G7 AGRI-YOUNG HACKATHON

Syracuse, September 24-27, 2024

The Process (speech)

Thank you to the Ministers for the opportunity to participate in the G7 forum.

Honorable ministers and distinguished guests. The Italian Ministry for Agriculture, food sovereignty and forests, under the G7 presidency recognized that youth-led initiatives are of paramount importance to foster sustainable development and thus convened the "G7 Agri-Young Hackathon" in cooperation with the Italian agency for youth to address three key topics: (1) The Role of Science and Innovation for Agrifood Systems Transformation Under Climate Change, (2) The Young Generations in Agriculture in the Global South, and (3) Global Food Security Challenges and Its Drivers.

The participants in the hackathon include youth and teachers from the G7 countries and the European Union. Each country selected 3-4 representatives from various sectors including young farmers, university and high school students, and teachers who have expertise in crop and livestock management, fisheries, nutrition, environmental sciences, biotechnology, policy, economics, education, and training.

Since August, we have met online and prepared written documents to address questions related to each of the key topics. From this initial work we have worked in person for the past two days to elaborate our recommendations for the G7 Ministers of Agriculture.

Regarding the Role of Science and Innovation for Agrifood Systems Transformation Under Climate Change, we discussed innovations that may improve crop resilience to climate change, potential risks and benefits of adopting agricultural technologies, and how science-driven policies can promote the adoption of sustainable agricultural practices. We discussed the meaning of innovation, and realized that while innovation can be something brand new, innovation also can include existing knowledge, technologies, and farm management practices not yet adopted in a particular region. Yet, barriers such as lack of publicly-owned information, low knowledge sharing, high cost of development, and financial risk for farmers prevent reorientation of food production to healthy and nutritious food and the adoption of available innovation. Thus, recommendations focus on possible solutions for closing the gap between available innovation and adoption at the farm and food system level.

The group on Young Generations in Agriculture in the Global South addressed barriers that young people face in entering the agricultural sector, how barriers can be overcome, and how education and training can prepare the next generation of farmers, researchers, and business leaders. We discussed familiar challenges related to economic, environmental, and social problems that are replicated across the globe, and believe these shared experiences can be transformed into beneficial practices that could be implemented in the Global South. Environmental barriers include climate change, risk management, and unstable weather conditions. Social barriers include education, access to skills and knowledges, opportunity, and gender equity. Economic issues include access to land and land governance. Our recommendations focus on education and financing.

Education is critical to develop and improve skills and knowledge. Financing is essential to support and encourage young farmers and to help them to be competitive.

The group on Global Food Security Challenges and Its Drivers discussed global food security and its drivers from a local, national and global perspective. We discussed the lack of access to safe and nutritious diets, lack of income for agricultural producers and workers in agriculture, and problems in the food systems and along value chains. We also discussed the most critical socio-economic factors contributing to global food insecurity, how geopolitical conflicts and trade policies impact global food supply chains, and emerging risks to food security due to climate change and how these can be mitigated. The group felt that including youth from food insecure countries would have contributed greatly to our discussions. We also discussed water security as a major issue and that efficient use of water in agricultural production, water governance, preparedness against extreme weather events, and climate change need to receive more attention in the future.

Now six of the participating youth will present the results of our work and policy recommendations for the Agriculture Ministers that we hope can inform ongoing discussion and inspire practical solutions to these pressing issues.

SPEECHES

First recommendation

My name is Crystal Salazar-Nieto one of the students from the United States of America.

Today, I want to address some of the critical challenges young farmers in the Global South face. These challenges not only hinder their ability to succeed but also threaten the sustainability of agriculture in the region.

The first major issue is limited access to financial support. Many young farmers struggle to secure youth-friendly, agricultural-specific loans. When loans are available, they are often accompanied by high interest rates and lack the tailored financial guidance needed to navigate the complex nature of agricultural investments. This leaves young farmers at a disadvantage before they even begin.

Another challenge is the lack of comprehensive support for the diverse aspects of agriculture. While crop production may receive some attention, areas like livestock, fisheries, fisheries and sustainable farming practices are often overlooked.

Without adequate financial backing in these areas, young farmers find it difficult to adopt innovative techniques or scale their operations.

Moreover, the absence of collaborative frameworks such as cooperatives further limits their growth. Without a system in place to pool resources—whether it's machinery or financial capital—many young farmers are left isolated, unable to benefit from shared assets that could improve productivity and reduce costs.

Finally, there's a lack of a robust safety net for farmers. Agriculture is inherently risky, with economic and environmental shocks threatening both income stability and long-term profitability. Many young farmers are one bad season away from losing their livelihoods, yet there are few risk management tools available to protect them.

As we reflect on the key issues of economic support, funding, and farmer safety nets, we can take meaningful steps toward empowering young farmers and identifying financial solutions for sustainable agriculture in the Global South. With that, I'll now hand it over to my colleague, who will present potential recommendations to tackle these pressing challenges.

My name is Katharina and I am representing the European Council of Young Farmers (CEJA). I am Vice-President of CEJA and a farmer from Austria, specialised in pig breeding.

We, youth and young farmers are current future and drivers of agricultural sustainability and resilience.

To meet the challenges that Crystal just mentioned, today we call on you Agriculture Ministers and Commissioners to the following actions:

1) establish Rural development banks that provide tailored financial solutions to young people in agriculture, especially women. This helps youth to establish in the farming sector and Invest into resilience

2) provide mobile Advisory services, providing expert guidance on finance and farm management. These should be connected to the banks (1. point), to ensure a holistic approach and easy access to the services.

Practical idea = mobile advisory bus

3) Finally, ensure equal access for all to long term farm investments that take into account the local needs and specificities, regarding climate, soils, water availability etc.

On behalf of youth in agriculture across the G7 Members, I thank you for this opportunity and we expect you to deliver.

The future is now!

Second recommendation

Nearly 1 billion of the world's 1.2 billion youth aged 15-24 reside in developing countries with 800 million residing in rural and semi-urban areas. 3 in every 5 are unemployed and the majority are unemployed in the informal economy. Currently youth unemployment is at 13% with 20.4% of them not in employment, education or training (NEET). This shows the need for support and cooperation with young people in these countries.

One of the barriers to unlocking this unemployment issue is the lack of skills, knowledge and resources. There is usually a mis-match, especially in the global South between the current skills and what is desired by the labour market and also the skills needed for young entrepreneurs to use and adapt to modern farming practices.

Our solution would be to create a digital learning platform for young people to exchange knowledge and a directory of mentors that young people can be paired up with for face to face learning in their area. We also need to invest in market relevant skills, digital and entrepreneurship training. This can be done with a strong partnership, financial commitment and policy alignment of all ecosystem actors.

Some examples of best practices that we have learnt as a group from our own context and presentations heard from others.

For example, in Wales they have a scheme called Farming Connect which aims to revitalise rural communities and provide support for agriculture. They offer a range of services from expert advice, support services and mentoring to events, webinars, networking and more. The creation of skill hubs and mentorship modules could be replicated and adjusted to work in countries in the Global South.

It has proved to be very successful, with (waiting for data)

An example for France , there exists a partnership with Ivory Coast where young people come for training in France through their university to spend 6 or 9 months to share and exchange practises and knowledge. When back home they put into practice and adapt what they have learnt and had seen. For example there is currently a project on potatoes growing going on we are following up closely the results.

Last example I want to share is an example I learnt from listening to some of the presentations from some organisations here. IFAD has a youth employment programme with Germany in 9 African countries where they offer a holistic ecosystem approach bringing onboard several actors.

We believe that any new program should take a holistic approach in order to equip young people with all the essential tools to be successful. This holistic approach to educating young people, particularly in the agricultural sector should ensure that they can gain market access, employment services, business development, technical transfer, networking and financial services. After completion of training, there should be post support to ensure that the program developed is sustainable and is having an effective impact on transforming the career or agri business opportunities for young people especially those in the Global South.

To conclude, as a group we recommend to

- *Align policies and investment.*

- *Increase collaboration and partnership*

- *Invest in education and skill development as described by the three best practices to bridge the skills gap and mismatch.*

Recommendations

Nearly 1 billion of the world's 1.2 billion youth aged 15-24 reside in developing countries with 800 million residing in rural and semi-urban areas. 3 in every 5 are unemployed and the majority are unemployed in the informal economy. Currently youth unemployment is at 13% with 20.4% of them not in employment, education or training (NEET). This shows the need for support and cooperation with young people in these countries.

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Thank you.

Third recommendation

My name is Lanna Coneybeare from Canada.

We need to adopt innovation in agriculture in order to address food insecurity in all countries, promoting sustainable practises and food supply resilience.

Our first area of concern is the lack of consistency and availability of knowledge regarding improved farming practices, best legislative practises to support keeping pace of innovation , and methods of food production to adopt to and mitigate climate change.

A changing climate is making farmers work in more adverse weather conditions, and we are on the front line of the impacts of climate change. We need to be supported in our need to adapt quickly, and not be hindered by slow moving and antiquated policy.

For example, it is well established that the use of drones in the application of sprays, fertilizers, and cover crop can reduce soil compaction. But unfortunately, current regulatory framework and aviation regulations in many countries prevent drones from being used in this innovative way.

The second barrier to innovation that we would like to highlight is the cost of development of adaption. The cost can occur by having to navigate and satisfy legislative requirements, or right at the farmer level having to pay for these expensive innovations or technologies. This high cost can simply prevent innovations from being adopted, or continues to contribute to the consolidation of ownership of innovations and technology in the agricultural sector. This consolidation can lead to predatory pricing on seed,

technology and equipment, which extracts a vast amount of wealth from primary producers.

To target these barriers, we propose establishing an international development fund to drive publicly owned research and intellectual property. The financial contribution to this fund will be from countries, with their contribution weighed based on the country's economic development. Projects and research need to be accepted following the eligibly criteria of gender equality, youth empowerment and employment, as well as projects in the global south.

Drawing out of this fund can be from a wide variety of actors, such as educational institutions, and businesses, with the strict criteria that all results from these projects or research are owned publicly. Public ownership of this information is quintessential in the successful sharing and accessibility of this information. Another benefit of this fund would be the strengthening of the collaboration between scientific institutions and policy makers to allow for greater efficiency in policy implementation and changes.

The second challenge we would like to highlight is one that we would turn around on you, our political representatives. We would challenge you to innovate within the political institutions that govern global trade.

A lack of fairness in international trade risks undermining us on farm. Currently international trade does not value intrinsic public goods. Our current consolidated supply chains fail to reward the value of environment, society and animal welfare and this needs to change if the global food system is to increase its resiliency and sustainability in the face of climate change and an unstable geo political environment.

The current system asks some farmers to innovate, take risks and change their businesses in a manner that will benefit the environment, society and animal welfare. Yet at the same time our trade policies and the consolidated supply chains operating in them, risk undercutting these farmers and putting at risk those innovations that will help our planet, societies and guard against poor animal welfare.

We have two recommendations to help address these challenges. Firstly, boarder adjustments need to be made to underpin high environmental, animal welfare and social standards.

In 2023, a trade deal was ratified between the EU and New Zealand. This landmark trade deal included the use of a Tariff Rate Quota (TRQ) with a condition pertaining to standards of beef production. The trade deal is an example of an agreement being made to benefit trade with the need to protect domestic standards related to beef quality, safety, animal welfare, and sustainability.

Additionally a carbon boarder adjustment (CBMA) currently exists for the UK and Europe on fertilizer. This CBAM aims to equalize the price of carbon emissions between domestic products and imported goods. It seeks to prevent "carbon leakage," where companies might relocate production to countries with less stringent climate regulations, thereby undermining environmental efforts. We have demonstrated in some areas that our public goods matter but we cannot stop there. Why stop at carbon? We must do more.

Finally we propose an international supply chain review focusing on the imbalance of power between producer, processor and retailers. These types of assessments are happening in countries such as the UK but international trade does not respect geographical boundaries and therefore our institutions need to innovate and keep pace with this. Once we have this assessment, we can then systematically assess each element

of the supply chain, find where we can mitigate risks, and align practices with sustainability goals.

Thank you.

Fourth recommendation

My name is Matthias Berger I have both Italians and German roots. I am studying agricultural sciences in the German university of Hohenheim.

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Thank you.

Fifth recommendation

My name is Kennedy Bentley from the US.

We want to draw your attention to the critical issue of water security, a concern that affects us all globally. Water availability is closely linked to food security, as it is essential for producing, cleaning, and processing our food. Agriculture alone accounts for 72% of

global freshwater withdrawals, making it the highest-consuming sector. Both the quantity and quality of water are crucial for producing safe and nutritious food. We are not only confronting water scarcity due to the growing impacts of climate change, but also facing the issue of water contamination. Agricultural runoff, microplastics, and industrial pollution in irrigation systems have compromised crop safety, further threatening both the availability and quality of food in our countries.

Today, 2.4 billion people live in water-stressed countries, and as young people, we witness the real impacts of water scarcity in our daily lives. Our discussions at the G7 meeting highlighted various examples from our home countries that illustrate this urgent problem.
In Sicily, the site of our G7 meeting, a severe water crisis is drastically depleting water reservoirs, forcing farmers to ration water and resulting in damage to vital citrus and olive crops. In Germany, our pastures, once lush and green, are now more often yellow during the summer season. Across Europe, we can no longer rely on rain to nourish our crops; when it does rain, the soil is so degraded that it cannot absorb the water, leading instead to destructive floods. In the U.S., outdated infrastructure in both urban and rural areas hampers farmers' ability to irrigate their crops, contributing to reduced yields and increased food insecurity.

To effectively address water security, we need policies that prioritize upgrading outdated infrastructure and providing capacity-building programs for farmers to implement sustainable water management and reuse strategies.
Water security issues have affected African countries long before they became a major concern for the G7, with many of these nations pioneering policies and innovations that can inspire global efforts. For instance, South Africa's National Water Act is one of the most progressive water management policies globally. By recognizing water as a public resource, this law promotes equitable access and sustainable use, forming the basis for the country's National Water Resource Strategy. Through infrastructure development and comprehensive governance reforms, access to clean water has significantly improved for millions of South Africans, making this policy a model for other nations striving to balance human needs with ecosystem sustainability.

Furthermore, as many of us are students, we want to emphasize the importance of exchanging knowledge on water management techniques in agriculture. Practices like rainwater harvesting, small-dose irrigation, irrigation channels, mulching, moisture

sensors, drone technology, drought resistant species and regenerative agriculture can significantly reduce the need for extensive irrigation. When applied on a large scale, these methods can promote more sustainable farming and help conserve global water resources. However, despite the proven effectiveness of many of these strategies, their real-world implementation remains limited. That is why bridging the gap between research, ideas and practical application is crucial. To address this, we propose the development of industrial PhD and post-graduate programs focused on water management solutions and entrepreneurship. These programs should foster partnerships between G7 universities, businesses, and countries that have successfully implemented water strategies, ensuring that innovative practices are put into action on a global scale.

To summarize, as we face the urgent challenges of water security, it is essential to foster international dialogue and collaboration for finding solutions together. We must respond with a variety of solutions in different sectors in order to tackle the problem. We urge all decision-makers to recognize the importance of prioritizing water security management strategies as a key component in addressing global food security. We ask that this crucial topic be included in future meetings and translate the outcome into practical programs and policies, ensuring that we work together towards global food security for all.

Thank you.

Six recommendation

My name is Emily Bland, from Canada.

Our group came together with the ambitious goal of addressing global food security in just three days. However, we soon realized the complexities of this issue. Despite our collective determination, intelligence, and compassion, we were unable to develop a comprehensive solution within such a limited timeframe.

What became evident, however, was the value of our shared experience. Building relationships and learning from one another has proven to be instrumental in shaping us as future leaders. Currently, there is no efficient system that allows youth across the G7 to communicate our perspectives on the pressing challenges in agriculture, either to

policymakers or among ourselves. Youth remain largely underrepresented in political arenas worldwide, with less than 2% of politicians being in their 20s. We operate within silos, lacking communication channels that would allow us to exchange innovations and best practices across borders. Without such collaboration, achieving a food-secure future remains difficult.

Solution

We propose the establishment of a Youth Advisory Council for the G7. This council would work closely with policymakers and industry leaders to ensure youth perspectives are meaningfully incorporated into decision-making processes.

Youth advisory councils have been successfully implemented around the world to engage young people in decision-making. For example, the NEFERTITI project, which connects 17 EU countries, has created a network of demonstration farms that promote knowledge exchange and innovation in agriculture, benefiting over 45,000 participants. In Canada, the Agriculture Youth Council has operated successfully for four years, providing youth with the opportunity to advise on policy within the sector.

Through the creation of a G7 Youth Advisory Council, we envision four key elements:

- *Inclusivity Beyond G7 Countries*

  We recommend that the council include not only representatives from formal G7 countries but also from other nations participating in the G7 Summit. Our group strongly believes that youth representation from Africa would have significantly enriched our discussions and perspectives.

- *Digital Knowledge-Sharing Platform*

  We propose the creation of a digital platform to facilitate knowledge sharing within the council. Multi-sector forums and events that promote collaboration across industries and countries will break down the silos in which we currently operate. This will foster a diverse and dynamic exchange of ideas.

- *Formal Feedback Mechanism*

We suggest a structured framework allowing youth to provide feedback on G7 policies and decisions. Specifically, youth representatives should be included in all G7 Agriculture Senior Meetings, with the ability to offer input on the focus areas identified. This ensures that young voices are considered in decisions that will impact us for the next four decades.

- *Active Participation in Implementation*

  Finally, we emphasize that this group of youth is not content merely to observe. We are eager to engage and take part in planning, policy implementation, and even hands-on work within agriculture. We are ready to contribute and become active participants in creating solutions.

Conclusion

In summary, while we did not devise a plan to solve global food security within the past three days, we believe we have taken a critical first step. We have forged a network of 27 diverse youth, many of whom are primary producers or engaged in innovative research, each contributing a unique perspective to the challenge of global food security.

Over the past few days, we have witnessed numerous instances of youth sharing solutions, policies, and funding opportunities that have addressed challenges we face on our individual farms. Many of us have already extended invitations to visit one another's farms and homes, and some have already made plans to do so. These relationships, rooted in mutual respect and a shared mission, will drive positive change in food production globally.

We may not have solved the world's agricultural challenges yet, but we are confident that this group will. Our commitment to each of you is unwavering: we will create lasting change and play a significant role in securing a food-secure future for all.

These recommendations are the result of the work done by the G7 Hackathon Youth group.