PROJECT SUMMARY

Assessing Sustainability on Kentucky Farms

2022-2025

GLOBAL FARM METRIC FARM SUSTAINABILITY ASSESSMENT TOOL

Measuring Whole Farm Resilience

Since 2022, the Organic Association of Kentucky (OAK) has helped more than 50 farmers complete a Kentucky-based Farm Sustainability Assessment Tool (FSAT) in an effort to drive positive change on farms.

This tool was adapted from the Global Farm Metric (GFM), an internationally recognized framework developed by the Sustainable Food Trust to align common language, goals and quantitative measures that support sustainable agriculture efforts around the globe. The GFM-FSAT measures social, economic and environmental indicators on farms to assess resilience across 12 categories.

Based on globally recognized research as well as advice and consultation from experts and farmers within Kentucky, the tool collects 1,000+ datapoints and is embedded with measures, benchmark scoring and alignment with agricultural best practices and well-known agricultural tools, resources and models.

The GFM-FSAT supports on-farm decision making, leads to targeted technical assistance and offers compelling evidence to buyers in the marketplace, as well as farmer-driven marketing opportunities.

> *I have so many new ideas for my farm after completing the tool! We'll reduce inputs and increase renewables; we've learned to ID more birds and test water quality in our creeks; and we are planning for pollinator habitat and riparian buffer practices.*

ABOUT THE TOOL

Farmers typically spend 4-6 hours completing their sustainability assessment and receive an incentive payment upon completion. The data required to complete the assessment include information that can be easily estimated, mapped data that can be retrieved from linked resources online, details from farm records and data collected on the farm by a technical assistant.

The results are scored relative to published agricultural benchmark data. The scores not only help farmers target areas for improvement on the farm but also allow farmers to identify, celebrate and share their positive measurable outcomes with customers.

With repeat assessments, farmers can monitor change over time and benchmark their results against aggregated results from peer farms.

OAK's Farm Sustainability Assessment Tool helps farmers to:

MEASURE and monitor important indicators related to farm sustainability

BENCHMARK compare data with outcomes from peer farms

SET GOALS use scoring and results to prioritize action toward goals

MARKET increase transparency with buyers by sharing measurable outcomes

FARM VISITS

and technical assistance

FARMERS SAY THE ON-FARM SAMPLING, RESULTING DATA, WHICH COME FROM USING THE TOOL AND OAK'S TECHNICAL ASSISTANCE, ARE INVALUABLE.

The soil data was amazing; I appreciate it so much. I have never gotten such a robust test and analysis of my soil.

As part of the pilot projects, OAK's technical assistance field staff visited each farm to collect soil samples, conduct dissolved oxygen tests on surface water, collect vegetable samples for Brix testing and connect with producers about goals and plans for their farms. The project staff also help troubleshoot any ongoing production concerns and support production efficiencies.

I was able to get detailed soil testing, learn more about water quality, the farm ecosystem and how my small vegetable farm fits into a larger picture of our Kentucky food system.

INDICATORS

Measured in the tool

The GFM-FSAT collects data on over 100 indicators across 12 categories.

CLIMATE	Average Temperature, Average Precipitation, Preciptiation Deviation from Average, Water Risk, Natural Hazard Damage, Natural Hazard Occurence, Limitations to Growing Season, Season Length
COMMUNITY	Key Amenity & Farming Service Access, Market/Sales Channel Access, Key Infrastructure Access, Local Short Supply Chain Activities, Local Employment, Public Access, Educational Opportunities, Peer & Community Network, Outreach & Communication, Community Support
NATURE	Water Pollution, Dissolved Oxygen, EIQ Ecological Component, Soil Pollution, Pollution Risk, Natural Threshold, Landscape Diversity, Connectedness of Farm Habitats, Farmland Birds, Keystone Native Plants, Aquatic Indicator Species
SOIL & WATER	Soil Health, Cation Exchange Capacity, Macro- and Micronutrient Leels, Water Source, Irrigation, Erosion and Runoff Potential
GOVERNANCE	Land Ownership, Farm Business Status, Durability, Certifications/Standards, Management Priorities, Historically Underserved Farmer/Rancher, Participation in Decision Makeing
RESOURCES	State of Buildings, State of Infrastructure, State of Equipment
INPUTS	Plant-based Inputs, Manure & Compost, Fertilizers & Amendments, Agricultural Plastics, Imported Inputs, On-farm Entergy, % Renewable Energy, Direct Energy Per Acre, Recycling/Re-Use/Reduction, Landfill Waste, Waste Volume
FARMERS & WORKERS	Annual Wage, Hourly Wage, Workload, Wage Equity, Training, Capacity Builiding, Career Building, EIQ Farm Worker Component, Occupational Injuries, Policies, Benefits & Social Engagement
CROPS & PASTURE	Crop Germination/Establishment, Crop Losses, Crop Health Level, Pasture Condition, Integrated Pest Management Systems, Grazing Systems
LIVESTOCK	Livestock Losses, Fertility & Productive Longevity, Health Level of Livestock, Health Management Systems, Poultry, Ruminants, Hogs & Pigs, Equine, Aquaculture, Other Animals
PRODUCTS	Whole Farm Productivity, Crop Productivity, Livestock Productivity, Buyer Standards, Soluble Solids, EIQ Consumer Component, Crop Diversity, Animal Diversity, Farming System Deiversity
ECONOMICS	Net Income, Profit Margin, Budget & Financial Goals, Debt-to-Asset Ratio, Financial Flexibility, Revenue Sources, Market Channels, Agricultural Product Sales, Production Flexibility & Risk Management

DATA SOURCES

Used for farm benchmarks and scoring

- USDA Census of Agriculture
- USDA NRCS Guide to Pasture Condition Scoring
- USDA National Agriculture Statistics Service (NASS)
- USDA Animal and Plant Health Inspection Service (APHIS)
- Animal Welfare Institute
- NOAA National Centers for Environmental Information
- FEMA National Risk Index
- USDA Plant Hardiness Zones
- USDA Agricultural Resource Service (ARS) Midwest Climate Hub
- NRCS Water Quality Indicators Guide
- Kentucky Department of Fish and Wildlife State Wildlife Action Plan
- Kentucky Water Watch
- US EPA Ecological Soil Screening Levels for heavy metals
- National Agricultural Worker Survey
- USDA Economic Research Service
- Kentucky Agriculture Water Quality Best Management Practices
- US Energy Information Administration
- US Census Burearu
- Agricultural Justice Project
- Cornell University's Environmental Impact Quotient
- COMET-Planner
- FAO World Programme for the Census of Agriculture

This is an amazing tool that put info right at my fingertips! I was able to easily compare our farm [livestock] mortality to other regional mortality rates, which was enlightening. It also made me think more about species diversification on the farm.

IMPACTS BY THE NUMBERS

Spring 2023 - Spring 2025

PARTICIPATION & INCENTIVES

58
PARTICIPATING FARMS

$11,880
VALUE OF SOIL ANALYSES PROVIDED FREE FOR FARMERS

41
ASSESSMENTS REQUESTED BY RETURNING FARMS

$30,900
INCENTIVES PAID FOR GFM-FSAT COMPLETION

99
PERSONALIZED ANNUAL FARM ASSESSMENTS DISTRIBUTED

92%
COMPLETION RATE

IMPACTS BY THE NUMBERS

Spring 2023 - Spring 2025

PARTICIPATION & INCENTIVES

5.6
AVG. HOURS TO COMPLETE THE TOOL FOR THE FIRST TIME

198
SOIL SAMPLES COLLECTED

4.4
AVG. HOURS FOR RETURNING FARMS TO COMPLETE THE TOOL

44
WATER QUALITY TESTS COMPLETED

> *I enjoyed filling out the GFM-FSAT. It made me consider many new aspects to my whole farm picture that I hadn't before, and doing it two years in a row allowed me to see improvements!*

ADVISORS & CONTRIBUTORS

Consulted for the project

SUSTAINABLE FOOD TRUST
PARTICIPATING FARMERS
NRCS - KENTUCKY
UNIVERSITY OF KENTUCKY
UNIVERSITY OF LOUISVILLE
BEREA COLLEGE
MURRAY STATE UNIVERSITY
GROW APPALACHIA
ENVIROME INSTITUTE
KENTUCKY DEPT OF FISH & WILDLIFE
WATERS AGRICULTURAL LABS
WOODS END LABORATORIES
COLORADO STATE/COMET TOOLS
UNIVERSITY OF READING
CORNELL/WOMEN FORWARD INTL.
BIONUTRIENT FOOD ASSOCIATION

PROJECT FUNDERS

Owsley Brown II Family Foundation
Women Forward International
USDA Specialty Crop Block Grant
USDA Partnership for Climate-Smart Commodities
Regenerative Agriculture Foundation

WHAT'S NEXT?

Continuing this work

OAK IS SEEKING FUNDING TO CONTINUE TO PROVIDE THIS INVALUABLE TOOL TO KENTUCKY FARMERS AND HELP CREATE POSITIVE CHANGE IN OUR FOOD SYSTEM.

There is no doubt that the GFM-FSAT has had positive impacts for Kentucky farmers, or that farmers want access to tools that help them set goals, implement change and capture the whole story of their farms.

We hope this innovative tool and the wraparound technical assistance and marketing services it provides can help shape better and more transparent food and agricultural systems at regional, national and global scales.

I could see myself using this tool for years to come if it were available. I love how it spelled out the strengths and weaknesses of the farm. One of our weaknesses was energy use, and knowing that helped me pull the trigger on solar panels and rain catchment systems to help close the loop on my farm's energy usage.

LEARN MORE

oak-ky.org/gfm-fsat