



G20 ITALY 2021

10th Meeting of Agricultural Chief Scientists (MACS)

Communiqué

1. The 10th Meeting of G20 Agricultural Chief Scientists (G20-MACS), chaired by the G20 Presidency of Italy was held virtually on June 15-16, 2021 along with participants from G20 members, guest countries and international organizations with the goal of promoting international research collaboration and identifying global research priorities and targets to drive the transition towards more sustainable food systems. Delegates shared their experiences and discussed the role of science, technology, and innovation in sustainable food systems to improve productivity, food security and nutrition, and food safety.
2. Recalling the commitment to the 2030 Agenda for sustainable development and the Paris Agreement, we recognize the importance of research and innovation in promoting science-based, data-driven sustainable practices in agriculture and in supporting actions on the mitigation of and adaptation to climate change. We highlight the importance of sharing information regarding experiences, best practices, knowledge and progress in agricultural science, technology and innovation at national, regional and global level, including for the benefit of the least developed countries.
3. Tackling the multiple challenges related to food and agriculture, with regard to the social, economic, and environmental aspects of food systems and exacerbated by system shocks such as the COVID-19 pandemic, we focused the discussion on the science-policy interface, bridging the gap between science, policy and agriculture in building sustainable food systems, including discussion on the United Nations Food Systems Summit (UNFSS). We commit to mobilize our agricultural science networks to engage with the Scientific Group of the UNFSS.
4. Considering that the digital transformation of agriculture can improve sustainability, including protection of biodiversity and resilience of food systems, we welcome investments in the research and development of innovative digital technologies tailored to the needs of sustainable production, including those of small producers and processors, and in learning and capacity building necessary to their uptake and effective deployment, including in digital skills, knowledge exchange, technological infrastructures, and standards. We note the importance of questions of data ownership, data governance and of ensuring data privacy for the stakeholders of the food value chain.
5. Digital traceability tools may play a key role in enabling risk-based food safety approaches, supporting the work of regulatory agencies, and providing information for consumers. Critical and emerging technologies such as artificial intelligence, advanced computing, and distributed ledger technologies could enhance digital traceability and lead to safer and more sustainable



food systems. We encourage research cooperation to improve the use and application of digital traceability technologies.

6. During the 10th MACS we discussed application of genome editing in agriculture, its potential benefits and risks, its potential use for sustainable development, as well as the public perception, and the status of regulatory policy. We encourage international exchanges to further reinforce science-based understanding and knowledge of genome editing and its application in agriculture to support sustainability, including biodiversity and agriculture productivity, and food system resilience and security, and to inform policy approaches and regulatory systems.
7. We stress the need for effective research collaboration between countries, and between the public and private sector, to find solutions to help farmers mitigate and adapt to climate change, to improve sustainability, productivity, and profitability. Investments in agricultural innovation and research and development (R&D) can enhance existing approaches and adapt and build resilience to climate change. Together we call for greater and more effective investments in agricultural R&D and innovation to help to raise global ambition and underpin more rapid and transformative climate action in all countries. We support the G20 Presidency proposal to organize a workshop on the interlinkages between sustainable agriculture and climate change focusing on the risks, the adaptation of agriculture to climate change and actions to make agriculture part of the solution.
8. We support the proposal from Italy to highlight the One Health approach by organizing an experts' meeting on antimicrobial resistance (AMR) to focus on identifying opportunities for, research initiatives such as social and technological innovative solutions to better fight AMR and to promote responsible antimicrobial use to help tackle the related risks to public health and food systems. We also highlight the need to enhance the cooperation and research on One Health issues and prevention of emerging infectious diseases.
9. We acknowledge the efforts and achievements that have arisen from MACS with the purpose of enhancing food security, nutrition and agricultural productivity, supporting sustainable and resilient food systems, particularly during the COVID-19 pandemic, through strengthening international research cooperation. We acknowledge the importance of continuing the stocktaking of progress on such initiatives emanating from the MACS. In this regard, we appreciate the progress on the activities emanating from the 9th MACS, sustainable agriculture development in drylands, and the water, energy and food nexus to curtail future food uncertainties.
10. We look forward to the next G20 MACS, to be hosted by Indonesia in 2022.