



# Merge Impact Supply Transparency (MIST)

MIST is a comprehensive standard for measurement, verification, reporting, and marketing the field-level impact of agricultural production and the incidental impact on value chains. MIST is a blockchain data package that provides producers with opportunities to monetize positive planet and human outcomes of production in compliance with consumer value initiatives like “regenerative” and “organic” demanded products.

## WHAT IS BLOCKCHAIN? HOW DOES IT IMPACT MIST?

Simply put, blockchain does not enhance transparency - it enhances the validity and integrity of transparency data by de-centralizing data storage and removing the likelihood of creating data silos - a situation where data is buried in a mess of other ag data and generates little to know value within the supply chain. For the MIST, blockchain is used to ensure the origin and validity of comprehensive environmental & production outcome data.

## WHO IS MERGE IMPACT?

As the first and only blockchain-powered agricultural measurement and data solution, Merge Impact connects brands to fully verified regenerative and organic supply chains while providing regenerative and organic farmers with comprehensive field-level measurement and ecosystem services. With Merge Impact’s tools that help to measure, validate, and monetize climate initiatives, sustainability goals are well within reach. Here at Merge Impact, we’re excited to go on this journey with you. Whether you’re a farmer, a brand, or a consumer, supply chain transparency and trust are the future of food.

# About MIST

## BACKGROUND AND DESCRIPTION

Merge Impact has created an opportunity to advance regenerative agriculture impacts by developing a standard, holistic, regenerative measurement and transparency protocol to be used by farmers, producers, retailers, government agencies, certifiers, and consumers in their pursuit of a defined regenerative claim verification.

## SCOPE

In alignment with the [Earth Impact Soil Protocol \(EISP\)](#), Merge Impact has developed four protocols:

- ✓ Grassland Verification
- ✓ Basic Row/Field Crop Verification
- ✓ Specialty Row/Field Crop Verification
- ✓ Permanent Crop Verification

Additionally, MIST aligns environmental outcomes with consumer values through transparent production at field level in the following categories:

- ✓ Soil Accountability
- ✓ Water Quality
- ✓ Biodiversity
- ✓ Animal well-being
- ✓ Farmer/farm community economic resilience

Compliance reporting, ecosystem outcome reporting and field task transparency, in combination with using aligned expert service providers/organizations to collect, analyze and verify data. MIST data provides transparent field and task data to satisfy the needs of leading regenerative certifications.

## PRODUCER OPPORTUNITIES

By utilizing MIST, producers are ensured transparent connections directly to consumer values. In return for reciprocating transparency, producers see a direct link between the impact of their production and the value consumers display to the marketplace. Additionally, compliance with MIST ensures producers have visibility to brands looking for supply under these standards.

## CONSUMER VALUES

Having a direct connection to the resources we demand from producers is important. MIST ensures the outcomes consumers value in their products and brands are real and consumers are provided the product with a previously unattainable amount of transparency. A direct connection to the buying behavior of consumers and how that impacts our ecosystem at the origin of the product - the farm and ranch.

## Considerations

Additional measurements may be requested to be included in a custom protocol. MIST data may be utilized to satisfy product claims, ecosystem market insetting opportunities for supply chain stakeholders, and farm/ranch-level offset opportunities.

# Protocol Outcomes

## SOIL ACCOUNTABILITY

### SUMMARY

Verified soil quality impact for the selected soil protocol through the EISP and transparent compliance to conservation strategy according to soil loss reduction recommended under NRCS guidelines. Certain strategies that reduce soil erosion through conservation may include waterways, reduced or eliminated tillage & cover cropping. Merge Impact provides qualifying parcels with a geographical information system (GIS) plan for conservation strategy upon enrollment.

- ✓ **Nutrient Cycling** - Proper plant nutrient availability in regenerative and organic systems is largely determined by nutrient exchangeability via nutrient cycling. Using the Soil Health Assessment (SHA) provided in the EISP, along with accounting for basic soil agronomy principles like pH and phosphorus

### METRICS & MEASURES

- ✓ Earth Impact Soil Protocol (EISP)
- ✓ Confirmation of Soil Conservation Strategy

### RESOURCES PROVIDED

- ✓ Conservation GIS Strategy
- ✓ Soil Nutrient Correction Plan



management ensures plants have the needed nutrients to create healthy, optimized crops for food.

Additionally, acres enrolled in MIST are required to report in-field tasks, including events that disrupt soil, to provide additional transparency and correlate activities to outcomes for feedback.

## WATER QUALITY

### SUMMARY

Measuring, monitoring, and reporting local water resources for compliance to water quality improvement plans includes activities that promote understanding and improving local water quality, soil moisture attributes, and testing.

Local water quality refers to sites most impacted by production systems, including: edge-of-field, farm wells, & downstream communities. Local water resources have an impact on community health, animal health, and producer health.

Soil moisture attributes like holding capacity, slaking, and saturation index provide crucial insights into a soil's resilience through soil organic matter and structural improvements.

Water quality testing includes chlorine, Ammonia,

### METRICS & MEASURES

- ✓ Farm/Field Accountability - wells, edge-of-field, irrigation, soil attributes
- ✓ Community Accountability - downstream water supply impact

### RESOURCES PROVIDED

- ✓ Data and Measurements - used for improvements
- ✓ Conservation GIS Strategy
- ✓ Soil Nutrient Correction Plan



Nitrates, Phosphate & Iron as a standard drinking water analysis. Additional testing for bacteria and chemical contamination may be requested.

# BIODIVERSITY

## SUMMARY

Biodiversity is crucial for the health and productivity of agricultural systems. By maintaining a diverse range of plants and animals on farms, farmers can build more resilient and sustainable agricultural systems that are better able to adapt to changing environmental conditions. Biodiversity is measured to account for the following areas of impact:

- ✓ **Genetic Diversity** - Species counts are collected and accounted for using reported and visually confirmed data. Animal and plant diversity is a critical component for farm/field resilience.
- ✓ **Ecosystem Services** - Accounting of and improvements to habitat available for pollinators and other beneficial populations provides indicators of ecosystem health and the presence of natural systems.

## METRICS & MEASURES

- ✓ Percentage of total acres in habitat and/or agroforestry
- ✓ Number of cash crops in rotation (for revenue)
- ✓ Number of plant species used in rotation (total)
- ✓ Number of animal species on farm

## RESOURCES PROVIDED

- ✓ Habitat GIS Strategy + Plant Selection
- ✓ Xerces Society Integration



# ANIMAL WELL-BEING

## SUMMARY

Along with data provided by livestock service providers, MIST accounts for open-space livestock metrics to be measured for compliance. Available open space, feed/water access & quality, and animal health are measured against existing conditions to provide field/farm-level insights for assurance and compliance to optimum standards for animal well-being.

Specific requirements for animal well-being can be incorporated into customized reporting in unison with MIST.

## METRICS & MEASURES

- ✓ Open Space Reporting - Animals per acre of grazing
- ✓ Task/Input Reporting
- ✓ Soil & Feed Quality - SHA, Feed Testing

## RESOURCES PROVIDED

- ✓ Service providers for livestock management



# FARM/RANCH & COMMUNITY WELL-BEING

## SUMMARY

Supply chain data provided by MIST ensures the comprehensive impact of agriculture and food products are reported to indicate local opportunities and challenges. Using MIST, insights about production life cycles and destination impact are provided to allow for in-depth understanding of where and what our farm and ranch supply chains influence positive impact for local ecosystems and human well-being.

The following areas of supply chain data influence transparent impact for *Farm/Ranch & Community well-being*:

- ✓ **Origin & Distance Traveled** - Where a product is produced and where it meets the consumer determine the extent of the impact of producers. Production that is consumed closest to origination has a smaller footprint and most likely has a positive impact on local economies versus a product that travels furthest to consumer.

## METRICS & MEASURES

- ✓ Distance to Consumption
- ✓ Downstream Metrics - Water
- ✓ Community Investment & Sponsorship Reporting
- ✓ Workplace Standards & Benefits Reporting



- ✓ **Inputs and Environmental Impact** - Water Quality, Biodiversity, and Input data collected by the MIST protocol are reported as a measure of farm/field impact and the downstream opportunities and/or challenges associated with this data.
- ✓ **Local Labor and Community Engagement** - Utilization of local resources and labor pools with a proven commitment and contribution to local investments, donations, and contributions to local nutrition. MIST reports community focused impact created by farms and ranches to ensure impact is valued locally, regionally, then nationally.