2022 In Review: Launching Eco-Harvest

When we first formed ESMC in 2019, it was after two full years of discussions, planning, research, and coalition building within the agricultural supply chain. We received a grant of $10.3 million from the Foundation for Food and Agriculture Research (FFAR) for the research needed to develop our market program. With our member support, we matched the grant to fund research and development projects and programming in the public-private partnership for a total investment of $20.6 million. We worked with our members to develop science-based and standards-based protocols (approved by SustainCERT) and collaborated with our entire agricultural supply chain to test and refine our program via research pilots.

This resulted in the launch of our market program, Eco-Harvest, in May 2022. Eco-Harvest is the science-based, standards-based market program we envisioned. But there is so much more to do. We look forward to expanding and enlarging this timeline to show how Eco-Harvest projects create measurable greenhouse gas reductions/removals as well as other ecosystem services outcomes for regenerative agriculture.

On behalf of ESMC and ESMRC, I thank and congratulate our members, collaborators, stakeholders, funders, advisors, and supporters for all your contributions and efforts to support Eco-Harvest. We are grateful for your continued participation, collaboration, and support and look forward to many successes as we move forward.

Debbie Reed, ESMC Executive Director
Key Highlights from the Year

We successfully launched our market program, Eco-Harvest, in May 2022, which was the culmination of many years’ collective work coming to fruition. This launch signified the readiness of Eco-Harvest – an end-to-end digitized and advanced technology program and platform to generate high quality, third-party verified credits for soil carbon removals, avoided and reduced greenhouse gases, and water impacts from US farms. Dr. LaKisha Odom, the Scientific Program Director at FFAR, noted at the launch event: “ESMC is a poster child for how collaborative funding and research catalyzes innovation. This consortium is an amazing opportunity to support soil health research, incentivize adoption of soil health practices and provide a science-based methodology to measure the impact of these practices.”

We announced a multi-year roadmap to scale Eco-Harvest with General Mills; this roadmap focuses on priority regions in the U.S. and Canada where General Mills sources its key ingredients, like wheat, oat, corn, and dairy. The initial $3 million investment from General Mills includes an ESMC grant to support the launch and development of Eco-Harvest and funds to scale regional programs.

In 2022, we had...

19 eco-harvest market and pilot projects underway
covering more than 100,000 acres

...and program expansion into:

- California almond crops
- Southern US cotton crops
- Kansas sorghum crops
- Organic production systems
- Dairy systems in the Chesapeake Bay region
Our Eco-Harvest market program was the first to reach pilot certification under the Value Change Initiative in the US. Eco-Harvest achieved project design certification, which means it aligns with the Value Change Initiative Guidance. A subset of enrolled Eco-Harvest producers was also verified to show the reported soil carbon removals and GHG reductions are materially correct, making ESMC’s program the first Value Chain Intervention to reach this milestone of combined validation and verification in the US.

We are a partner on seven USDA Climate Smart Commodity Grants; five were announced in September and two additional awards were announced in December.

Our Eco-Harvest measurement, reporting and verification (MRV) platform was updated throughout 2022 to include multiple enhancements reflecting the needs and feedback of our project partners.

We released a number of research reports through ESMRC, our research consortium. These were made possible by our member working groups, collaborations with technical contractors, and the generous support of FFAR. Part of our mission is to share research findings with the broader scientific community, and we will continue to produce and release reports along these lines to accomplish that mission. Recent reports include:

- Remote Sensing Technology Assessment
- Direct Measurement and Proximal Sensing Technology Assessment
- Modeling and Stratification Technology Assessment
- Final Report on Remoting Sensing, Direct Measurement Technology, and Modeling and Stratification Technology
- Rotational Tillage Assessment White Paper
Looking Ahead: What Is Next?

With Eco-Harvest launch in May 2022, we completed a major objective for our program. However, we still have a lot of work to accomplish.

Next steps for us in 2023 include expanding Eco-Harvest projects to include more regions, more crops, new production systems, and more practice change opportunities. This expansion is thanks to the hard work of our producers, project partners, technical contractors, research team, and member-based working groups. As we launch additional opportunities, we’ll announce them in our newsletter and website.

We see increased biodiversity plantings and enhanced biodiversity practices (such as edge-of-field practices) as key to true regenerative agricultural systems. We have been piloting a biodiversity credit with projects in Missouri and Kansas and are continuing to develop biodiversity materials and support for our projects to incorporate biodiversity.

Participating producers and buyers need a sophisticated, secure, and well-functioning MRV platform to input data, track outputs, and verify results. We spent much of 2022 refining our MRV platform and are working to fully digitize it to streamline project inputs and producer support.

In our cotton project, we focused on Black, Indigenous, and People of Color (BIPOC) producers. We are continuing to expand BIPOC and underserved producer opportunities to participate in Eco-Harvest and are re-launching our Inclusion and Racial Justice working group in 2023.
ESMC/ESMRC Funding

Sources of Organizational Support

ESMC/ESMRC receives funds from diverse sources, including public and private foundations, the award of competitive and philanthropic grants, and dues from our members. Under ESMC/ESMRC’s FFAR grant, FFAR releases research and development funds when cash or in-kind matching funds are provided from our members or via other non-federal sources – so these matching funds are included as a funding source.

Expenses

ESMC/ESMRC expenses are primarily centered on funding for research, development, demonstration, and deployment efforts to build and test our dynamic program, to retain staff and technical contractors, pay producers, and support to allow ESMC/ESMRC representation at meetings, conferences, and presentations. Travel in 2022 increased from the previous year but is still far from normal.

*Consulting Services include contractor support for Technical and Research Development, Certification and Verification Refinement, MRV Platform, Legal and Accounting Advisement, and Program Infrastructure.

**Administrative Costs include software and subscription services, insurance, office supplies, filing fees, bank charges, and advertising.
Our Funders
We thank our funders for their generous support in 2022. Without our funders and their strong commitment to ESMC/ESMRC, we would be unable to drive collective and meaningful change. Our funders included:

1. Foundation for Food and Agriculture Research
2. General Mills, Inc
3. United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)
4. The Ida and Robert Gordon Family Foundation
5. United Soybean Board
6. Walton Family Foundation

Our Members
Our public-private partnership was made up of over 70 members in 2022 including agriculture commodity organizations, food and beverage companies, agribusinesses, land grant universities, and non-profit environmental and conservation organizations across the agricultural supply chain and value chain. These members represent the spectrum of the agricultural sector supply chain with whom we are scaling sustainable agricultural sector outcomes. We thank them for their continued support and participation in ESMC as we grow.
ESMC/ESMRC Founding Circle Members

ESMC/ESMRC Legacy Partner Members
Our Staff
We could not achieve all our progress without the work of our dedicated and experienced staff. Sincere thanks and kudos to our dedicated team throughout 2022, including Debbie Reed, Jack Jeworski, Alana Pacheco, Isidora Jimenez LaCasse, Austin Arrington, Thayer Tomlinson, Lizzie Rose, Jake Deutmeyer, Damaris Canales, Amanda Raster, Stacy Cushenbery, Caroline Wade, Neville Millar, Grant Ivison-Lane, and Andrew Lentz. Read more about our staff.

Our Board
We thank our 2022 members of our board of directors which includes:

Board Chair: Chad Ellis, Chief Executive Officer of the Texas Agricultural Land Trust

Board Vice-Chair, Kris Johnson, Ph.D., Director, North America Agriculture Program of The Nature Conservancy

Mary Jane Melendez, Chief Sustainability and Social Impact Officer, General Mills

Emily Johannes, Head of Sustainable Sourcing, Nestlé USA

Rattan Lal, Ph.D., Distinguished University Professor of Soil Science and Director of the CFAES Rattan Lal Center for Carbon Management and Sequestration, The Ohio State University

Ryan Sirolli, Global Row Crop Sustainability Director, Cargill

Debbie Reed, Executive Director, ESMC