

FIELD TO MARKET

Metrics Committee

November 19, 2024

It is Field to Market's strict policy to fully comply with both the letter and the spirit of all applicable state, federal, and international antitrust laws. Because competitors may be present at this meeting, several topics of conversation must be avoided.

In general, the types of discussion that must not occur are those that may suggest or imply agreements among competitors with respect to prices, terms of sale, discounts, credit, or any other such items that could impact prices.

Other topics that must be avoided include the allocation of customers, markets or territories, bid-rigging, and group boycotts or joint refusals to do business with others.

Field to Market will conduct this meeting in a manner that complies with all applicable antitrust laws.

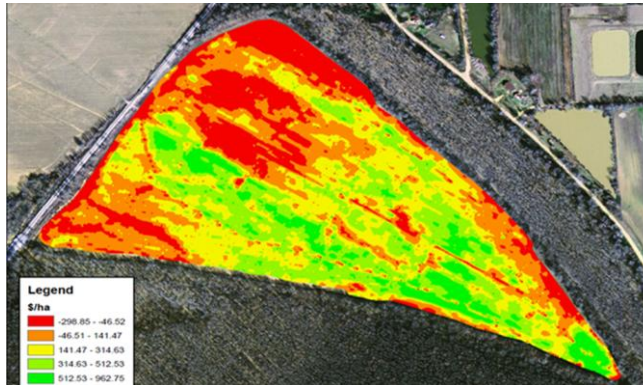
If at any time during the course of the meeting a participant believes that a topic prohibited under the antitrust laws is being discussed, or is about to be discussed, they should advise the facilitator and chair who will halt any further discussion.

Agenda

- Welcome and Committee business (10 min)
 - Mark McConnell, Ph.D., new Committee member from Mississippi State University
 - Introducing staff
 - Upcoming workstreams and events
- Update on Soil Carbon metric (20 min)
 - Olaf David, Ph.D., and Jack Carlson – One Water Solutions Institute, Colorado State University
- Status and group discussion on Biodiversity metric (60 min)

New Committee Member

- We are happy to announce our newest Committee member:
 - **Mark McConnell, Ph.D.**, Professor of Upland Birds at Mississippi State University ([Google Scholar Profile](#))
- Mark has deep knowledge and hands-on experience with cropland biodiversity, creating decision-support tools, and conducting complex geospatial analyses
- Mark joins as part of the Affiliate Sector



Introducing Recent Staff Additions



Carrie Vollmer-
Sanders

President



Kaylyn Reagin,
Ph.D.

**Sustainability
Data Analyst**



Katelyn Ifft

**Communications
Coordinator**



Kieu Le, Ph.D.

Staff Scientist



Tessa Lightfoot

**Conservation
District Fellow**

Upcoming Workstreams

- Public comment for metric revisions for Energy Use, GHG Emissions, and Soil Carbon.
 - Tentative date for review before the end of the year
- For 2025
 - Resiliency indicators, likely in collaboration with Science Advisory Council
 - Water Quality Metric (replace STEP with SWAT+)
 - Irrigation Water Use Metric
 - Biodiversity Metric

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Reserve Your Calendars!



2024 Sustainable Ag Summit

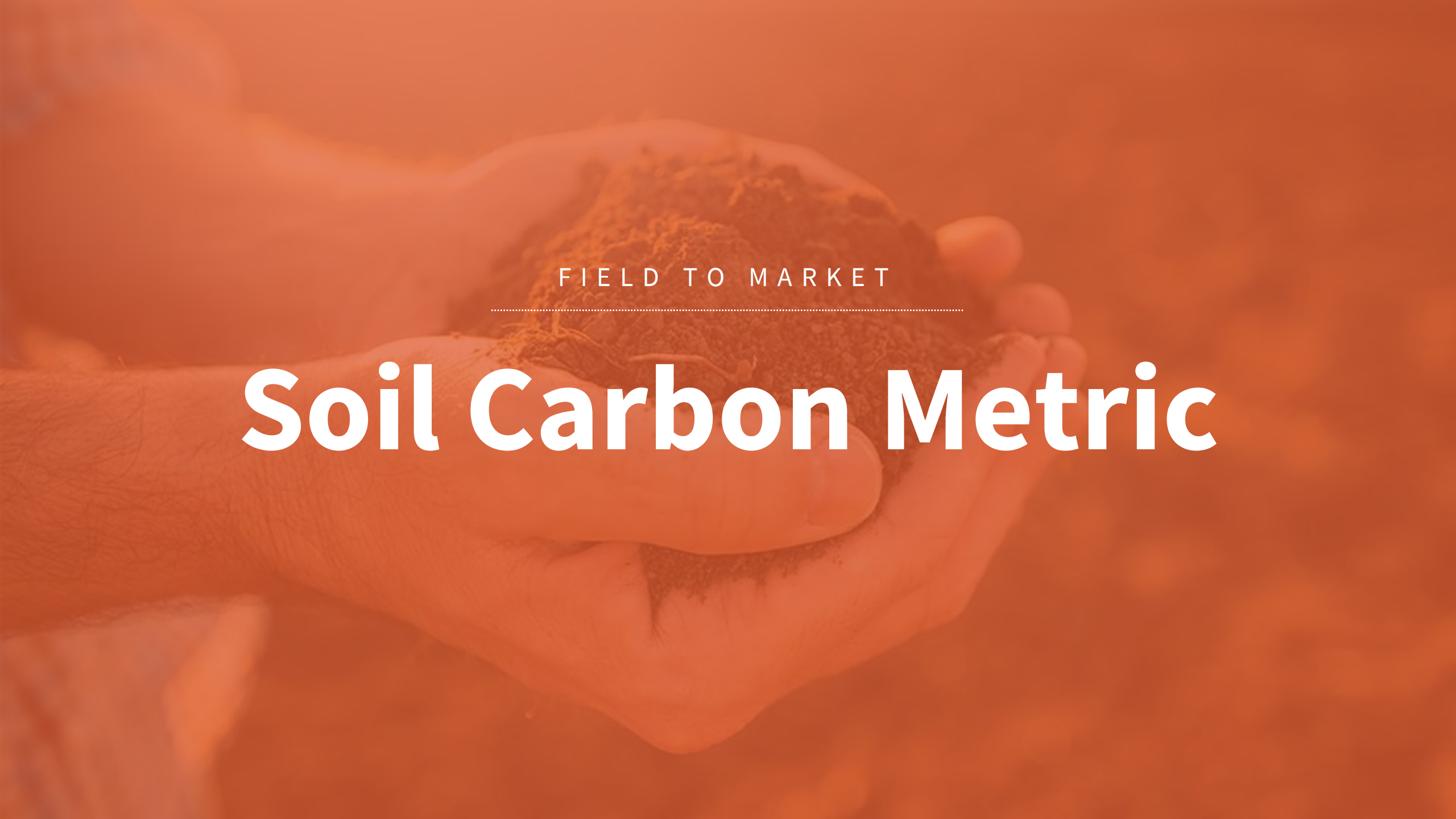
November 20-21 | Minneapolis, Minnesota

REGISTRATION SOLD OUT



June Plenary and General Assembly Meeting
June 3-5 | Kansas City, Missouri

REGISTRATION COMING SOON

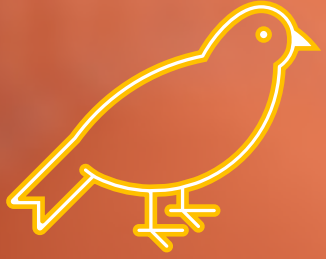
A close-up photograph of a hand cupped together, holding a mound of dark, rich soil. The entire image is overlaid with a semi-transparent orange filter. The text 'FIELD TO MARKET' is centered above the main title.

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Soil Carbon Metric

Workstream: Revisions to Soil Carbon Metric

- CSU, TAMU, USDA ARS, and Field to Market are making progress toward the implementation of SWAT+ to estimate soil organic carbon sequestrations or emissions.
- Our scientist, Kieu Le, Ph.D., has been working hard to test the model parameters and inner workings.
- The implementation of SWAT+ has helped us to significantly improve how we collect data and include a complete view of a field's crop and management history.



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Biodiversity Metric

Revisions to Biodiversity Metric

- After the public comment period of early 2024, we held extended workshops in July and September with interested stakeholders. Around 30 organizations joined both workshops.
- We proposed biodiversity indicators, polled members, and discussed concerns and limitations.
- Member alignment on biodiversity indicators remains poor, and we want to propose a different approach.

Biodiversity Metric Revision Process

- The process for Biodiversity has helped test a better approach.
- All materials throughout the process are publicly available:
 - Original revision proposal
 - Public comments from late 2023/early 2024
 - Both workshops, related materials, and additional feedback posted online
- We will follow a similar process for all Metrics Committee workstreams

Summary on the two summer workshops

- 56 (first) + 39 (second) = 95 collective member hours spent ideating solutions
- We discussed two major options with attendees

Option 1

- Ratio of natural/semi-natural area to cropland as an entry-level biodiversity indicator
- This indicator could potentially be used to report or track the guidance of improved ecological integrity (WBCSD), no conversion of natural ecosystem (SBTN), enhancement of biodiversity in agriculture (CBD), and cropland with natural vegetation (TNFD).



Option 1 + Enhancement

- Ratio of natural/semi-natural area to cropland as an entry-level biodiversity indicator + **a temporal component**



Type	Months												Acre-year	Acre-month	Formula
Cropland	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	155	1,862	$266 * 7 = 1,862$
NSN area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	132	1,594	$22 * 12 + 266 * 5 = 1,594$

Option 2

- Reframing the Biodiversity Metric as a **Natural Resource Concerns Indicator** to enable more flexibility by grower, region, and project.
- Organizations or growers choose what to focus on



Plants

Plants are common ingredients in many NRCS conservation practices. That's because they hold soil in place, protect stream banks and shores, filter pollutants, offer food for livestock and cover for wildlife. They also heal th...



Animals

Both domestic and wild animals are a critical component of ecosystems and our environment. Domesticated animals, such as livestock, provide us with food and fiber, while wildlife support healthy ecosystems.



Wildlife Habitat

Two-thirds of the land in the lower 48 states is privately owned, and produce much of the country's food and fiber. They also provide much of our nation's open space and the habitats that wildlife need.



Invasive Species and Pests

Invasive plants and pests can ruin crop fields and forests and drastically alter the natural processes of ecosystems.



Land

No matter if you grow crops or raise livestock, or you manage timber or want to improve your private land, NRCS has options for you that are good for your land and its natural resources.



Watersheds

Watersheds impact everyone; every community, farm, ranch, and forest. They provide a vital resource for all living things to survive and thrive. All watersheds are interconnected, creating a land-water system that conveys wat...

Member Reactions

- The members that commented saw more potential in Option 2, which reframes the Biodiversity Metric as a Natural Resource Indicator
- Some positive comments about the temporal component of Option 1

A sample of the challenging topics under the umbrella of Biodiversity

Pesticides and
Integrated Pest
Management

Management of
owned versus
rented/leased
cropland

Complexity
(farm or field
level, field edge
width, natural vs
semi-natural)

Above-ground,
below-ground,
and aquatic
biodiversity

True biodiversity
metric versus a
proxy indicator

Temporal habitat
considerations
(permanent and
seasonal)

Spatial context
and regional
potential for
biodiversity

Land use change

Proposal

- The highest agreed-upon feedback from members was the need to involve cropland biodiversity experts to provide a stronger scientific foundation for a metric revision.
- We **propose fundraising** among our membership to put forth an RFP to hire expert help, likely from a University team with like-minded goals.
- In the meantime, we will improve the documentation and educational materials for our current biodiversity model of choice, the Habitat Potential Index.

What are we missing to complete the revision and how could a member-supported RFP help us achieve alignment for a biodiversity metric? The work ahead must:

- Clarify the goal of the Biodiversity Metric
- Conduct a literature review to identify key factors for cropland biodiversity in the U.S. and what actions growers and the supply chain can take
- Define the parameters within which we must work (what is not scalable or not doable for growers, or for which there is no strong evidence)
- Conduct a crosswalk between the most relevant biodiversity frameworks to select the most promising biodiversity indicators
- Framework for implementation into the Fieldprint Calculator
- Assess cropland biodiversity in the U.S. over time with opportunities and challenges for inclusion into the next National Indicators Report

Workstream: Revisions to Biodiversity Metric

Tentative timeline

- Fundraising in parallel with all activities, now until June 2025
- Publish RFP, March 2025
- Select bidder by May 2025
- Works starts in June-Sept 2025
- Completion of most deliverables within 6-8 months (January to March 2026) with interim feedback periods
- Member discussions and piloting of new biodiversity indicators in the Fieldprint Calculator during mid to late 2026
- Cost: \$175K-\$250K?

Group Activity

- Walk around the room and provide comments to the prompts

Prompt 1

- Do you agree with these goals for the Biodiversity Metric? These are currently part of FTM's bylaws.
 - Defining, measuring, and advancing biodiversity.
 - Supporting diverse species and ecosystems by conserving and enhancing habitats across U.S. agricultural landscapes.
- Do you think the Biodiversity Metric goals need to be rewritten? Would you expand on them or make them more generic?

Prompt 2

- Would the RFP deliverables provide sufficient theoretical and practical foundation to move forward with a Biodiversity metric revision?

Prompt 3

- What is the likelihood of your organization using Field to Market's Biodiversity Metric?
- How would you use it?

Prompt 2

- Would the RFP deliverables provide sufficient theoretical and practical foundation to move forward with a Biodiversity metric revision?

Prompt 3

- What is the likelihood of your organization using Field to Market's Biodiversity Metric?
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Adjourn