Field to Market®
The Alliance for Sustainable Agriculture

FIELD TO MARKET BACKGROUNDER ON USDA CLIMATE-SMART PARTNERSHIP PROGRAM

Since November 2006, Field to Market: The Alliance for Sustainable Agriculture has championed a pre-competitive, multi-stakeholder approach to standardizing a science-driven and outcomes-based framework for evaluating the environmental impacts of commodity crop production. With fifteen years of lessons learned, Field to Market is eager to offer solutions and insights to inform the potential development of USDA's Climate-Smart Partnership Program.

While the Alliance acknowledges the need for a standardized approach across all of U.S. agriculture in defining climate-smart agriculture, inclusive of livestock, dairy, specialty crop and commodity crop production, Field to Market's diverse membership of nearly 150 organizations across the value chain encourages USDA to consider opportunities to leverage Field to Market's collective investment and fifteen years of learnings to inform how to scale climate-smart practices in commodity crop production. As members in the Alliance, we advocate for solutions that harness our pre-competitive metrics, supply chain accounting methodologies and impact allocation framework enabled for supply chain sustainability initiatives for any program design related to commodity crop production, inclusive of downstream use in food, beverage, feed, fiber and biofuel feedstocks.

USDA IDENTIFIED BARRIER: *Lack of clear standards for measurement of climate benefits of CSAF practices.*

FIELD TO MARKET SOLUTION: Field to Market has developed a pre-competitive, science-based and outcomes-driven suite of sustainability metrics for commodity crop production embedded within the Fieldprint Platform. In many instances, these metrics build from USDA NRCS tools which we have adapted and further tested and developed in collaboration with USDA. These metrics include translating the benefits of climate-smart agriculture practices directly to:

- **Energy Use:** Evaluates all energy required to produce a crop, from pre-plant to first point of sale or delivery at the processing facility. This includes direct energy used for operating equipment, pumping irrigation water, grain drying and transport as well as embedded energy, which is required to produce crop inputs like seeds, fertilizers and crop protectants. Measured as British thermal units (BTU) per unit of crop production (i.e., bushel, pound or hundred weight). (*Developed by Field to Market*)
- **GHG Emissions:** Evaluates all sources of GHG emissions required to produce a crop, including energy use, soil management, flooded rice fields and residue burning in a common unit for all emissions. The metric is and influenced by all the actions a farmer takes including increased efficiency of energy, water, fertilizer and chemical usage and adoption of renewable energy to

power farm operations. Measured in pounds of carbon dioxide equivalent (CO_2e) per crop unit produced (e.g. bushels or pounds). (*Developed by Field to Market with additional information for soil N_2O emissions adapted from USDA supported crop modeling*)

- **Soil Carbon Sequestration:** Evaluates the gain in soil carbon that can be achieved by adopting specific practices using two USDA tools – the primary metric is the qualitative Soil Conditioning Index which provides a snapshot based on just one year of information as to whether a field is gaining or losing soil carbon. A secondary, optional calculation uses the quantitative COMET-Planner tool to determine potential soil carbon sequestration following adoption of a climate-smart practice, measured in mega grams of CO_2e per acre per year. *(Developed by USDA NRCS and adopted by Field to Market*)
- **Soil Conservation:** Evaluates risk of soil erosion and is measured as tons of soil lost (T) per unit of land area (acre) per year for all crops. Methods to improve soil conservation, such as conservation tillage and cover crops, also provide co-benefits to preventing release of emissions from decomposing organic matter and sequestering soil carbon. *(Developed by USDA NRCS and adopted by Field to Market*)

Designed to measure environmental outcomes from individual farm fields, these metrics are developed and adopted through the multi-stakeholder governance process to form the core of our standardized measurement approach. Field to Market's Metrics Committee, consisting of four elected members from each of the Alliance's five membership sectors, review each metric at least once every three years to ensure they incorporate any advances in the underlying science. The review process is described in detail in our Metrics Standard Operating Procedure. Download detailed metrics documentation for more information on how the Alliance has standardized the measurement of climate-smart agriculture practices in commodity crop production.

USDA IDENTIFIED BARRIER: *Potential for double counting benefits and Lack of efficient supply chain traceability.*

FIELD TO MARKET SOLUTION: Field to Market's Process-Based Standard outlines clear requirements for supply chain accounting methodologies to prevent double-counting of GHG emissions reductions or removals within projects enrolled in the Alliance's Continuous Improvement Accelerator. This standard enables projects to make sustainability claims related to the volume of ingredients or raw materials procured utilizing two potential supply chain accounting methodologies to track and allocate impact:

- **Mass Balance**
  In this method, volumes can be tracked back to a first aggregator delivery point. A project can only account for volumes delivered to the first aggregator. The first aggregator must flag and record volumes coming in as well as the amount of volume sold to each downstream project participant. Although the project-specific crop becomes mixed with the non-enrolled crop at the first aggregator level, the mass balance system allows projects to make claims on the delivered volumes. First aggregators can only sell as much enrolled volume as was delivered by growers enrolled in the project.

- **Volume Proxy**
  In this method, a project keeps track of annual enrolled acres, with the understanding that growers' acres are only enrolled in one project per crop per year for geographically distinct areas. The acres are converted into "proxy volumes" first using regional historical yield data and updated using actual yield once available after harvest. The volumes are captured at a first aggregation point and the volume existing at a project level would be converted into a proxy volume from which the claims could be based. This system is a hybrid area mass balance and (closed) credit system.

These supply chain accounting methodologies acknowledge the challenges of assigning traceable environmental attributes within complex commodity supply chains. The integrity of the system relies upon transparency, provided by detailed annual reports that describe how growers, acres and associated impact are assigned to a company.

To prevent double counting, Field to Market requires projects to define a geographic boundary and requires the Project Owner to allocate growers, acres, product volumes and associated impact among downstream partners. Claims on environmental attributes are specific to one crop in a given year, allowing farmers and companies to partner and claim environmental attributes of multiple crops sourced from a given region.

Field to Market's Impact Claims Verification Protocol provides projects with detailed guidance on how to allocate impact, including detailed guidance on determining co-product allocations. Scaling climate-smart commodities depends on utilizing a shared system for project tracking and allocation. The public project directory of Field to Market's Continuous Improvement Accelerator could be leveraged for this purpose.