Leading Harvest Metrics Pilot Project

Data Collection Protocol

Table of Contents

How to Use This Document

This document provides data collection protocols for each of the 15 metrics selected for the Leading Harvest Farmland Management Standard Metrics Pilot. Protocols are organized by category and metric and follow a consistent structure across all 15 metrics.

Each protocol includes:

- Definition — what the metric measures and why it was selected
- Required data fields — what participants must report
- Optional fields — additional data encouraged but not required

General principles that apply across all protocols:

- Participants report what they have. No new data collection is required for Year 1. The pilot works from existing records, programs, and monitoring systems from the 2024 or 2025 growing seasons (unless otherwise noted).
- Documentation of method is required wherever a value is reported. How a number was generated matters as much as the number itself for interpreting pilot data.
- Both measured and modeled values are acceptable across environmental metrics. Where a distinction exists, participants must note which type of value they are reporting.
- Not-applicable designations are available where a metric genuinely does not apply to a participant's operation. A not-applicable response with a brief explanation is more useful than a blank.
- Pilot diagnostic questions are for Leading Harvest's internal use in understanding participant capacity. They are not performance indicators and will not be used to evaluate participant compliance.

Reporting window: Growing seasons 2024 and/or 2025, with 3-year rotation windows (2023–2025) applied where specified for biodiversity metrics. Historical data from prior years is encouraged where available across all categories.

Category 1: Soil Health

Three metrics are included in the Soil Health category: Soil Organic Matter, Aggregate Stability, and Nutrient Use Efficiency. Together they cover the biological, structural, and input efficiency dimensions of soil health. All three were selected based on strong survey resonance and alignment with several other reporting frameworks.

Soil Organic Matter (SOM)

— Primary Anchor Metric

How it informs management decisions: Year-over-year trend in SOM demonstrates whether management practices like tillage intensity, cover crops, residue retention, and organic inputs are building or depleting the long-term productive capacity of the land. Declining SOM signals a management trajectory that reduces asset value and resilience; improving SOM demonstrates stewardship that increases both.

Data Fields

SOM value	Reported as % SOM.
Sample depth	e.g., 0–6 in, 0–12 in. No specific depth is required but depth must be consistent across reported acreage and documented for future comparisons.
Sampling method	e.g., grid sampling, management zone sampling, random composite. No specific method is required.
Lab analysis method	Acceptable methods include (but not limited to) loss on ignition (LOI), dry combustion, and Walkley-Black. Method must be consistent across all reported acreage.
Date of most recent sample	Month and year of the most recent sampling event.
Reporting cadence	How frequently SOM is sampled (e.g., annually, every 2 years, every 3 years).
Method consistency	Is the same lab analysis method used consistently across all reported acreage? (Yes / No — describe variation)

If Modeled or Remote Sensing-Based

Source	Must note that values are modeled or remote sensing-derived, not lab-measured.
Platform or model	Name of the platform and/or model used.
Calibration tier	Report under one of three tiers: (1) Lab-measured; (2) Modeled / remote sensing, but calibrated against lab samples on the same acreage; (3) Modeled / remote sensing, uncalibrated. Modeled values should be reported separately from lab-measured values where both exist.

Optional — Encouraged

- Historical SOM data from prior years, up to 5 years back, if available, to support trend interpretation.
- If historical data is available, note the direction of change: increasing / stable / declining / unable to assess.

Note on Trend Data

Two growing seasons is too short to detect meaningful SOM change through lab analysis. Participants with historical data going back 3–5 years are encouraged to share it. This is more valuable for trend interpretation than a two-season comparison.

Aggregate Stability

How it informs management decisions: Indicates whether soil structure can withstand physical disturbance from rainfall, irrigation, and field traffic without losing its ability to infiltrate water and resist erosion. Managers use it to evaluate whether tillage intensity and organic matter inputs are maintaining or degrading structural integrity, which are a direct proxy for erosion risk and water infiltration capacity at the field level.

Required Data Fields

Aggregate stability value or score	Quantitative (e.g., % stability from wet sieve) or qualitative (e.g., SLAKE app score, visual rating) — both are acceptable. The goal is to understand whether participants are paying attention to structural soil health, not to require a specific value format.
Method used	Acceptable methods include: wet sieve method, SLAKE app, slake test, drop test, visual field assessment, or other — describe.
Quantitative or qualitative	Is the reported value a measured number or a descriptive rating?
Sample depth	If applicable to the method used.
Sampling method	If applicable (consistent documentation approach with SOM).
Date of most recent assessment	Month and year.
Reporting cadence	How frequently aggregate stability is assessed.

Optional — Encouraged

- Historical aggregate stability data from prior years if available.

Nutrient Use Efficiency (NUE) — Nitrogen

How it informs management decisions: Measures whether nitrogen inputs are being converted into crop production rather than lost to the environment. A declining NUE signals over-application or poor timing, which are decisions with direct cost implications and water quality consequences downstream. An improving NUE demonstrates precision in input management that benefits both the bottom line and environmental performance.

Definition and Calculation

NUE (Nitrogen) = Total nitrogen removed in crop harvest ÷ Total nitrogen applied as inputs

- A ratio below 1.0 indicates more nitrogen was applied than removed (potential surplus and loss to environment).
- A ratio above 1.0 indicates more nitrogen was removed than applied (potential mining of soil nitrogen reserves).
- For the purposes of this pilot, nitrogen only is required.

Required Data Fields

NUE ratio	Calculated value (N removed ÷ N applied). Participants calculate their own NUE based on yields, crop uptake values relevant to their region/crop and fertilizer records.
Nitrogen input sources included	List all sources used in the calculation (e.g., synthetic fertilizer, manure, compost, legume cover crops, other — describe). All sources must be accounted for.
Yield data source	e.g., farm records, elevator receipts, FSA records, estimated — describe.
Crop removal coefficient source	e.g., extension publication, agronomist recommendation, IPNI/IFA database, other – describe.
Currently calculating	Is this NUE calculation already part of existing operations, or was it calculated new for the pilot? (Already calculating / New for pilot)

Category 2: Biodiversity

Three metrics are included in the Biodiversity category: Crop and Rotation Diversity Index, Habitat Extent and Quality, and Beneficial Insect / Pest Ratio (reported as IPM and Beneficial Insect Management). Together they address in-field crop diversity, landscape-level habitat stewardship, and biological pest management. The crop and rotation diversity index is the anchor metric, supported by the strongest survey resonance across the biodiversity category.

Crop and Rotation Diversity Index

— Primary Anchor Metric

How it informs management decisions: Reflects the degree to which cropping decisions support soil biology, break pest and disease cycles, and reduce input dependency. A more diverse rotation demonstrates proactive risk management, reducing reliance on any single market, input, or biological pathway, and is associated with long-term productivity resilience under climate variability.

Definition

An intentionally planted species includes any cash crop (annual or perennial), cover crop (each species in a mixture counted individually), companion crop, or nurse crop that was deliberately seeded or established as part of farm management during the reporting window. Variety-level distinctions within a single species do not count as separate species.

Reporting Window

3-year rotation window: 2023, 2024, and 2025 growing seasons.

Required Data Fields

Simple species count	Total number of distinct intentionally planted species in the reporting window. This is the required minimum reporting format.
Species list	List of all intentionally planted species across the 3-year window — by common name and/or crop type.
Years covered	Should be 2023–2025. Note if any year is missing and why.
Acreage by species or category	Approximate acreage or proportion of managed acres associated with each species or crop category — provides context for the count.
Categories included	Note whether cover crops, companion crops, or nurse crops are included in the species list so results are interpretable.

Optional

Shannon Diversity Index	$H' = -\Sigma(p_i \times \ln p_i)$ where p_i is the proportion of total managed acres in each species. Members selecting this option must note the acreage breakdown used in the calculation.

For Perennial and Specialty Crop Participants

Simple count is the recommended reporting format. Species listed should include the perennial crop itself, all cover crop species grown within or between rows, and any companion or nurse crops. Variety-level distinctions within a single species (e.g., multiple grape varietals) do not count as separate species unless they represent functionally distinct management units with different agronomic inputs.

Habitat Extent and Quality

How it informs management decisions: Documents the proportion of managed land actively maintained for non-crop ecological function. Demonstrates intentional stewardship of habitat features like buffers, wetlands, hedgerows, or conservation acres that reduce off-farm environmental impacts, support pollinators and beneficial insects, and in many cases fulfill regulatory or lease-based conservation obligations.

Definition

Habitat includes any land area on or adjacent to managed agricultural land that is intentionally maintained or passively retained to support ecological function. Participants should use their own categorization and document which category applies to each reported area.

Habitat Categories

- Vegetative or riparian buffers (grass waterways, filter strips, streamside buffers)
- Pollinator habitat or insect refuge strips
- Wetlands (natural, restored, or constructed)
- Intentionally fallow or idled land (including CRP, CREP, or equivalent enrolled acres)
- Managed forest or timberland
- Hedgerows or shelterbelts
- Native vegetation remnants or semi-natural areas
- Other — participant defines and describes

Required Data Fields — Extent

Total habitat acreage by category	Acreage for each habitat category present on managed land.
Total managed acreage	Total acres under management — used to calculate % of total in habitat.
% of total managed acres in habitat	Calculated from above. Both raw acreage and percentage should be reported where possible.
How acreage was determined	e.g., GIS mapping, FSA records, aerial imagery, visual estimate, conservation program enrollment records, other.
Date of most recent assessment	Year or date range of the assessment used for reporting.

Quality Sub-Questions — Optional, Pilot Diagnostic

Quality sub-questions are optional for Year 1 and are intended to help Leading Harvest understand how participants currently manage and document habitat features. They are not required reporting fields.

Management presence / absence:

- Is each habitat category actively managed or passively present? (Actively managed / Passively present / Both)
- If actively managed: briefly describe the management approach (e.g., annual mowing, prescribed burn, pollinator seeding, buffer maintenance).

Conservation program enrollment:

- Is any habitat acreage enrolled in a formal conservation program? (Yes / No / Unsure)

IPM and Beneficial Insect Management

How it informs management decisions: Provides a field-level indicator of whether the farming system is supporting the biological controls that reduce pesticide dependency. A favorable balance between beneficial and pest insects demonstrates that management practices like crop diversity, habitat retention, and reduced chemical inputs are creating conditions where nature is doing work that would otherwise require purchased inputs. Declining beneficial insect populations signal a biological tipping point that often precedes pest outbreak and increased input costs.

Definition

This metric captures the degree to which participants are actively managing for the balance between beneficial and pest insect populations through Integrated Pest Management (IPM) practices. The primary reportable figure is acreage managed under IPM. Beneficial and pest insect monitoring data is optional and reported where available. All participants are asked to report on this metric; participants without active IPM programs may report zero acres or note that IPM is not applicable to their system.

Required Data Fields

Acreage under IPM practices	Total acres managed under IPM during the reporting year.
% of total managed acres under IPM	Calculated from total IPM acreage and total managed acreage.
Definition of IPM in their system	Participants define what IPM means in their operation (e.g., scouting-based spray decisions, biological control releases, economic threshold-based management, certified IPM program enrollment, other).

If Beneficial / Pest Monitoring Data Exists

Monitoring method	Stated if monitoring data is reported (e.g., field scouting, sticky traps, sweep net sampling, drone-based monitoring, third-party IPM consultant reports).
Monitoring frequency	How often monitoring is conducted (e.g., weekly during growing season, at key phenological stages, event-based).
Quantitative or qualitative	Are results expressed as counts and ratios, or as presence/absence and relative abundance ratings?
Key species monitored	Participant's own definition of key beneficial and pest species in their system — no standardized species list is required. Participants describe what they monitor and why it matters for their cropping system.

If Biological Control Inputs Are Used

- Type of biological control used (e.g., predatory insect releases, beneficial nematode applications, microbial products).
- Acreage treated with biological control inputs.
- Whether population establishment or persistence is tracked after release.

Category 3: Water Quality

Three metrics are included in the Water Quality category: Irrigation Efficiency, Groundwater Levels, and Nutrient or Sediment Load. Irrigation Efficiency is the anchor metric for irrigated operations; participants with entirely dryland or rainfed operations should note this at enrollment and follow the not-applicable pathway for Irrigation Efficiency. Groundwater Levels and Nutrient or Sediment Load apply across a broader range of operation types with appropriate not-applicable designations available where needed.

Irrigation Efficiency

— Primary Anchor Metric

How it informs management decisions: For irrigated operations, demonstrates that water applied is being used productively by the crop rather than lost to runoff, evaporation, or deep percolation and serves as a direct measure of management precision and, where applicable, regulatory compliance. Tracking efficiency over time allows managers to identify whether infrastructure investments, scheduling improvements, or system upgrades are translating into measurable water savings.

Important Context

Water efficiency has very different meanings across geographies. A raw efficiency number should always be interpreted alongside system type, climate, and regulatory context. Participants are asked to document these contextual factors alongside the calculation.

Calculation Options — Participant Selects and Documents Method

Option 1 — Applied water per acre	Total applied water (acre-inches or mm) divided by irrigated acreage. Simplest calculation; requires only water meter or pump records and irrigated acreage. Does not normalize to production but establishes a baseline.
Option 2 — Applied water per unit of yield	Total applied water divided by total production (e.g., acre-inches per ton, bushel, or cwt). Adds yield normalization; requires yield records alongside water records. Most comparable across operations of similar crop types.
Option 3 — Irrigation Water Use Efficiency (IWUE)	Total production divided by total applied water (yield per acre-inch or m^3). The inverse of Option 2; the format used by Field to Market. More intuitive for demonstrating efficiency improvement over time.

For mixed operations with multiple crop types: report by crop type if possible, or note that the calculation represents a blended average across crops.

Required Data Fields

Calculation method used	Which of the three options above was used, or describe alternative approach.
Total applied water	For the reporting period, in acre-inches, mm, or m^3.
Irrigated acreage covered	Total irrigated acres represented by the calculation.
Data source for water records	e.g., flow meter, water district delivery records, irrigation management software, regulatory compliance records, estimated from pump runtime, other.
Primary irrigation system type	drip / center pivot / flood or furrow / sprinkler / subsurface drip / mixed — describe.
Reporting period	2024 season / 2025 season / both.

If Yield-Normalized Calculation Is Used

Yield data source	Farm records / elevator receipts / FSA records / estimated — describe.
Crop type(s) included	List crops represented in the calculation.
By crop or blended	Is the calculation broken out by crop type or blended across crops?

If Regulatory Compliance Records Are the Data Source

Program name	Name of the compliance program or framework (e.g., SGMA, ILRP, Murray-Darling Basin Plan, State Water Board).
Data match	Whether reported values match the compliance submission exactly or are derived from compliance data.

Not-Applicable Pathway

Participants with no irrigated acres should note this at enrollment and confirm their operation is entirely dryland or rainfed. No further reporting is required for this metric. A brief note on primary water source type is appreciated.

Groundwater Levels

How it informs management decisions: Withdrawal volume tracking informs whether irrigation demand is increasing, stable, or declining and can serve as a direct signal of whether efficiency improvements are working. Water table depth signals whether the aquifer underlying an operation is being drawn down faster than it recharges and can be the earliest warning indicator of long-term water supply risk. For dryland operations, water table depth can also inform drainage management decisions. Tracking both over time enables proactive rather than reactive infrastructure and operational decisions.

Required — Primary Water Source Declaration

Primary water source type	Groundwater only / Surface water only / Mixed groundwater and surface water / No irrigation — dryland or rainfed.

Not-Applicable Pathway

Participants with no irrigation (entirely dryland or rainfed): not applicable for withdrawal volume. The water table depth question may still apply if monitoring wells exist on managed land.

Participants relying entirely on surface water with no groundwater use: not applicable for both withdrawal volume and water table depth.

Withdrawal / Pumping Volume — Required for Participants with Groundwater Use

Total water withdrawal	For the reporting period, broken down by source: groundwater / surface water / municipal / recycled or reclaimed / other.
Units	acre-feet, gallons, m^3, ML.
Data source	pump meter / water district delivery records / regulatory compliance records / utility records / estimated from pump runtime / other.
Reporting period	2024 season / 2025 season / both.
Metered or estimated	Whether withdrawal volume is metered directly or estimated.

Water Table Depth — Required Where Data Is Available

Current water table depth	Most recent measurement in feet or meters below surface.
Measurement method	Dedicated monitoring well / production well static water level / GSA or water district reported / modeled / not measured.
Date of measurement	Month and year of most recent reading, or reporting period it represents.
Compliance program	Whether data comes from a compliance program — if yes, name the program (SGMA, Murray-Darling Basin Plan, State Water Board, other).
Historical baseline	Whether a historical baseline exists for water table depth on managed land (Yes — note years available / No / Unsure).

Nutrient or Sediment Load

How it informs management decisions: Measures what is leaving the field in water, the downstream accountability check on nutrient management and soil conservation practices. High nutrient or sediment loads indicate management gaps like over-application, poor timing, inadequate cover, or unprotected tile outlets, which can represent both regulatory exposure and wasted inputs. Connecting this metric with NUE creates a verification pathway: high NUE should correlate with lower nutrient loading.

Definition

This metric captures the quantity or estimated risk of nutrients (nitrogen and/or phosphorus) and sediment leaving managed land through surface runoff, tile drainage, or edge-of-field discharge. Both measured values and modeled estimates are acceptable. Participants should report what they have and document the source clearly.

Required Data Fields

Parameters reported	Select all that apply: Nitrate-nitrogen / Total nitrogen / Phosphorus / Total suspended solids / Sediment / Other — describe. Nitrogen (N) and/or phosphorus (P) are the primary parameters; other water quality parameters may be added.
Measured or modeled	Stated for each parameter reported.

If Measured

Sampling location	Tile drain outlet / field edge / adjacent waterway / ditch / other).
Sampling method	Grab samples / automated sampler / continuous sensor / third-party monitoring program.
Lab or program	Lab analysis method or monitoring program name.
Sampling frequency	Single sample / event-based / seasonal / continuous.
Compliance program	Whether sampling is part of a formal compliance or conservation program — if yes, name it (ILRP, Murray-Darling Basin Plan, watershed monitoring program, other).

If Modeled or Estimated

Model or tool used	See reference list below.
Key model inputs	Brief description of primary inputs used (e.g., slope, soil type, cover, management practices).
Load value or risk score	Whether the estimate represents a measured-equivalent load value or a relative risk score.
Validation	Whether the model output has been validated against any measured data.

Reference: Acceptable Modeling Tools by Geography

U.S. operations:

- RUSLE or RUSLE2 erosion and sediment estimation
- State extension nutrient loss calculators (e.g., Purdue P Index, Iowa State N loss calculator, UC Cooperative Extension nutrient management tools)
- NRCS conservation practice effect estimates from EQIP or CSP enrollment
- CDFA Healthy Soils Program practice effect documentation (California)
- Cool Farm Tool or similar MRV platforms with water quality co-benefit outputs
- Third-party agronomist or consultant estimates — name the provider

Australian operations:

- HowLeaky — paddock-scale water quality, erosion, and nutrient loss modeling; recommended for grain systems
- SedNet — catchment-scale sediment budgeting
- APSIM — cropping systems model with nutrient and water balance outputs
- GRDC nutrient management tools — grain systems
- State Department of Agriculture tools: NSW DPI, Agriculture Victoria, PIRSA (South Australia), Queensland DAF
- Catchment management authority (CMA) practice effect documentation
- National Landcare Program conservation practice documentation

Category 4: Climate

Three metrics are included in the Climate category: GHG Emissions (Carbon Intensity), Soil Carbon / Carbon Sequestration, and Land Use Change. All three have alignment with other reporting frameworks. Carbon intensity is the anchor metric, selected for its ability to normalize emissions to production output and support cross-operation benchmarking and supply chain reporting.

GHG Emissions — Carbon Intensity

— Primary Anchor Metric

How it informs management decisions: Normalizes emissions to production output, allowing evaluation of whether an operation is becoming more or less emissions-efficient per unit of food produced over time. Improving carbon intensity demonstrates that productivity and emissions performance are moving in the same direction, which is the core narrative for supply chain decarbonization. For most participants, this metric will currently serve primarily a reporting function; the pilot diagnostic questions are designed to understand where it is and is not yet informing on-farm decisions.

Definition

Carbon intensity = Total GHG emissions (kg CO_2e) ÷ Total production (kg or tonne of product). Emissions include combined Scope 1 and Scope 2 sources reported as a single figure. The Scope 1/2 boundary distinction is acknowledged as complex for asset managers rather than direct farm operators; combined reporting is accepted and preferred for this pilot.

Scope 1 and 2 sources typically included in MRV tool calculations: fuel combustion (diesel, gasoline, propane), nitrogen fertilizer application (N_2O), purchased electricity, irrigation pumping energy, and other direct operational emissions as captured by the tool used.

MRV Tool Fragmentation

Multiple participants flagged tool fragmentation as a barrier in the focus group surey. Leading Harvest does not endorse any specific MRV tool. Any tool is acceptable as long as it is disclosed and used consistently year over year. Participants beginning measurement for the first time should select a tool that is most relevant to their geography and primary cropping system.

Required Data Fields

Carbon intensity value	kg CO_2e per kg or tonne of product.
Crop or commodity type	If multiple crops, report by crop type or note that the value represents a blended portfolio average.
MRV tool or platform	e.g., Cool Farm Tool, Comet-FARM, other — name the platform.

Tool consistency	Is the same MRV tool used consistently across all reported acreage? (Yes / No — describe)
First year or continuing	Is this the first year using this tool, or does prior-year data exist using the same tool?
Reporting period	2024 season / 2025 season / both.
Acreage coverage	Acreage or proportion of managed acres represented by the calculation.
Primary vs. default inputs	Approximate proportion of inputs that were primary data vs. tool default values. Three tiers are sufficient: Primarily primary data / Mixed / Primarily defaults. No submission of primary data records is required for the pilot.

Yield / Production Data

Yield data source	Farm records / elevator receipts / FSA records / estimated — describe.
Per-acre fallback	If yield data is not available, participants may report emissions per acre (kg CO_2e per acre) instead of per product. Note that per-acre reporting is being used and state the reason.

Soil Carbon / Carbon Sequestration

How it informs management decisions: Documents whether the soil is functioning as a net carbon sink or source, which is the most direct measure of whether management practices are contributing to atmospheric carbon reduction. For buyers and investors making nature-based solutions claims, soil carbon sequestration is increasingly an evidential requirement. For farm managers, improving soil carbon also tracks with improving soil health outcomes across multiple dimensions simultaneously. This metric shares data infrastructure with the Soil Organic Matter metric in the Soil Health category.

Relationship to Soil Organic Matter

Participants who reported SOM (%) in the Soil Health category can derive SOC concentration using the standard conversion: SOC (%) = SOM (%) × 0.58. Participants should note if their soil carbon value was derived from SOM using this conversion rather than measured directly as SOC. Where both SOM and SOC data exist, direct SOC data are preferred.

Reporting Format — Participants Select Whichever Is Available

Concentration (% SOC or g C / kg soil)	Derived directly from lab analysis or converted from SOM. More universally accessible, does not require bulk density data.
Stock (tonnes C / acre or tonne C / ha)	Concentration × bulk density × depth. Required for sequestration calculations but needs bulk density data that not all participants will have. If reporting stock, bulk density source must be stated.

Required Data Fields

Soil carbon value	Concentration or stock. Specify which is being reported.
Sample depth	Consistent with SOM reporting depth where applicable.
Sampling method	Consistent with SOM reporting where applicable.
Lab analysis method or modeled source	Must be stated.
Measured or modeled	Must be noted using same three-tier framework as SOM: (1) Lab-measured; (2) Modeled / remote sensing — calibrated against lab samples; (3) Modeled / remote sensing — uncalibrated.
Relationship to SOM reporting	Whether this value was also reported under the Soil Health category (SOM / SOC) or is a separate measurement.
Date of most recent sample or model run	Month and year.
Acreage represented	Acreage or proportion of managed acres represented by the measurement.

Optional — Change Calculation

- Prior SOC or SOM measurement(s) available
- Direction of change: increasing / stable / declining / unable to assess from available data.

Land Use Change

How it informs management decisions: Documents whether changes in how land is classified and used are net positive or negative for emissions and biodiversity. For operations managing mixed portfolios (cropland, pasture, forest, wetlands), land use change is the mechanism by which habitat is either protected or converted and the most visible indicator for deforestation-free supply chain commitments.

Definition

Land use change documents permanent conversions between natural or semi-natural land (including forest, native vegetation, and wetlands) and agricultural land (cropland or pasture) on participant-managed acres. The metric captures both negative changes (natural to agricultural conversion) and positive changes (agricultural to natural restoration or reforestation). Routine timber harvest and regeneration within continuously managed forest is not considered a land use change event unless the harvested land was subsequently converted to a non-forest agricultural use.

Step 1 — Current Land Use Baseline

Participants document the current breakdown of all managed acres by land use category. This baseline serves as the reference point for future land use change reporting.

Land use categories — report acreage for each that applies:

- Cropland — annual crops
- Cropland — perennial crops (orchards, vineyards, permanent pasture)
- Managed forest or timberland
- Pasture or rangeland
- Conservation or habitat land (wetlands, native vegetation, CRP, easements)
- Other — describe

Total acres by category and total managed acres stated.

Step 2 — Change Events in the Past 5 Years (2020–2025)

Any permanent conversion?	Did any permanent land use conversion occur on participant-managed acres during this period? (Yes / No / Unsure)
Type of conversion	For each change event: Natural or semi-natural to agricultural (forest clearing, native vegetation clearing, wetland drainage) / Agricultural to natural or semi-natural (reforestation, wetland restoration, native vegetation restoration) / Forest to non-forest agricultural / Other — describe.
Acreage involved	Acres affected by each change event.
Approximate year	Year or range in which the conversion occurred.
Location	State or region — does not need to be field-specific.
Voluntary or required	Whether the conversion was voluntary or required (e.g., regulatory requirement, conservation program enrollment, buyer requirement).

Category 5: Social

Three metrics are included in the Social category: Safety Training Completion and Recordable Incident Tracking, Agricultural Management Retention Rate, and Community Engagement Activities Annually. Safety Training is the anchor metric for the Labor and Workforce sub-category; Community Engagement is the anchor for the Community sub-category. Agricultural Management Retention Rate is the most LH-distinctive metric across all five categories — it does not appear in any external sustainability framework and is included based on strong qualitative signal from LH participant surveys.

Safety Training Completion and Recordable Incident Tracking

— Primary Anchor Metric

How it informs management decisions: Documents whether the workforce is equipped with the knowledge and systems to prevent injury, and whether management is tracking outcomes when harm occurs. A declining incident rate alongside high training completion demonstrates a safety culture that protects workers, reduces liability, and maintains operational continuity. It is the most basic indicator of an employer's duty of care across the portfolio.

Reporting Scope

Because this is a farmland management standard, farm-level labor data is important alongside managing-entity-level data. Participants should report what they have access to and document the scope clearly:

- Direct employees of the managing entity only
- Farm-level employees on directly operated acres
- Farm-level employees on tenant-operated acres (where data is accessible)
- All of the above
- Note if any scope category was excluded due to data access limitations — particularly relevant for tenant-operated acres

Safety Training Completion — Report Whichever Option(s) Are Available

Option 1 — % completing annual safety training	Total number of employees in scope; number completing safety training in the reporting year; % completion rate; type of training covered (brief description); whether training is conducted in-house or by a third party.
Option 2 — Hours of safety training per employee per year	Average hours of safety training per employee in the reporting year; total employees in scope; whether this includes mandatory regulatory training, voluntary training, or both.
Option 3 — % of operations with a documented safety training program	Total number of farm operations or managed units in scope; number with a documented safety training program in place; % of operations with a documented program; whether programs are standardized across operations or operation-specific.

Participants may report using one, two, or all three options. Note which option(s) are being used and why others are not available if only one is reported.

Recordable Incident Tracking

Total recordable incidents	Number of recordable incidents in the reporting year.
Types of incidents tracked	Injuries only / illnesses / near misses / all of the above.

Agricultural Management Retention Rate

How it informs management decisions: Demonstrates whether the organization is maintaining the institutional knowledge, grower relationships, and technical expertise that underpin long-term stewardship quality. High retention of qualified agricultural management personnel signals organizational stability, continuity of practice, and the kind of long-horizon decision-making that sustainable farmland management requires. Turnover in these roles disrupts the very management quality that LH certification is designed to verify.

Who Is in Scope

Permanent full-time agricultural management and supervisory staff includes:

- Farm managers
- Agronomists employed directly by the managing entity
- Field supervisors and operations managers
- Sustainability managers with direct farm management responsibilities
- Other permanent full-time staff whose primary role involves on-farm agricultural management decisions

Explicitly excluded from scope:

- Seasonal or temporary workers
- H-2A or PALM scheme workers
- Independent contractors or third-party consultants (unless noted separately in optional supplemental reporting)
- Corporate, financial, or administrative staff without direct farm management responsibilities

Reporting Options — Participants Select Whichever Are Available

Option 1 — Average tenure	Total number of permanent full-time agricultural management and supervisory staff currently employed; average years of service for that population; longest tenure in the group (optional); whether any staff have been employed for 10 or more years (yes / no / number if known); data source (HR records / payroll records / management estimate).
Option 2 — Annual retention rate	Total permanent full-time agricultural management and supervisory staff employed at start of reporting period; total retained at end of reporting period;

	number who departed during the period (voluntary vs. involuntary if known); annual retention rate (% retained); reporting period (must be stated); data source.

Participants may report using one or both options. Note which is being used and why the other is not available if only one is reported.

Community Engagement Activities Annually

— Primary Anchor Metric

How it informs management decisions: Documents the degree to which the organization is investing in the rural communities, industries, and supply chains on which its operations depend. Consistent community engagement demonstrates a social license to operate that reduces reputational and regulatory risk, and reflects the understanding that agricultural operations and rural communities are mutually dependent. It also recognizes the significant existing community investment most participants are already making without formal documentation.

Definition and Threshold

Active participation is the threshold across all four categories. Passive association, such as receiving newsletters, informal affiliations, or one-time conference attendance without an active participation role does not qualify. Participants should report activities that represent genuine organizational investment of time, resources, or leadership.

Reporting Period

Calendar year 2024 and/or 2025.

Category 1 — Organizational Memberships

Active membership means the organization is paying dues AND at least one of the following applies: a representative sits on the board or a standing committee; a representative actively attends meetings or events on behalf of the organization; or the organization contributes staff time, resources, or expertise to the organization's activities.

Total active memberships	Number of organizations in which the member holds an active membership meeting the threshold above.
For each membership	Name of organization; type (Farm Bureau / commodity association / watershed council / Landcare group / conservation organization / professional association / other — describe); nature of active involvement (board member / committee member / regular meeting attendance / other — describe).

Category 2 — Events

Events include farm tours, field days, agricultural fairs, community meetings, educational workshops, and similar activities where the member organization hosts, co-hosts, or actively participates in community-facing programming.

Total events	Number of events hosted, co-hosted, or actively participated in during the reporting year.
For each event or event type	Brief description; approximate date or season; estimated number of participants or reach where known.
Indigenous community engagement	Flag where any events involved engagement with Indigenous communities.
Total reach (optional)	Estimated total number of people engaged across all events.

Category 3 — Employee Volunteering Time

Includes formal organizational volunteering programs and informal community contributions made by staff on behalf of the organization. Not limited to agricultural or rural community contexts — any community-focused volunteering counts.

Total organizational volunteering hours	For the reporting year.
How hours were captured	Formal tracking system / manager estimates / employee self-reporting / estimated from known activities / other). Estimates are acceptable, note that an estimate is being provided.
Formal or informal	Whether volunteering is part of a formal organizational program or informally practiced.
Types of organizations or causes (optional)	Brief description of organizations or causes supported.
Indigenous community organizations (optional)	Flag where any volunteering involved Indigenous community organizations.

Category 4 — Supply Chain and Industry Engagement

Active engagement means going beyond attendance to contribute expertise, leadership, or organizational resources. Qualifying activities include:

- Speaking on a panel or presenting at a conference or industry event
- Serving on a working group focused on sustainability, supply chain, or agricultural practice
- Serving on a commodity association board or committee
- Leading or co-leading an industry initiative or project

- Contributing written content, case studies, or data to industry publications or frameworks
- Participating in a formal multi-stakeholder sustainability initiative (e.g., Leading Harvest, Field to Market, sustainability roundtables)

Does not qualify: attending a conference without an active participation role; receiving industry publications; passive membership in an association without active involvement.

Total qualifying activities	Number of qualifying supply chain or industry engagement activities during the reporting year.
For each activity	Name of event, organization, or initiative; nature of participation (panel speaker / working group member / board member / presenter / contributor / other — describe); approximate date.
Indigenous community supply chain initiatives	Flag where any engagement involves Indigenous community supply chain initiatives.

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