

Transformative Collaboration in Agriculture

The global community must work together to transform the way the world produces, consumes and thinks about food. [The UN Food Systems Summit](#) is focused on the coordination and facilitation of healthier, equitable and environmentally sustainable world food systems. A key part of the overarching Summit are a series of Food Systems Dialogues, largely centered around supporting the [UN's Sustainable Development Goals](#) (SDGs).

Guided by five [Action Tracks](#), the Summit and each Dialogue draw from the expertise of global food system stakeholders in sectors that include science, business, policy, healthcare, academia and agriculture, as well as organizations for indigenous, youth, consumer and environmental groups. Each stakeholder has the opportunity to share and learn, ultimately fostering action through partnerships that not only spur new action but amplify existing initiatives with a common goal: to bring positive change to the world's food systems.

[The Foundation for Food & Agriculture Research](#) (FFAR) recently conducted an Independent Dialogue on how we can globally connect farmers, ranchers and scientists to offset greenhouse gases (GHGs) emitted by agriculture. FFAR is one of three founding partners of [AgMission](#), a global movement with a singular mission of mobilizing farmers, ranchers and scientists to mitigate climate change.

Goals of the AgMission Independent Dialogue

Climate change threatens food security worldwide. While advances to reduce GHG emissions are happening in scientific labs and farm fields around the globe, that work is largely fragmented, limiting the pace of progress. At the same time, climate change impacts are increasing in number and intensity. FFAR, [U.S. Farmers & Ranchers in Action](#) and the [World Farmers Organisation](#) established AgMission as an expansive, coordinated approach to agriculture's climate-change response. AgMission is closing the gaps in agriculture-climate research and data integration while accelerating the development and adoption of new and proven on-farm climate solutions. These steps are integral in connecting practical work to the broad outcome of advancing global food systems.

In pursuit of this goal, FFAR's Independent Dialogue facilitated discussions needed to accomplish the audacious goal of bringing agriculture net negative for GHGs. Through a series of small breakout group discussions, participants identified six criteria imperative to accomplishing AgMission's ultimate objectives.

Findings:

Research and data

Data is critical to the success of any climate-smart farming practice, and generating that data requires expansive research, both on and off the farm. But ensuring comprehensive representation of different types of farming and ranching, while identifying learnings from past research and data trials in other regions can be difficult, time consuming and disconnected.

One short-term opportunity identified in discussions is matching farmers who are willing to be involved in trials with projects to coordinators on a larger scale, instead of just the connections that a farmer may have. This matching effort could tap into the same principles of social networking tools. At the same time, farmers can be incentivized to participate in trials, not unlike how the medical community rewards patient trial participants.

While expanding farmer trial participation is important, understanding gaps in current data to further support adoption must happen quickly. This includes documenting the risks and costs of a new practice or technique at a comprehensive level, such as equipment needed, additional labor, etc. Doing so will help clearly communicate the value of these new practices or techniques back to farmers – data, results, financial gain – and can create opportunities for farmers to be paid for their data, what many believe is the most valuable commodity on a farm or ranch.

The final discussion point around research and data is the need for education on how and why different climate-smart practices – ecosystems practices, water capacity, nutrient cycling – contribute at the micro and macro levels. Peer learning is most likely the immediate opportunity to provide this education, but longer-lense efforts like education through organizations like university extensions, FFA and 4-H is another opportunity, along with curricula at the high school and collegiate level.

Data interoperability

As data collection efforts begin to expand, the next step is creating a centralized and easily accessible depository to make that data available to everyone. In essence this will create a rising tide that lifts all boats. Many organizations are attacking this problem and contributing to solutions, but again there is no central coordination strategy, meaning the results will likely continue to be fragmented.

While identifying all existing data is important, the results must be fully interoperable, democratized and supported by public policy and governance, ultimately contributing to long-term access among farmers, ranchers and all other stakeholders.

Barriers to success around data operability include the sheer enormity of the effort and the fact that much of the data from existing research is currently too narrow in scope to address opportunities holistically. Universal availability will broaden that scope and the efficacy of the practices and systems in overcoming growing climate challenges.

Measuring and maximizing results

One of the biggest challenges with determining success in reducing GHGs is how to measure the efficacy of climate-smart, on-farm practices. This requires a wholesale infrastructure approach to identify effective practices and create the ability to optimize and integrate on large scales. This may require outcome-based reporting tools that document what farmers and ranchers are doing to reduce GHGs, and also the production efficiency and economic impacts to each individual (but anonymous) farm or ranch. Ultimately, these reporting tools must have the functionality to allow users to mine results for use by other farmers and ranchers around the globe.

Collaborate effectively

While collaboration certainly exists in both agriculture and agriculture sustainability efforts, it tends to be regional or otherwise limited. No initiative to date has bridged geographies, crops and animals, production methods and other variances to realize the full value of existing and future collaboration within the global entirety of agriculture. Unifying and connecting efforts will prevent fragmentation or duplications while filling data gaps, maximizing resources and accelerating progress.

To accomplish this, engaging farmer peer networks will be crucial, as well as connecting with those who support and advise farmers and ranchers. That can include extension agents, agriculture retailers, agronomists and other key advisors and input providers. The focus of these efforts is to demonstrate transparency, build trust and drive effective outcomes, while recognizing that individual farmer and rancher spheres of influence can largely vary depending on any number of factors.

Incentivizing adoption

There are many public and private efforts to incentivize certain climate-smart practices. There are likely resources on the table that can be shifted to support this collaboration. There is a

way to get costs covered by the whole system; without that, it will be difficult for private sectors to adequately address incentives for farmers.

Rapid-scale adoption

The adoption of climate-smart farming practices is about more than data; it's about building high-quality, comprehensive datasets that can help drive adoption by connecting them to the most economically viable practices and systems on every farm or ranch. Through research and pilot projects, data can be applied industry-wide to specific practices and systems that will also generate new revenue for farmers, ranchers and other key stakeholders. It must be practical and profitable for producers.

Currently, there is no platform or forum to provide expansive training on climate-smart practices to farmers. The need is even larger in developing countries and bridging that gap is critical for climate-smart agriculture production practices to become normalized globally.

AgMission Dialogue outcomes

Alignment exists between both farmers and industry on the need to balance risk and profitability when implementing climate-smart practices. Proof of success and a need for rewards and recognition along the entire supply chain are valuable components for farmers and industry to assess potential profit.

Scientists often need farmers to participate in trials and demonstrations in order to produce the proof of success that farmers need. However, there is a disconnect in the system as farmers don't know how to get involved and scientists don't know how to reach out. A clear need exists to facilitate these types of conversations. The final point that resonated across all breakout groups was a need for high-quality, reliable and robust datasets to inform decision-making.

FFAR looks forward to continuing to engage with farmers and ranchers, scientists and industry as AgMission continues to evolve. We are actively seeking additional funding and programmatic partners.

Join the conversation

FFAR is committed to building strong public-private partnerships within the agriculture community and welcomes your input. To learn more about how you can engage with FFAR and AgMission, visit AgMission@foundationfar.org.



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