



G20 Meeting of Agricultural Chief Scientists (MACS) Varanasi, India; 17-19 April, 2023

Chair's Summary & Outcome Document



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All G20 Agricultural Chief Scientists agreed to paragraphs 1-2 and paragraphs 5-12, along with Annexure I.

1. Under the G-20 Presidency of India, the Meeting of Agricultural Chief Scientists (MACS) was held during 17-19 April, 2023 at Varanasi, India. The G-20 Member States, Invited Countries and International Organizations participated in the MACS to discuss and identify the Research and Development (R&D) priorities in agriculture to foster transformation towards diverse, resilient and sustainable agriculture and food systems.
2. Global food security concerns have been aggravated by the COVID-19 pandemic and climate change. This requires multi-layered solutions in the spirit of “One Earth, One Family, One Future”. We intend to safeguard the global food security and nutrition by strengthening our efforts towards sustainable agriculture and food systems by leveraging science, technology and innovations.
3. ¹Since February 2022, we have also witnessed the war in Ukraine further adversely impact the global economy. There was a discussion on the issue. We reiterated our national positions as expressed in other fora, including the UN Security Council and the UN General Assembly, which, in Resolution No. ES-11/1 dated 2 March 2022, as adopted by majority vote (141 votes for, 5 against, 35 abstentions, 12 absent), deplores in the strongest terms the aggression by the Russian Federation against Ukraine and demands its complete and unconditional withdrawal from the territory of Ukraine. Most members strongly condemned the war in Ukraine and stressed that it is causing immense human suffering and exacerbating existing fragilities in the global economy – constraining growth, increasing inflation, disrupting supply chains, heightening energy and food insecurity, and elevating financial stability risks. There were other views and different assessments of the situation and sanctions. Recognising that G20 is not the forum to resolve security issues, we acknowledge that security issues can have significant consequences for the global economy.

¹ Paragraphs 3 and 4 of this document, as taken from the G20 Bali Leaders' Declaration (15-16 November 2022), were agreed to by all member countries except Russia and China.



4. It is essential to uphold international law and the multilateral system that safeguards peace and stability. This includes defending all the Purposes and Principles enshrined in the Charter of the United Nations and adhering to international humanitarian law, including the protection of civilians and infrastructure in armed conflicts. The use or threat of use of nuclear weapons is inadmissible. The peaceful resolution of conflicts, efforts to address crises, as well as diplomacy and dialogue, are vital. Today's era must not be of war.
5. We call for increased coordinated R&D efforts to provide nutrient rich varieties of food crops for the benefit of farmers and consumers.
6. Recalling the 2030 Agenda of the Sustainable Development Goals (SDGs) and G20 Matera and Bali Declarations, we recognize the importance of research and innovation and call for sharing knowledge, experience and best practices voluntarily with agreeable terms in sustainable agriculture and food systems. We endeavour to intensify research and its implementation in agriculture and related sciences to improve the capacity of stakeholders, including local communities; indigenous people as applicable; women; youth; smallholder; family and marginal farmers. We intend to deepen effective collaborations between national and international research organizations for sustainable agricultural development.
7. We recognize the need for enhancing R&D collaborations between the public and private sector to build resilient agriculture and food systems, find solutions for climate change adaptation and mitigation without adverse effects on food security, protect and enhance biodiversity, and help improve productivity and profitability sustainably in global agri-food value chains. We recognize the potential of crop and livestock breeding innovations to improve environmental health and productivity outcomes. Effective investments in agricultural research and innovations will enhance the capacity to build resilience to climate change. Success of public and private sector collaboration in R&D depends on scaling up of innovations and information sharing.
8. We recognize the importance of digital transformation of agriculture and food systems in improving sustainability and outcomes for farmers. We encourage increased public-private investments and partnerships for improving communication and adoption of innovative tools, agricultural practices and technologies that meet the needs of stakeholders.



9. We call for cooperation in research and extension to improve responsible, sustainable and inclusive use and application of digital technologies for food production and safety, climate resilience, circular economy principles, and for preventing food loss and waste.
10. We highlight the importance of locally adapted crops for the transition towards resilient agriculture and food systems, enhancing agricultural diversity, and improving food security and nutrition. Recognizing the achievements of the Wheat Initiative, we intend to continue the R&D efforts to provide inclusive solutions for climate-resilient, nutritious, locally adapted, indigenous and underutilized grains. To strengthen the research collaboration and public awareness of these grain crops, we support the launch of the “**Millets And OtHer Ancient GRains International ReSearch Initiative (MAHARISHI)**” with voluntary membership from G20 member countries, non-member countries, International Organizations and the private sector. The objectives and modalities of this Initiative are placed at **Annexure-I**.
11. We support India’s proposal to organize a workshop on climate change, sustainable and climate-resilient agricultural practices and actions to make agriculture a part of the solution to the climate crisis. We also recognize the enhanced need of cooperation and research on transboundary diseases, antimicrobial resistance and prevention of zoonotic disease emergence among One Health issues. We support the proposal to organize an experts meeting on the ‘One Health’ approach for identifying opportunities to undertake research through collaborations, without duplicating the efforts of existing international organizations.
12. We express our deep gratitude to the Indian Presidency for their leadership, hard work, and enthusiasm for organizing the MACS 2023. We look forward to the next MACS to be hosted by Federative Republic of Brazil in 2024.

Varanasi, 19 April 2023



Annexure: I

Millets and other Ancient Grains International Research Initiative (MAHARISHI)

We, under the auspices of a G20 MACS Global Research Collaboration Priority (GRCP), support the launch of the “Millets And OtHer Ancient GRains International ReSearch Initiative (MAHARISHI)” to facilitate research collaboration on climate resilient and nutritious grains including Millets and other underutilized grains. This will supplement the efforts undertaken under the International Year of Millets 2023 (IYoM 2023) program initiated by the United Nations General Assembly (UNGA).

Achieving impact across multiple grains is difficult due to dispersed efforts. To address this problem, a framework must be developed that can be applied to the grains under this initiative.

We underscore that any G20 member may voluntarily contribute funds, scientific expertise, and/or other resources to the initiative. The MAHARISHI intends to cooperate with public and private organizations, making efforts to advance research on these grains. In alignment with the G20 MACS guiding principles, this GRCP will be limited to two years, and a written report will be provided during the 2025 G20 MACS.

The activities of this effort may continue after 2025, but at this point, the activity should no longer be discussed, presented, or reported at the G20 MACS, except for any future stocktaking report.

Drawing upon the learnings from the Wheat Initiative, the MAHARISHI intends to pursue the following cost-effective activities, while striving to avoid duplication of existing efforts:

- Establish mechanisms to connect researchers and institutions working on identified grain crops to enhance the dissemination of research findings, and identify research gaps and needs. This will also include supporting open access publication of research results.
- Establish web platforms to connect researchers, exchange data, share communication products and thematic briefs to encourage research and information sharing in an open and accessible manner.



- Organize knowledge transfer, on voluntary and mutually agreed terms, capacity-building activities and international research workshops and conferences. These activities would endeavour to encourage researchers to work on these grains.
- Provide research and innovation prizes and/or awards to scientists to support and promote their research interests.

Implementation

The MAHARISHI secretariat will be based in the Indian Institute of Millets Research (IIMR), Hyderabad with technical support from International Crops Research Institute for Semi-Arid Tropics (ICRISAT), One CGIAR, International organisations (IOs) and research institutions.

Varanasi, 19 April 2023

