sustainable agricultural inputs as an alternative to excessive reliance on synthetic fertilizers.

Finally, Rufta Arefaine's research paper, Desert Locust and Swarm Movement Prediction System, emphasizes the urgent need to establish centralized, systematic, and reliable data-collection practices in response to the devastating effects of desert locust infestations. Such a system could strengthen monitoring, improve prediction and early-warning mechanisms.



Rufta Arefaine

The reflections of this six presenters and the outcome of their research papers underscored the practical significance of the research outcomes and their potential to address pressing livelihood, agricultural, environmental, and economic challenges.



Background Preparations of the National Conference of Eritrean Agricultural Studies



Dr. Efrem Gebremeskel

This newsletter conducted an interview with Dr. Efrem Gebremeskel, Chairperson of the Conference, Mr. Abdella Omer, Secretary of the Technical Committee, and Mr. Natnael Habtemichael, a member of the committee, and Miss. Siye Negash Unit head of Event Management and Planning at the Public Relations Division (PRD) of MoA.

According to Dr. Efrem Gebremeskel, the primary objective was to bring together agricultural research representing the different parts of the country, promote the advancement of agricultural knowledge, and ensure that important findings and recommendations are properly documented and followed up by the relevant institutions.

“The fundamental objective of this conference is to bring together agricultural research studies representing the entire country, advance agricultural knowledge, and ensure that the necessary actions identified by the relevant bodies are documented and followed up.”

Dr. Efrem noted that a conference of this nature is also important for identifying opportunities, gaps, and challenges within the agricultural sector, while at the same time

assessing and promoting the professional capacity available in the country.

He further emphasized its importance to the Ministry of Agriculture and to those interested in investing in the agricultural sector, noting that the experience gained from the conference would provide an important foundation for future initiatives and activities.

A Nationwide Call for Research

To ensure the effective preparation and successful implementation of the conference, a national technical committee was established and given overall responsibility for coordinating the process.

Agricultural professionals across the country were invited to submit abstract of their research papers after the necessary information, guidelines, and submission formats had been disseminated. As a result, more than 180 research papers were submitted, of which 76 were ultimately selected for presentation at the conference.

The selected papers covered a wide range of agricultural issues under eight thematic areas. The breadth of these topics reflected the multifaceted nature of agricultural development and the need for research-based approaches to address both current and emerging challenges.

The Work Behind the Conference

Mr. Abdella Omer, Secretary of the Technical Committee, and Mr. Natnael Habtemichael, a member of the committee, explained that the committee was established



Mr. Abdella Omer

in January 2025 and had worked continuously since then to prepare the necessary formats, plans, and procedures.

“First, we visited all the regions, colleges, partner organizations, and others, and distributed announcements and posters. We also issued a call for them to submit abstracts describing their research and study activities.”

The organizers used different communication channels to reach Eritreans both inside and outside the country. A standardized review format was also prepared to facilitate the evaluation of submitted papers. Each research paper was reviewed by three senior experts, both from within the country and abroad.



Mr. Natnael Habtemichael

The committee members described the process as demanding, particularly because it required direct communication with individual presenters to collect additional information and facilitate the review and preparation of the papers.

“Since the process required us to meet individually with each paper presenter to collect and communicate the necessary information, we had a very heavy workload.”

Coordinating a National Event

Ms. Siye Negash and her team served as logistical coordinators of the event.

She explained that her team was responsible for providing the necessary materials, coordinating activities, and monitoring the preparations.



Ms. Siye Negash

“The group that I led focused on providing the necessary materials, coordinating, and monitoring the work through the Planning and Event Management Unit of the Public Relations Division of the Ministry of Agriculture.”

The preparations covered a wide range of logistical activities, from arranging the conference halls to providing the required materials and logistics, printed documents and

promotional materials, facilities, and other supplies, as well as inviting and coordinating participants.

Given the scale of the conference, the conference was organized across three halls. More than 300 participants attended, with women accounting for 23 percent of the participants. The diverse group included ministers; representatives of government ministries; officials and experts from regional agriculture and land departments; higher education institutions; national associations; development partners; representatives of the Eritrean Crop and Livestock Corporation; the Forestry and Wildlife Authority; research paper presenters; farmers’ representatives; innovators; Eritreans who came from abroad; and other stakeholders.

Following the conclusion of the Conference, selected research paper presenters visited the National Integrated Organic Agrotech Solutions Akria Site

Ms. Siye expressed appreciation to the Ministry of Information for its contribution in raising public awareness and disseminating information about the conference through all media outlets.

A Vibrant and Participatory Platform

Feedback from participants indicated that the conference was widely regarded as successful, timely, and dynamic. The open atmosphere and active exchanges observed throughout the two days reflected the strong interest of participants.

Dr. Efrem, “During these two days of the conference, there was a very vibrant atmosphere. I observed participants expressing their satisfaction and appreciation in a positive spirit and calling for the continuation of such a constructive

platform.” He also highlighted the constructive and open exchanges among participants, which were grounded in knowledge, evidence, and professional discussion.

Members of the Technical Committee similarly expressed their appreciation for the enthusiasm demonstrated by participants.

“In general, the high level of enthusiasm we observed among experts at all the platforms, particularly among young professionals, is encouraging and will drive greater efforts. The interest, willingness, initiative, and professional capacity demonstrated both inside and outside the country are truly encouraging.”

Ms. Siye also noted that the feedback received from participants was highly positive. “The feedback we received from the participants was very positive. They described the conference as timely, open, and participatory, and said that they gained a constructive experience. They also highlighted the good management and coordination demonstrated during the conference and expressed their hope that such a conference would continue regularly.”

A Promising Beginning

Although this was the first National Agricultural Studies Conference, the overall assessment from organizers and participants was that it had been highly successful and had opened a promising path for the future.

The strong response to the call for research papers, together with the constructive discussions held during the conference, demonstrated the considerable professional knowledge and research potential available in the country.

Dr. Efrem emphasized, saying: “Thanks to this national conference, we were able to see many highly capable young professionals. Their impressive research papers deserve to be preserved and promoted.” He stressed that the research presented at the conference should serve as a basis for further work and expressed his expectation that similar platforms would continue to be organized.

Mr. Natnael Habtemichael also highlighted the strong participation of young professionals and women.

“One of the things that pleased me was the high participation of youth and women professionals. This should be encouraged and continued. In addition, I am pleased that almost all the areas in which we expected research and studies to be conducted were addressed.”

For Mr. Abdella Omer, the conference provided an important opportunity for professionals who had been waiting for a platform to present their work.

“Thanks to this conference, many

professionals who had been waiting for an opportunity were able to come forward, present their research, and become motivated to undertake better work.”

Looking Ahead

At the conclusion of the Conference, Minister Arefaine Berhe commended the young female and male researchers for their commitment, dedication, and substantive scholarly contributions. He underscored the critical importance of fostering collaborative and innovative approaches to addressing the challenges confronting the national agricultural sector, emphasizing that the recommendations emanating from the conference constitute an important basis for advancing sustained and long-term development. Minister Arefaine further reaffirmed the Ministry’s commitment to continued dialogue and the convening of future conferences as essential platforms for promoting research-based, practical, and actionable strategies for the advancement of Eritrea’s agri-food system.

Mr. Arefaine Berhe, confirmed that similar agricultural research conferences would continue to be organized regularly.

This commitment provides an important opportunity to institutionalize a national platform where agricultural researchers and professionals can regularly share knowledge, present evidence, exchange experiences, and contribute to policy and practice.

The inaugural National Conference on Eritrean Agricultural Studies has therefore not only brought together a wealth of agricultural research and professional expertise; it has also demonstrated the value of collaboration and knowledge-sharing in advancing Eritrea’s agricultural sector.

As the country continues to pursue sustainable agricultural development and stronger food systems, the continuation of such platforms will provide an important foundation for turning research, innovation, and professional expertise into practical solutions for national development.



Keynote Address by H.E. Arefaine Berhe, Minister of Agriculture of the State of Eritrea on the National Conference on Eritrean Agriculture Studies

Your Excellency, Yemane Ghebremeskel, Minister of Information

Your Excellency, Halima Mohammed, Minister of Education

High Ranking Government and PFDJ Officials

UN Agencies Representatives

Distinguished Guests

All Protocols Observed

Ladies and Gentlemen !

It is s my privilege to welcome you today at this pivotal national Conference on Eritrean Agricultural Studies. I thank you for sparing your time to join us today, and I wish to acknowledge that your presence here today is not only an honor for us, but also show of solidarity for our continued effort to improve the Eritrean agriculture.

I would like to inform you, Ladies and Gentlemen, that the inspiration to hold this Conference is rooted on the International Conference of the Eritrean Studies held in January 04-06, 2025. His Excellency Yemane Ghebremeskel, Minister of Information, led the organization of that Conference while Her Excellency Halima Mohammed, Minister of Education, chaired the event. Today we are graced by their presence in this opening session. Please join me in giving them a warm applause.

This event signifies a renewed commitment to transforming Eritrean agriculture and solidifying its role as the cornerstone of our nation's economic prosperity. As we all know, Eritrea's history is inextricably linked to our land, and agriculture has been the lifeblood of our communities and economy for generations. However, we recognize that simply maintaining existing practices is not enough to meet the challenges of a rapidly changing world, including climate change, population growth, economic instability and ecological degradation. That is why this conference, organized under the theme "Advancing Sustainable Agri-food Systems for National Economic Growth," is vitally important for sharing experiences and lessons learnt that could improve current practices to foster agricultural development.

A thriving agricultural sector directly contributes to GDP, creates employment opportunities, reduces reliance on imports, and strengthens food security, which are all essential for Eritrea's future development. This Conference therefore serves as a platform to display ongoing research, innovative solutions, and strategic planning aimed at realizing these ambitious goals. It is an opportunity to translate commitment into tangible action, driving sustainable agri-food systems that fuel our economic growth and development.

The theme, "Advancing Sustainable Agri-food Systems for National Economic Growth," recognizes that long-term prosperity is not simply about increased yields, but it is about building resilience and equitable food systems capable of meeting present needs, while safeguarding resources for future generations. "Sustainable Agri-food" demands an integrated approach incorporating climate-smart technologies, water conservation, soil health management, diversification of crops and livestock, and value chain development, where the MoA is making every effort to resolve these challenges. Crucially, it also prioritizes the livelihoods of our farmers, particularly smallholder communities, ensuring that they benefit directly from increased productivity and market access.

Ladies and Gentlemen !

The MoA is implementing its 5-year strategic plan, 2024-2028, under the strategic vision, "Safe and Nutritious Food for Everyone, Everywhere". Supporting smallholder farmers is a major component of the strategic plan, where the MoA has designed three main strategies approaches to improve farmers' livelihoods through access to improved technologies, and extensive extension services, thereby realizing the vision Safe and Nutritious Food for Everyone, Everywhere. Let me touch upon each of them very briefly.

- The first one is the Small and Medium Commercial Farmers Strategy transforms small and medium commercial farmers into

modern commercialized farm-business. The Small and Medium Commercial Farmers Strategy is based on two pillars of intervention mechanisms: “Technological Support”, which is the hardware, and “Creating an Enabling Environment”, as the software.

- The second one is the Minimum Integrated Household Agricultural Package, popularly known as the MIHAP. The MIHAP is planned for smallholder farming communities, which have the opportunity to use irrigation water to support crop and livestock, and vegetables farming, with the aim of providing sufficient food and nutrition for the participating farmers, as well as producing extra production to the market, including women in agri-business
- The third one is the “Small and Productive Farm Plot strategy, known in short as SPFP, which focuses on households living in arid and semi-arid environment engaged in traditional rain-fed agriculture, and water-stressed areas. The idea is to intensify farming on 1000 square-meter farm plot in producing cereals, pulses and oil crops, as well as vegetables in subsequent seasons. In addition to these agricultural activities, participating farmers are expected to engage in complementary agricultural activities that contribute to household food and nutrition security. These include, raising local backyard chickens, beekeeping using top-bar hives, and keeping either one dairy cow or up to six dairy goats for milk. Until the first half of 2026, over 90 % of the planned villages in Zobas to participate in SPFP comprehensive at least one farmer in each village has established SPFP comprehensive, and by the end of 2026, the plan is that every village will have implemented the SPFP comprehensive. To help expand the SPFP comprehensive strategy, farmers’ field schools will make considerable efforts for sharing knowledge and experiences among farmers. The year 2027 will be used to address any remaining gaps. And during 2028,

which is the final year of the strategic plan, efforts will be made to fine tune and making sure that all households in all the villages have established SPFP comprehensive competently, thereby ensuring the achievement “Safe and Nutritious Food to Everyone, Everywhere”.

Ladies and Gentlemen !

This conference represents an opportunity for open dialogue, knowledge sharing, and collaborative planning. We value your insights as key stakeholders. Your contribution and active participation is essential in shaping the future of Eritrean agriculture. I thus call on each of us to embrace innovation, champion sustainable practices, and dedicate ourselves wholeheartedly to realizing this vision. Let us work together, as we embrace into the future, united in our commitment to building a vibrant agriculture, where the Eritrean agriculture sector thrives as a powerful engine for national economic advancement.

Before I conclude let me reiterate my sincere appreciation to the Organizing Committee, who worked so hard under the Chairmanship of Dr Efrem Ghebremesqel, during the last one and half years to realize the successful organization of this Conference. Let us give them a warm applause. Finally, yet importantly, let me commend all the presenters and their collaborators, who committed themselves to bring up their research work successfully to the attention of this Conference.

In conclusion let me wish you fruitful deliberations, and we look forward to see your constructive recommendations to move us forward.

I thank you for your attention, and wishing you a pleasant two-day discussion.

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