



Sustainable Food Group Sustainability Standard™ Audit Guidelines

*Used in conjunction with Sustainable Food Group
Sustainability Standard v1.1*

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Introduction

These guidelines are provided to help auditors execute and score the Sustainable Food Group Sustainability Standard in a knowledgeable, impartial manner. This information is provided to interpret and support the principles, requirements and expectations of the Sustainability Standard as noted in the Scheme normative documents.

This document is for guidance purposes only and in no way replaces any regulatory legislation or other legal guidance documentation or viewed as giving legal advice. The Sustainable Food Group (SFG) and

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These guidelines are neither exhaustive nor exclusive and detail minimum requirements only by means of statements related to audit questions and expectations. There will be variations in applicability to an operation based on the process(es) and commodities involved. Auditors and auditees should interpret the questions and criteria in different situations, with food safety and risk minimization being the key concerns.

The operation practices, policies and procedures should be pertinent to the situation at hand and be able to stand up to any challenge by an auditor or other relevant interested party (including law enforcement). Where laws, customer requirements and specifications, commodity specific guidelines and/or best practice recommendations exist and are derived from a reputable source these practices and parameters should be followed if they present a higher level of conformance than those included in the audit scheme system.

Website links shown in this document are there to aid understanding and provide assistance by way of example (link listings are not exhaustive). These links are not a sign of endorsement by the Sustainable Food Group. Furthermore, the Sustainable Food Group accepts no liability for the content of these links.

Please be aware that there is additional information on the Sustainability Standard website including the audit checklist template. The Sustainability Standard website also has access to the official SFG Sustainability Standard General Regulations which explains the overall scheme scoring systems and other details of the scheme.

The following is a modified excerpt from SFG Sustainability Standard General Regulations v1.1. It is provided here as an introduction to the audit notes. For full and current text please refer to the most recent version of SFG Sustainability Standard General Regulations at www.sustainablefoodgroup.org.

Audit Execution

The audit should be performed using the most recent version of the SFG Sustainability Standard normative documents.

Please note, with all operations it is imperative that the facility is running product i.e. growing or processing (whatever functions are usually occurring as on a "normal" day) and that a normal complement of personnel is on site when the audit occurs in order for the auditor to complete a valid assessment.

Scoring System

The audit format is updated as needed. This may include the layout, the questions themselves and point assignments. Point assignments vary by question. Questions are ranked as total conformance, partial conformance, non-conformance or not applicable. Partial conformance provides the auditor with an option of providing partial points; partial conformance is an option for all questions except the Minimum Requirements. Not applicable is an appropriate response if the practice that the question is referencing is not used, e.g. no pesticides are applied or if the size or type of operation makes the question irrelevant. Responses marked as not applicable receive zero points and the auditor should subtract the corresponding question's point total from the total possible points for the operation's audit.

Automatic Failure

There are some questions that if down scored will lead to an automatic failure and an overall score of 0%. On being immediately informed of the automatic failure by the auditor during the audit, the auditee has the option to have the auditor continue to complete the audit or to have the audit halt at that point (all charges will apply).

Special Circumstances for Not Certifying

Please also note, that under special circumstances and upon finding serious food safety risks a “not certified” decision can be attributed. The auditee should be immediately informed of the automatic failure by the auditor during the audit. The auditee has the option to have the auditor continue and complete the audit or to have the audit halt at that point (all charges will apply).

There are other Special Circumstances that are not technical in nature, examples of these include detection of deliberate illegal activities like deliberate mislabeling, discovery of falsified records, attempting to bribe an auditor/CB officer, threatening behavior towards an auditor/CB officer, etc.

Audit Termination

Once an audit has been started, should the auditee wish to stop the audit for any reason, the auditor will complete the report for as many questions as they were able to verify. SFG Sustainability Standard audits cannot be converted into a pre-assessment audit once the audit has been started. If an audit is terminated early then questions that the auditor was unable to verify, will be marked as non-conformance and receive a score of zero. For questions unable to be verified the auditor will indicate the audit was terminated at the request of the auditee before the auditor could verify whether or not the audit conformed to the conformance criteria of the question. A report will be created on the database and issued and all charges will apply.

Documentation Requirements

When an organization and its associated operations are being audited the auditor is checking the systems (SOP's, policies etc.) and the implementation of these systems.

While usually auditees create and implement their own systems, they can also use systems that have been created by other entities, for example, their customer's technical manager, their consultants etc. or a combination of resources.

For example, an organization may opt to create their own SOP's, in other instances utilize SOP's templates provided by other entities. As long as the systems meet the requirements of the SFG Sustainability Standard questions and expectations and these systems are being implemented properly, the auditee should receive full points for their efforts. The auditee is responsible for ensuring that the systems they use are reviewed, maintained and up to date. If the auditor detects any inconsistency, it will result in a down score.

New Auditees/First Time Auditees

In operation for more than three consecutive months – auditee should have at least three months of documentation available for review. If the auditee has less than three months of most of their documentation available for review, a pre-assessment audit is strongly advised. If the auditee has less than three months of most of their documentation available for review and decides to have a regular audit, they should be aware that they cannot receive full conformance for paperwork questions relating to monitoring and that the down score will be based on the amount of paperwork available.

Short season operation, in operation for less than three consecutive months - auditee should have at least three months of documentation available for review (this may include last season's

documentation). Where an operation does not have three months of records available (e.g. one month of operation per year) auditee should have at least the previous season’s records available for review. If the auditee has less than three months of most of their documentation available for review and decides to have a regular audit, they should be aware that they may not receive full conformance for paperwork questions relating to monitoring and that the down score will be based on amount of paperwork available.

Existing Auditees

In operation for more than three consecutive months – auditee should have documentation available from the date of the prior audit.

Short season operation, in operation for less than three consecutive months – auditee should have at least three months of documentation and documentation at least since the last audit (which includes the last season). Where an operation does not have three months of records available (e.g. 1 month of operation per year) auditee should have at least the previous season’s records available for review.

	Operates < three months/year	Operates > three months/year
New Auditee	Three months of records (may include last season’s records)	Three months of records (may include last season’s records)
Existing Auditee	Records at least since last audit (or longer) to meet minimum requirement of three consecutive months of records	Records since last audit

Visual versus Verbal Confirmation

Visual confirmation is the default method of auditing, whether on the visual inspection portion or the paperwork section. Scores and comments are assumed to have been visually confirmed, unless otherwise stated. Verbal confirmation should be the exception to the rule and, if auditing properly, these should be rarely used. If a verbal confirmation is accepted, the auditor should write this in the comments section of the question.

How to Use Point Assignment Guidelines

The following sections of this guidance manual are designed to help the users choose the right score for each question, thereby helping to ensure consistency. This document does not cover all situations and is intended to be a guideline, as opposed to a rule. Auditors are expected to follow the guidelines as much as possible but it is understood that there will be situations where an auditor should use their discretion. If an auditor has to make a judgment call and/or tackle a situation not covered by this manual, the auditor should note the circumstances in the audit report with full justifications. The auditor should also forward these details to the Sustainable Food Group in a separate note, so that this can be accounted for in the next version of the manual.

In order to be consistent with the voluntary nature of requesting a third party audit, and in order not to seem to be a legal document, the requirements within the questions are written as “should”, and can be scored against. In other questions that use the term “ideally”, these statements cannot be scored against, but give the auditee an opportunity for improvement.

Glossary

Aggregate stability

The ability of soil aggregates, or groups of soil particles, to resist disintegration when tillage, water, wind erosion or other disruptive forces act on the soil. Wet aggregate stability suggests how well a soil can resist

raindrop impact and water erosion. Size distribution of dry aggregates can be used to predict resistance to abrasion and wind erosion.

Agricultural inputs

Materials used in the production of crops including seeds, transplants, rootstock, cuttings, fertilizers, crop protection products, adjuvants, growth promoters, predator additions, irrigation water and any other material inputs to the growing process.

Application equipment calibration

Process to ensure that input application equipment is operating properly by testing equipment measurements against a known value. Improperly calibrated equipment may cause either too little or too much of an input, e.g., pesticides, fertilizers, manure, compost, to be applied.

Available water capacity

The maximum amount of plant available water a soil can provide. It is an indicator of a soil's ability to retain water and make it sufficiently available for plant use.

Beneficial insect

Insects that provide a benefit, such as suppressing pests or providing pollination. The term “beneficials” in the context of a question addressing insects is used as a synonym to beneficial insects.

Beneficial species

Organisms that provide an agroecosystem benefit, such as suppressing pests. The term “beneficials” in a non-specific context refers to all beneficial species.

Biopesticides

Certain types of pesticides made up of living organisms or derived from the products of living organisms, such as microbes, bacteria, plant extracts, fatty acids or pheromones, and used to control pests.

Biosolids

Organic matter recycled from sewage for use in agriculture.

Buffer zone

An area of permanent vegetation that is maintained between agricultural fields and the water bodies to which they drain. These buffers are intended to intercept wastewater runoff thereby providing water quality benefits. Additionally, they are effective mitigation tools for reducing pesticide and applied nutrient drift to environmentally sensitive areas that foster pollinators and other beneficial organisms.

Compaction

A compression of soil that results in poor water drainage, air movement and root growth.

Cover crops

Crops planted and later incorporated into the soil to help manage soil erosion, soil fertility, soil quality, water, weeds, pests, diseases, biodiversity and wildlife. Examples include legumes, cereals, grasses and more.

Cultural practice

Agricultural practices that aim to disrupt the pest's environment without the use of chemical substances to enhance crop health and prevent weed, pest or disease problems. Examples include turning under crop residues, sterilizing tools and equipment and harvesting early.

Drip irrigation

Irrigation method that saves water and fertilizer by allowing water to drip slowly, either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing and emitters.

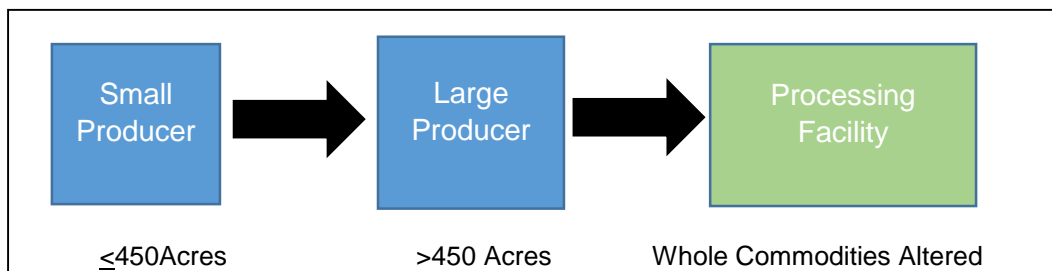
Evapotranspiration (ET)

The loss of water from the earth's surface through the combined processes of evaporation from soil and plant surfaces, and plant transpiration. ET information is critical for irrigation system design and water management.

Facility operation

A handling operation carried out in one or several buildings where product is being handled. This audit applies to three types of operations that can be classified as: "Small Producer," "Large Producer" and "Processing Facility."

The following image describes the scope of each one of the facility types in this certification scheme:



Auditees should not apply for multiple Sustainability Standard audits of different operation types at the same address, unless there is a processing facility and growing operation with the same address or is different ownership.

Field operation

A growing operation carried out in an open or in a covered area for the production of fresh produce for human consumption. The type of Field operation can be classified as: "Small Producer" or "Large Producer."

Filter strips

An area of permanent herbaceous vegetation used to reduce sediment, organics, nutrients, pesticides, and other contaminant loadings in runoff.

Furrow irrigation

Irrigation of farmland by water run in open furrows created in soil between the crop rows.

Genetically modified organisms (GMOs)

Organisms (i.e. plants, animals or microorganisms) in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating and/or natural recombination.

Green manure

Living plant material incorporated into the soil, or killed and left on the surface, for soil improvement, or when composed of legumes to increase the soil N supply.

Greenhouse gases (GHGs)

Compounds that trap heat in the atmosphere. These gases include carbon dioxide, methane, nitrous oxide and fluorinated gases.

Greenhouse

A greenhouse is defined as a temporary or permanent enclosed structure where crops are grown in a controlled environment. Greenhouses do not include shade or hoop houses. A product grown under this type of operation is marketed as “Greenhouse grown”.

Ground nests

Similar in appearance to ant holes from above, about 70% of native bee nests in the ground and need access to the soil surface to dig their nest. Each female excavates her own nest tunnel and brood cells, and stocks the cells with nectar and pollen.

Infiltration rate

The rate at which ponded water on a soil surface enters the soil profile.

Integrated pest management (IPM)

Integrated pest management (IPM) is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.

Invasive

Designated by state or national agricultural authorities as threatening to agricultural and/or horticultural crops and/or humans and livestock.

Key pest

An insect, mite, disease, nematode or weed that frequently causes crop damage past a quality and economic threshold unless an action is taken to reduce the impact. A common pest that requires human intervention in order to maintain a quality product.

Micronutrient

A chemical element necessary in only extremely small amounts (less than 1 part per million in the plant) for the growth of plants. Micronutrients include: boron, chloride, copper, iron, manganese, molybdenum and zinc.

Mitigation plan

Set of strategies that have been identified and implemented to reduce or eliminate the negative impact of pesticide applications on air, soil, water, plants, animals and humans.

Mode of action

Describes a functional or anatomical change, at the cellular level, resulting from the exposure of a living organism to a substance.

Packinghouse

This type of facility is where whole commodities are sorted and/or sized, may be minimally trimmed (not altered in form), washed or not washed, possible post-harvest fungicide treatments applied (e.g. wax treatments) and packed for commercial distribution and use by consumer or retail establishment. In this type of facility, no processing activities are being performed, if so, a different type of facility operation shall be used. A Packinghouse facility covers the activities involved in the Storage & Distribution Center and Cooling/Cold Storage facilities.

Pest scouting

Process of precisely assessing pest pressure and crop performance to evaluate economic risk from pest infestations and disease, as well as to determine the potential effectiveness of pest and disease control interventions.

Pesticide

A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. This includes substances used as a nitrogen stabilizer or as a plant regulator, defoliant, or desiccant. Pesticide products approved for use in organic crops, such as spinosad or Bt, are included in this definition.

Pesticide drift

Airborne movement of pesticides, away from the intended target. Pesticide drift can affect everyone, both urban and rural communities, by having negative effects on human health and the environment.

Processing facility

This type of facility is where whole commodities are minimally processed and altered in form by peeling, slicing, chopping, shredding, coring, or trimming, with or without washing, prior to being packaged for use by the consumer or a retail establishment (e.g., pre-cut, packaged, ready-to-eat salad mixes). In this type of facility, processing activities are being performed, if not, a different type of facility operation shall be used. A Processing facility covers the activities involved in the Storage & Distribution Center, Cooling/Cold Storage and Packinghouse facilities.

Reduced tillage

Method of tillage in which the soil has been disturbed to a lesser extent relative to the conventional tillage (plowed/harrow till). Reducing tillage can reduce soil erosion, loss of carbon from the soil into the atmosphere, and reduce energy consumption and costs.

Refuges

An area of a field not treated with pesticides to allow beneficial insects and susceptible pest organisms to survive.

Resistance

Ability of an organism to avert the attack of a potential pathogen up to a certain degree or to resist the effect of a harmful agent.

Riparian buffer

The vegetated region next to streams and wetlands that is used to intercept and control excess nitrogen from wastewater runoff.

Rotation

Alternating plantings of one type of plant with at least one other (e.g., corn followed by soybeans); alternating pesticides of one type with at least one other type (e.g., an organophosphate followed by a biopesticide).

Sensitive sites

Sensitive sites are parts of the natural or built environment that may be impacted by growing operations. Most growing operations have sensitive sites that can be protected from production activities.

Undeveloped reserves

A section of field that has been left untouched by farming, construction, etc. to preserve the natural habitat.

Wastewater

Any water that has been adversely affected in quality by man-made influence or pollutants. It comprises liquid waste discharged by domestic residences, commercial properties, industry and/or agriculture and can encompass a wide range of potential contaminants and concentrations.

Wood tunnel nests

Artificial nests consisting of wood blocks drilled with a large number of dead-end tunnels used to attract bees and promote their local population growth.

General Standards

Environmental Certifications

- 1.01** Is production currently certified under any other program(s) addressing elements of sustainable agriculture and requiring an on-site audit? (Informational only, answer will not affect score.)

Informational question (0 points assigned): Certificates are current, available for inspection and apply to all of the operations in the scope of the application. Choices: Demeter Certified Biodynamic, Eco Apple, Equitable Food Initiative, Fair Food Program, Food Alliance, Protected Harvest, Rainforest Alliance, SCS Sustainability Grown, TruEarth, USDA Organic, Other.

Minimum Requirements

- 1.02.1** Is there a written policy statement prohibiting the application of both untreated and treated biosolids to production sites for at least one year prior to production?

Total conformance (10 points): A written policy available for inspection contains a clear statement prohibiting the application of both biosolids (treated sewage sludge) and untreated sewage to all sites in production for at least one year prior to production. The policy is communicated and applied to all operations that supply the facility and all growing operations in the scope of the applications.

Non-conformance (0 points): No written policy exists. Policy is not communicated and applied to all operations that supply the facility and all growing operations in the scope of the applications.

- 1.02.2** Is there a policy that any genetically modified (GM) ingredients will be disclosed to the buyer?

Total conformance (10 points): A written policy available for inspection includes a clear statement that any GM content will be disclosed to the buyer. If a GM variety of the product is available on the market (e.g., zucchini, yellow squash, sweet corn, potato, papaya) and the organization does not communicate GM content to buyers, a written seed-supplier certification and/or third-party test results are available indicating no GM content.

Non-conformance (0 points): No written policy exists.

- 1.02.3** Is there a policy that legal requirements be met for all pesticide and nutrient applications and for employment, and employee health and safety?

Total conformance (10 points): A written policy available for inspection includes a clear statement that all operations in the scope of the application will comply with all applicable laws and regulations of the jurisdiction(s) governing the production location and addressing labor, worker health and safety, and handling, storage and application of all pesticides and nutrients. If operations participate in the Whole Foods Market Responsibly Grown Rating System, a signed agreement on conformance with laws is acceptable.

Non-conformance (0 points): No written policy exists.

- 1.02.4** Are there complete and legible pesticide application records for the current season that include location, date, time, material applied, rate, applicator name, application method, wind speed and direction, air temperature and target pest?

Total conformance (10 points): For third-year auditees, pesticide application records are complete and legible, and available for at least three years for all operations in the scope, including location, date, time, material applied, rate, applicator name, application method, wind speed and direction, air temperature and target pest. For new or second-year applicants, there is a written policy clearly stating that these records will be maintained for a minimum of three years going forward.

Non-conformance (0 points): For third-year auditees, pesticide application records are not complete and legible or are not available for at least three years for all operations in the scope, including location, date, time, material applied, rate, applicator name, application method, wind speed and direction, air temperature and target pest. For new or second-year applicants, no written policy exists.

- 1.02.5** Are there complete and legible nutrient application records for the current season that include date, time, material applied, rate, applicator name and application method?

Total conformance (10 points): For third-year auditees, nutrient application records are complete and legible, and available for at least three years for all operations in the scope, including location, date, time, material applied, rate, applicator name and application method. For new or second-year applicants, there is a written policy clearly stating that these records will be maintained for a minimum of three years going forward.

Non-conformance (0 points): For third-year auditees, nutrient application records are not complete and legible or are not available for at least three years for all operations in the scope, including location, date, time, material applied, rate, applicator name and application method. For new or second-year applicants, no written policy exists.

Environmentally Sensitive Areas

- 1.03.1** Are all ecologically sensitive areas within and adjacent to field production, packing and processing sites identified?

Total conformance (20 points): All environmentally sensitive areas or structures on or adjacent to growing, packing and processing site are identified on a map. Environmentally sensitive areas include but are not limited to aquifers, wetlands, wellheads, endangered/threatened species habitat, fuel and chemical storage sites, storm drains and housing.

Non-conformance (0 points): Environmentally sensitive areas or structures are not identified.

- 1.03.2** Are environmentally sensitive areas avoided when putting new land into production?

Total conformance (20 points): New field production sites have not been established in sensitive areas since the previous audit (or within the past year for new applications). Environmentally sensitive areas include but are not limited to aquifers, wetlands, wellheads, endangered/threatened species habitat, chemical storage sites, storm drains, fuel tanks and on-site housing.

Non-conformance (0 points): New field production sites have been established in environmentally sensitive areas.

Not applicable (0 points) if: no new land has been put into production since the previous audit.

- 1.03.3** Are adequate protections in place to avoid impairment of sensitive areas at field production and/or processing plant sites?

Total conformance (20 points): Adequate measures to protect sensitive areas are in place such as undeveloped reserves, filter strips, signage (e.g., Do Not Enter), fencing, buffers, invasive plant removal, locked areas, adequate containment and enclosed production (greenhouse/hydroponic producers). Auditee should be able to provide an explanation for the measures taken to protect sensitive areas and cite the use of scientific resources. Auditors should critically evaluate the measures based on the auditee's justification and the specific sensitive area.

Non-conformance (0 points): No protective measures are in place.

- 1.03.4** Are all ecologically sensitive areas within and adjacent to field production, packing and processing sites visually monitored at least annually?

Total conformance (20 points): Visual monitoring records are available for review for all environmentally sensitive areas or structures on or adjacent to growing, packing and processing site to verify that any protective measures are operating as designed and appear adequate to prevent impairments in ecological functions. Status and corrective actions taken are documented in these records.

Partial conformance (5 points): Records exist, but not on an annual basis.

Non-conformance (0 points): No monitoring records exist.

- 1.03.5** Are quantitative data collected measuring the quality of sensitive areas at field production and/or processing plant sites?

Total conformance (10 points): Quantitative measures of the quality of sensitive areas at the field production and/or processing plant sites are recorded. Example measurements could include monitoring of: water quality measures, incoming irrigation or processing water testing, outgoing runoff or wastewater testing, air quality testing, biodiversity surveys and soil loss estimates.

Non-conformance (0 points): No records exist.

- 1.03.5.1** Do quantitative data measuring the quality of sensitive areas at field production and/or processing plant sites show improvement over time?

Total conformance (10 points): Recorded quantitative measures of quality of sensitive areas at field production and/or processing plant sites show improvement over time. For quantitative measures to show improvement, more than one measurement date must be available and the most recent measurement must be within the last year.

Non-conformance (0 points): No records exist.

- 1.03.6** Does organization create habitat and forage sources for pollinators?

Total conformance (40 points): Organization creates habitat and foraging resources for pollinators. These methods are documented.

Non-conformance (0 points): Organization does not create habitat and foraging resources for pollinators.

- 1.03.7** Does the operation employ measures to reduce ecological impacts of any managed pollinators used in production?

Total conformance (5 points): Operation employs measures to reduce ecological impacts of managed honey bees, bumble bees or other managed pollinators.

Non-conformance (0 points): Operation does not employ measures to reduce ecological impacts of managed honey bees, bumble bees or other managed pollinators.

Not applicable (0 points) if: managed pollinators are not used.

Environmental Emergency Management

- 1.04.1** Do all operations in the scope of the application have emergency contact information and staff procedures readily available in the event of possible emergencies?

Total conformance (20 points): Emergency contact information and basic staff procedures are readily available at likely locations in the event of an emergency including vehicle storage and maintenance, fertilizer and pesticide storage, fuel storage, fuel, fertilizer and pesticide loading facilities, etc.

Partial conformance (15 points): Emergency management plans exist, but do not specifically address local natural disasters (earthquake, tornado or volcanic eruption).

Non-conformance (0 points): Emergency contact information and basic staff procedures are not readily available.

- 1.04.2** Do all operations in the scope of the application have written emergency management plans that are readily accessible if an emergency occurs?

Total compliance (30 points): Emergency management plans are written, readily accessible and contains a list of potential emergencies, emergency contacts, staff roles and responsibilities, resources for control, contain and cleanup, and how staff are trained to respond. Plans address those events that may result in a threat of environmental contamination or worker exposure, e.g., vehicle accident, fire, fuel, fertilizer or pesticide leak or spill, plus earthquake, tornado, volcanic eruption in areas prone to those events.

Non-compliance (0 points): Emergency management plans do not exist, are not readily accessible or are incomplete.

Fertilizer and Pesticide Drift

- 1.05.1** Is pesticide and nutrient application equipment appropriate for the crop and materials in use?

Total conformance (30 points): All fertilizer and pesticide materials are applied using appropriate equipment that is designed for the use as indicated by instruction manuals or documented expert recommendation.

Non-conformance (0 points): Fertilizer and pesticide materials are not applied with appropriate equipment.

Not-applicable (0 points) if: fertilizers and pesticides are not applied.

- 1.05.2** Are pesticide and nutrient application equipment calibrated at least annually, or more frequently if recommended by the manufacturer?

Total conformance (30 points): All fertilizer and pesticide application equipment is calibrated at least annually or more frequently if recommended in equipment manuals or advisor-documented instruction. Written calibration records including results of the calibration and adjustments made are available for at least the most recent calibration.

Non-conformance (0 points): Fertilizer and pesticide application equipment is not calibrated annually and written calibration records for the most recent calibration are not available.

Not-applicable (0 points) if: fertilizers and pesticides are not applied.

1.05.3 Are comprehensive drift management plans written and readily accessible?

Total conformance (40 points): Drift management plans are available for all field production sites where applications are made. The drift management plan contains the following elements: staff roles and responsibilities; training protocol for staff; information to help applicator determine when weather conditions are unsafe for specific types of pesticides; information to help applicator select or adjust formulations, additives, equipment, techniques, or other options to reduce drift; contact information for those requiring notification if unexpected drift has occurred. Any hired-out or contracted applicators must provide a written drift management plan or are trained on the protocol in the auditee's drift management plan.

Partial conformance (10 points): Drift management plans exist but are missing one of the elements.

Non-conformance (0 points): Drift management plans are not available.

Not-applicable (0 points) if: fertilizers and pesticides are not applied.

Air Quality

1.06.1 Are measures in place to protect air quality?

Total conformance (30 points): Operation has most applicable measures in place to protect air quality. Example measures include reducing odors by carefully handling and storing bulk materials (e.g., manure, waste); modifying existing equipment to reduce emissions; purchasing utilities that use less energy or have lower emissions (e.g., tractors, irrigation pumps, processing equipment); keeping vehicle use to a minimum (e.g., practices that reduce tractor passes, motorized transportation needs); adjusting timing of operations (e.g., no tillage during high winds); paving roads on site; applying suppressants on unpaved roads; establishing and maintaining wind breaks; etc.

Non-conformance (0 points): Measures are not in place to protect air quality.

Soil Erosion

1.07.1 Are visibly eroded areas not present, including around production, packing and processing locations?

Total conformance (30 points): Visibly eroded areas are not present, or are extremely limited in size and number with corrective measures in place. This includes all areas under control of the organization including areas adjacent to greenhouses or other enclosed production, packing and processing and facilities, and administrative offices.

Non-conformance (0 points): Visibly eroded areas present.

1.07.2 Are protective measures in place at all locations where the threat of soil erosion exists from wind or water?

Total conformance (30 points): Protective measures are in place at all locations under control of the organization where the threat of soil erosion exists from wind or water. Example protective measures include enclosed production, terraces, mulches, managed drainage, buffers or filter strips and established vegetation. Auditee should be able to provide an explanation for the measures taken to protect areas from the threat of soil erosion and cite the use of scientific resources. Auditors should critically evaluate the measures based on the auditee's justification and the areas susceptibility to soil erosion.

Non-conformance (0 points): Protective measures are not in place in areas where the threat of soil erosion from wind or water exist.

Soil Health

1.08.1 Does organization monitor and record basic soil health indicators?

Total conformance (30 points): Organization monitors and records basic soil health indicators, including macronutrients nitrogen, phosphorus, potassium as per soil tests and/or tissue analysis, and soil pH. Soil tests are conducted for each field at least once every three years.

Non-conformance (0 points): Organization does not monitor soil health indicators.

Not-Applicable (0 points) if: product is not grown in soil.

1.08.2 Does organization monitor and record advanced soil health indicators?

Total conformance (10 points): Organization monitors and records advanced soil health indicators on all fields of production. At least four indicators on the following list are measured by collecting at least one measure per field at least once every three years: compaction, infiltration rate, soil respiration, structure, aggregate stability, texture, earthworm populations, salinity, available water capacity, surface hardness, organic matter, active carbon, potentially mineralizable N, root health rating and micronutrients.

Non-conformance (0 points): Organization does not monitor or record advanced soil health indicators.

Not-Applicable (0 points) if: product is not grown in soil.

1.08.3 Does organization implement adequate protective/corrective measures for maintaining or improving soil health indicators?

Total conformance (40 points): Organization implements adequate protective/corrective measures to improve and maintain soil health. Example measures include: reduced tillage, cover crops/green manures, flotation tires, reduced tire air pressure, dual wheels, fixed travel lanes, reduced trips across field and soil amendments. Auditee should be able to provide an explanation for the measures taken and cite the use of scientific resources. Auditors should critically evaluate the measures based on the auditee's justification and soil health indicators.

Non-conformance (0 points): Organization does not use adequate protective or corrective measures for soil health. For example, cover crops, fixed travel lands and reduced tillage are not used in areas that need them.

Not-Applicable (0 points) if: product is not grown in soil.

1.08.4 Has organization set at least two goals for maintaining or improving soil health indicators and collected quantitative data measuring changes in soil health since the previous audit (or within the previous two years for new applicants)?

Total conformance (10 points): Organization has set at least two goals for improvement in soil health indicators since the previous audit (or for new applicants, within the previous two years). Quantitative data are collected to measure changes in soil health indicators. Quantitative measures include, but are not limited to: compaction, infiltration rate, soil respiration, structure, aggregate stability, texture, earthworm populations, salinity, available water capacity, surface hardness, organic matter, active carbon, potentially mineralizable N, root health rating and micronutrients.

Non-conformance (0 points): The organization has not met the minimum requirement of setting two goals to improve soil health indicators.

Not-Applicable (0 points) if: product is not grown in soil.

1.08.4.1 Has organization met at least two quantitative goals for improvement in soil health indicators since the previous audit (or within the previous two years for new applicants)?

Total conformance (10 points): The organization has met two quantitative goals for maintaining or improving soil health indicators (or two goals set within the previous two years for new applicants).

Non-conformance (0 points): The organization has not met two quantitative goals to improve soil health indicators.

Not-Applicable (0 points) if: product is not grown in soil.

Waste Disposal

1.09.1 Does the organization prohibit burning trash or vegetation?

Total conformance (20 points): Organization does not use burning to dispose of debris (e.g., garbage, broken pallets). Burning vegetation is limited to crops where it is an accepted Best Management Practice (BMP) e.g., expert-recommended burning of infected plant material to reduce disease inoculum. The BMP must be identified in scientific literature, e.g., NRCS, Extension, government agency or scientific research/education institution publication or communication, that the auditee provides for auditor review. The BMP is described in the auditor notes.

Non-conformance (0 points): The organization does not prohibit the burning to dispose of debris.

Advisory Team

1.10.1 Does the organization maintain an interdisciplinary sustainability advisory team?

Total conformance (50 points): Organization maintains one or more sustainability advisory team(s). The team includes and/or accesses the following roles/expertise: labor management, water conservation, energy conservation, soil health, Integrated pest management (IPM) for insects, weeds, plant disease, agronomy/horticulture. Representatives include internal leadership and may also include external experts.

Partial conformance (25 points): Organization's sustainability advisory team is missing one of the above mentioned roles.

Non-conformance (0 points): The organization does not have a sustainability advisory team or the team is missing more than one role.

1.10.2 Does the advisory team meet at least annually to review performance on sustainability measures, and identify and plan improvements?

Total conformance (50 points): The team meets at least annually to review performance and identify and plan improvements. Meeting attendance and minutes are documented. Performance is assessed and plans address one or more of the following: worker health and safety, worker rights, nutrient management, water management, energy conservation, waste management and reduction, scouting practices, records of pests present, expert recommendations, non-chemical measures in place to protect crops from pests, pesticide use and risks, product yield and quality improvement. Score as N/A if the operation does not have an IPM advisory team.

Non-conformance (0 points): The organization's sustainability team does not meet annually to discuss performance.

Not Applicable (0 points) if: the operation does not have an IPM advisory team.

Water Conservation

1.11.1 Does the organization implement measures to prevent contamination of water?

Total conformance (20 points): Organization implements measures to prevent contamination of ground and/or surface water with fertilizers and pesticides or sediment.

- For sediment/drainage management, example measures include establishing vegetation cover (hedgerows, herbaceous barriers, windbreak/shelterbelts and vegetated field borders) in areas sensitive to erosion that drain into waterways, contour buffer strips/terracing, conservation tillage, mulching around crops and cover cropping and cross wind trap strips/planting perpendicular to the prevailing wind direction.
- For salinity management, example measures include identifying saline recharge and discharge areas by testing and managing irrigation water to minimize salt delivery to surface and ground water. For nutrient management, example measures include establishing minimum setback distance (approx. 35 feet) between application area and closest waterway (including canals, ditches, sink holes, etc.)
- For pest management, these measures may include using a "smart sprayer" (e.g. target-sensing sprayers) and other technologies that improve application precision, minimum distance (approx. 35 feet) between application area and closest waterway (including canals, ditches, sink holes, etc.)

Partial conformance (10 points): If only 2 of the 3 management types above (sediment/drainage, salinity and pest) are addressed.

Non-conformance (0 points): The organization does not implement measures to prevent contamination of the ground/surface water with fertilizers, pesticides or sediment. They do not implement BMP or use the above strategies to reduce water contamination.

1.11.2 Does the organization make irrigation decisions based on documented crop need(s)?

Total conformance (10): Organization uses at least one science-based method to inform decisions on irrigation. Example methods include using soil moisture data from electronic sensors or hand measurements, or monitoring evapotranspiration.

Non-conformance (0 points): The organization does not use any science-based methods to inform decisions on irrigation (e.g. calendar-based irrigation).

Not Applicable (0 points) if: dryland systems not using irrigation.

1.11.3 Does the organization implement measures to improve irrigation water use efficiency?

Total conformance (20 points): Organization implements measures to improve irrigation water use efficiency. Example measures include drop nozzles installed on overhead irrigation, furrow/flood irrigation replaced by overhead or drip, closed-loop irrigation systems, shading to reduce evapotranspiration, laser leveling flood-irrigated fields, shutoff devices triggered by rainfall, flow meters for irrigation pumps, or use of soil and plant moisture technologies such as soil probes or precipitation/evaporation monitoring.

Non-conformance (0 points): The organization does not implement irrigation water use efficiency practices (e.g. uses overhead without nozzles, furrow/flood irrigation etc.).

Not Applicable (0 points) if: dryland systems not using irrigation.

1.11.3.1 Has the organization implemented new measures to improve irrigation water use efficiency in the past two years?

Total conformance (10 points): Organization has implemented at least one new measure to improve irrigation water use efficiency in the past two years. Example measures include drop nozzles installed on overhead irrigation, furrow/flood irrigation replaced by overhead or drip, closed-loop irrigation systems, shading to reduce evapotranspiration, laser leveling flood-irrigated fields, shutoff devices triggered by rainfall, flow meters or irrigation pumps, or use of soil and plant moisture technologies such as soil probes or precipitation/evaporation monitoring.

Non-conformance (0 points): The organization has not added any new measures to improve irrigation water use efficiency in the last two years.

Not Applicable (0 points) if: dryland systems not using irrigation.

1.11.4 Does the organization measure and report irrigation use efficiency, i.e., irrigation water use per unit of production?

Total conformance (10 points): Organization measures and reports irrigation water use per unit of production. Irrigation use efficiency can be calculated by determining the ratio of acre-inches of water applied per mass of crop, or by using the calculator provided in the Stewardship Index for Specialty Crops.

Non-conformance (0 points): The organization has not added any new measures to improve irrigation water use efficiency in the last two years

Not Applicable (0 points) if: dryland systems not using irrigation.

1.11.5 Does the organization try to improve local and/or regional watersheds?

Total conformance (5 points): Organization actively tries to improve local and/or regional watersheds. Example measures include records of working with stakeholders and/or local organizations to identify goals for watershed enhancement; measuring progress toward meeting those goals; attending local and/or regional watershed management meetings; developing a written nutrient management plan; and/or implementing water management practices that help mitigate risk to watersheds from agricultural production.

Non-conformance (0 points): The organization does not work with stakeholders in the local/regional watershed to improve it or does not established measurable goals with concrete measurements of progress towards those goals.

1.11.6 Does the organization have measures in place to improve processing water use efficiency?

Total conformance (10 points): Organization has measures in place to improve the efficiency of post-harvest water use for washing or otherwise processing the crop. Example measures include upgrading to processing equipment with greater water use efficiency, water reuse or low flow nozzles.

Non-conformance (0 points): The organization does not implement efficient post-harvest practices. For example, the organization does not have a water reuse system, uses a lot of water per unit of production, has out of date inefficient post-harvest equipment.

Not Applicable (0 points) if: the operation does not use water for processing.

1.11.6.1 Has the organization implemented new measures to improve processing water use efficiency in the past two years?

Total conformance (10 points): Organization has implemented at least one new measure to improve processing water use efficiency in the past two years. Example measures include upgraded processing equipment, water reuse, water per unit of production, monitor established water budget for plant or low flow nozzles.

Non-conformance (0 points): The organization has not implemented any new efficient post-harvest practices.

Not Applicable (0 points) if: the operation is a dry facility and does not use any water.

- 1.11.7** Does the organization measure and report processing water use efficiency, i.e., processing and/or packing plant water use per unit of production?

Total conformance (10 points): Organization measures and reports processing water use per unit of production. Water use efficiency can be calculated by calculating the ratio of processing plant water used per unit of production.

Non-conformance (0 points): The organization does not measure or report the processing water use efficiency (amount of processing water use per unit of production).

Not Applicable (0 points) if: the operation does not use water for processing.

Energy Conservation

- 1.12.1** Does organization implement measures to reduce field production energy use?

Total conformance (20 points): Organization implements measures to reduce field production energy use, including electrical and fuel sources. Example measures include tractor auto-steering, reduced tillage or other practices to reduce trips cross the field; improving energy efficiency of irrigation pumps; a reduction in petroleum-based inputs (e.g., petroleum-based fertilizers); or undergoing an energy use audit and implementing recommendations.

Non-conformance (0 points): The organization does not use measures to reduce field production energy use. For example, they use inefficient irrigation pumps, unnecessary passes through the field and petroleum based fertilizers.

- 1.12.2** Does organization implement measures to reduce use of non-renewable energy for field production?

Total conformance (20 points): Organization implements measures to reduce field production use of non-renewable energy. Example measures include transition to bio-diesel, transition to ethanol, transition to wind energy, transition to solar energy, thermal technology to capture solar energy during day (greenhouse), sensor-mediated temperature control of growing environments, purchase of wind/solar energy, damless hydropower, carbon capture, purchase of carbon credits or purchase of NOx credits.

Non-conformance (0 points): The organization does not make an effort to reduce field production use of non-renewable energy. The farm does not use alternative energy methods.

- 1.12.3** Does organization measure and document energy use efficiency and/or greenhouse gas production including electricity use, fuel use and embedded energy associated with the production of nutrients and pesticides applied?

Total conformance (5 points): Organization measures and documents energy use efficiency and/or greenhouse gas production including electricity and fuel use, and embedded energy used during

the production of fertilizer and pesticide inputs. Tracking tools include Stewardship Index for Specialty Crops (SISC) Energy Use Metrics, Cool Farm Tool, Field to Market Fieldprint Calculator.

Non-conformance (0 points): The organization does not keep track of energy use efficiency or greenhouse gas production. Missing at least one of the following metrics for documentation: electricity and fuel use, embedded energy used during the production of fertilizer and pesticide inputs.

1.12.4 Does organization implement measures to reduce processing energy use?

Total conformance (20 points): Organization implements measures to reduce energy used for washing or other post-harvest processing. These measures may include improving the energy efficiency of processing equipment and undergoing a third-party energy use audit and implementing recommendations.

Non-conformance (0 points): The organization does not use measures to reduce energy used for washing or other post-harvest processing.

Not Applicable (0 points) if: the operation is not involved in packing and/or processing.

1.12.5 Does organization implement measures to reduce use of non-renewable energy for packing and/or processing?

Total conformance (20 points): Organization implements measures to reduce use of non-renewable energy for post-harvest packing and/or processing. Implemented measures may include: transition to bio-diesel, transition to ethanol, transition to wind energy, transition to solar energy, purchase of wind/solar energy, damless hydropower, carbon capture, purchase of carbon credits or purchase of NOx credits.

Non-conformance (0 points): The organization does not use measures to reduce the use of non-renewable energy for post-harvest packing and/or processing.

Not Applicable (0 points) if: the operation is not involved in packing and/or processing.

1.12.6 Does organization measure and document efficiency of energy used for processing, i.e., energy use per unit of production?

Total conformance (5 points): Organization measures and documents energy use efficiency performance, e.g., processing plant electricity use, overall fuel use per unit of production or transition to renewable energy sources, at least once every three years. Tracking tools to measure and document energy use efficiency performance include Cool Farm Tool's "Energy & Processing" section or another verifiable tracking method are used. First year audits must have performance data and outputs from the past year and assess performance every three years after that. Measuring and documenting energy efficiency for processing is required for total conformance. Proof of improving energy efficiency is not required for this question.

Non-conformance (0 points): The organization does not measure and document energy use efficiency or evaluate the documents and meet about switching to renewable energy sources at least every three years.

Not Applicable (0 points) if: the operation is not involved in packing and/or processing.

Natural Resource Reuse

1.13.1 Does organization reuse resources onsite?

Total conformance (20 points): Organization reuses resources available for reuse. Examples include processing waste land-spread or fed to animals; processing water reused for irrigation; and/or plant material from field operations reused such as prunings chipped and returned to soil.

Non-conformance (0 points): There are resources that could be reused by either feeding the animals, gray-water irrigation or adding extra plant material back to the soil, but the resources are not reused.

Not Applicable (0 points) if: the operation has no resources available for reuse on-site or laws or regulations prohibit the use of the available reusable resources.

1.13.2 Does organization measure and document performance, e.g. types/amounts of on-site reuse of renewables?

Total conformance (5 points): Organization measures performance, e.g., types/amounts of on-site reuse of renewables. Estimates of % (+/-5%) are acceptable for measurement. Justification for estimates are available.

Non-conformance (0 points): The organization does not document its performance of reusing renewables.

Not Applicable (0 points) if: the operation has no resources available for reuse on-site.

Materials Recycling

1.14.1 Does organization recycle materials?

Total conformance (20 points): Organization recycles the majority of all recyclable resources from field production, harvesting, packing and processing operations. These may include glass, metal, paper, plastics, batteries, computers and pesticide containers.

Non-conformance (0 points): Vendor does not recycle at least 50% of any of the above listed materials.

Not Applicable (0 points) if: the operation has no resources or materials available to recycle.

1.14.2 Does organization measure and record performance, e.g., types/amounts recycled?

Total conformance (5 points): Organization estimates percentage (+/-5%) of the total amount of that material that is recycled including all types of recyclable materials from all field, packing and processing operations. Types of recycled materials include glass, plastic, cellulose/paper, metal, pesticide containers, batteries, computers and non-edible oil. Justification for estimates are available.

Non-conformance (0 points): Vendor does not keep track of their recycling rates for any of the categories.

Not Applicable (0 points) if: the operation has no resources or materials available to recycle.

1.14.3 Does organization purchase products with recycled content?

Total conformance (10 points): For all products for which recycled content options are available, organization purchases products with recycled content such as recycled cardboard, recycled office paper, recycled pallets and recycled building supplies. Purchase of products with recycled content is verified using receipts, letters from supplying companies or certification (e.g., Forest Stewardship Council).

Non-conformance (0 points): Products with recycled content are available, but vendor does not purchase these products.

Not Applicable (0 points) if: the operation has no resources or materials available to recycle.

Work Environment

1.15.1 Does organization maintain fair and open communications and mutual agreements with employees and trade partners?

Total conformance (20 points): Organization provides documented evidence of maintaining fair and open communications and mutual agreements with employees and trade partners. Examples include employee involvement in decision making, financial/other performance measures transparency, formal employee grievance procedures, terms of employment disclosed during recruiting, no recruitment fees, employees are hired directly, all work hours recorded and compensated, automated work-time tracking, piece-rate workers earn more than minimum wage, employees have the right to collective bargaining, trade/partner customer satisfaction surveys and non-discrimination and non-sexual harassment policies. Auditors should critically evaluate the evidence provided by the auditee.

Non-conformance (0 points): Organization does not have written policies and practices in place to uphold workers' rights regarding employee grievances, non-discrimination and non-sexual harassment.

Not Applicable (0 points) if: the operation does not have employees and/or trade partners.

1.15.2 Does organization implement responsible practices for pesticide applicators?

Total conformance (20 points): Organization implements socially responsible practices for pesticide applicators by providing personal protective equipment for workers and annual medical monitoring for workers handling organophosphates with danger or warning labels.

Partial conformance (10 points): Organization provides either personal protective equipment for workers or annual medical monitoring for workers handling organophosphates with danger or warning labels.

Non-conformance (0 points): Organization does not provide workers with personal protective equipment or annual medical monitoring for workers handling organophosphates with danger or warning labels.

Not Applicable (0 points) if: the operation does not apply pesticides.

1.15.3 Does organization provide opportunities for employee advancement?

Total conformance (20 points): Organization provides one or more employee advancement opportunities. Examples include employee education and cost share, educational leave, internal advancement vs. external hires and in-house education and training.

Non-conformance (0 points): Organization does not provide employee advancement opportunities in any way outlined above.

Not Applicable (0 points) if: the operation does not have employees.

1.15.3.1 Does organization measure and record performance, e.g., employee participation rates, dollar investment, etc.?

Total conformance (5 points): Organization measures and records performance with written documentation, e.g., employee participation rates, dollar investment, rate of internal advancement vs. external hires, etc.

Non-conformance (0 points): Organization does not keep track of or record employee performance.

Not Applicable (0 points) if: the operation does not have employees.

1.15.4 Does organization provide rewards/incentives for innovation and improvement?

Total conformance (20 points): Organization provides rewards/incentives for innovation and improvement. Examples include profit sharing with employees/trade partners, incentive bonus for employees, quality bonus to suppliers and safety incentives.

Non-conformance (0 points): Organization does not offer any rewards or incentives for innovation and improvement to employees.

Not Applicable (0 points) if: the operation does not have employees.

1.15.4.1 Does organization measure and report performance in rewards and incentives?

Total conformance (5 points): Organization measures and reports performance of rewards and incentives opportunities with written documentation, e.g., employee participation rate, total dollar investment.

Non-conformance (0 points): Organization does not measure or report employs rewards or incentives.

Not Applicable (0 points) if: the operation does not have employees.

1.15.5 Does organization implement additional socially responsible practices?

Total conformance (20 points): Organization implements at least three additional socially responsible employee practices. Examples include providing meals, housing, transportation for workers, childcare for children of workers, health insurance cost-share, paid vacation, maternity/paternity leave, sick leave, paid medical care and lost wages for work and/or retirement or life insurance benefits.

Non-conformance (0 points): Organization does not provide socially responsible employee practices like including meals, housing or transportation.

Not Applicable (0 points) if: the operation does not have employees.

1.15.5.1 Does organization measure and report performance in additional social responsibility practices?

Total conformance (5 points): Organization measures and reports performance on additional practices with written documentation, e.g., employee participation rate, total dollar investment.

Non-conformance (0 points): Organization does not measure or report employee performance.

Not Applicable (0 points) if: the operation does not have employees.

1.15.6 Does organization track worker safety, i.e., incident rates?

Total conformance (20 points): Organization tracks worker safety by calculating number of work-related injuries and illnesses times 200,000, divided by the number of hours worked by all employees. Calculations and results are available for review. U.S. operations should receive full credit for keeping the Recordable Incident Rate required by OSHA.

Non-conformance (0 points): Organization does not calculate or record incident rates.

Not Applicable (0 points) if: the operation does not have employees.

Sustainability and Stewardship

1.16.1 Does organization have a written sustainability plan addressing goals for company operations?

Total conformance (50 points): A written sustainability plan is available for the organization addressing goals for company operations. Goals for improving sustainability may cover topics such as logistics, purchasing practices, packaging, sensitive area/biodiversity protection and environmental emergency management.

Non-conformance (0 points): Organization does not have a written sustainability plan.

1.16.2 Does organization communicate improvement toward sustainability goals to buyers, consumers, the public and/or NGOs?

Total conformance (30 points): Documentation is available demonstrating that organization communicates improvements toward sustainability goals to buyers, consumers, the public and/or NGOs via methods that may include company websites, newsletters, press releases, employee communications, annual performance reports and shareholder communications.

Non-conformance (0 points): Organization does not communicate improvements to buyers, consumers, the public and/or NGOs.

1.16.3 Has on-site research been conducted or supported financially or otherwise in the past year?

Total conformance (25 points): Written evidence shows that on-site research has been conducted or supported financially or otherwise in the past year. Examples of research include but are not limited to crop variety trials, reduced-toxicity pesticide efficacy trials, conservation-related research projects with local experts, water conservation trials at field, packing or processing facilities, etc.

Non-conformance (0 points): On-site research has not been conducted or supported financially or otherwise in the past year, or written evidence showing this does not exist.

1.16.4 Are science-based procedures used for on-site research?

Total conformance (25 points): Science-based procedures are used for on-site research. These procedures may include check and controls and quantitative results documented in writing.

Non-conformance (0 points): On-site research has not been conducted or documentation does not exist.

Crop-Specific Standards

The following crop-specific questions must be answered accurately for each crop in the scope of the application. A Not Applicable (N/A) option is provided for crops where no pesticide applications are made.

1.17.1 Does organization access IPM information resources?

Total conformance (100 points): Organization accesses IPM information such as crop and region-specific production guides, in-season update bulletins/newsletters, association publications, industry publications, bookmarks to on-line resources, extension bulletins and government-developed resources (e.g., USDA Crop Profiles or Pest Management Strategic Plans).

Non-conformance (0 points): Organization does not access IPM information.

1.17.2 Does organization identify key pests (those which usually require action to prevent economic losses) and understand key pest biology?

Total conformance (100 points): Staff or experts contracted by organization can identify key pests (those which usually require action to prevent economic losses) and understand key pest biology. Key pest lists may include insect pests, diseases and weeds. Organization can identify pest life cycle in relation to crop growth stages, crop-damaging life stage and important behaviors related to pest management. Organization uses this information to implement IPM strategies.

Non-conformance (0 points): Organization and staff are unable to identify key pests.

1.17.3 Does organization identify effective non-chemical and chemical strategies to prevent losses by each key pest?

Total conformance (100 points): Organization identifies both effective non-chemical and chemical strategies to prevent losses by each key pest. Non-chemical strategies may include cultural, mechanical and biological options. A list of strategies for each key pest is available.

Non-conformance (0 points): Organization cannot identify effective non-chemical and chemical strategies or a list of these strategies is not available for each key pest.

1.17.4 Does organization implement effective scouting, sampling and monitoring techniques for all key pests for which these techniques are available?

Total conformance (100 points): Organization staff or contracted experts implement effective scouting, sampling and monitoring techniques for all key pests for which techniques are available. Techniques may include visual sampling, insect traps/sweep nets, weed mapping, weather conditions and extension crop/region pest alerts or forecasts. Scouting, monitoring and/or mapping records are available for each key pest.

Non-conformance (0 points): Organization staff and contracted experts do not implement effective scouting, sampling and monitoring techniques for all key pests or records are unavailable for each key pest.

1.17.5 Does organization use science-based action thresholds to determine if and when to take action for each key pest for which thresholds are available?

Total conformance (100 points): Organization uses science-based action thresholds to determine whether and when to take action for each key pest for which thresholds are available. Thresholds may be based on visual sampling counts for pests or damage; trap, sweep net counts; specific weather conditions favorable to disease development; and/or crop prices and costs of control measures. A list of thresholds and sources of those are available.

Non-conformance (0 points): Organization does not use science-based action thresholds to determine whether and when to take action for each key pest for which thresholds are available or a list of thresholds and sources are not available.

1.17.6 Are pesticide applications tied to a documented need?

Total conformance (40 points): Pesticide applications are tied to a documented need such as pest populations over threshold, specific weather conditions being favorable to disease, written documentation from a credible source supporting the need for preventative application, extension regional pest alerts and a crop and site-specific history of problems. Organization can explain justification for applications and support explanation with documentation.

Non-conformance (0 points): Pesticide applications are not tied to a documented need. Organization cannot provide justification for applications or cannot support explanation with documentation.

Not applicable (0 points) if: no pesticides are used.

1.17.7 Is total pesticide use, i.e., pounds of active ingredient, measured and recorded?

Total conformance (20 points): Organization can provide documentation of total amount of pesticide used on an annual basis by crop, i.e., pounds of active ingredient or the amount and concentration of pesticide applied.

Non-conformance (0 points): Organization cannot provide documentation of total amount of pesticide used on an annual basis by crop.

Not applicable (0 points) if: no pesticides are used.

1.17.8 Is pesticide use tracked and reduced over time by transitioning to non-chemical strategies?

Total conformance (40 points): Organization tracks and reduces pesticide use over time by transitioning to non-chemical strategies such as application techniques, e.g. auto-steering and spot application; cultural techniques, e.g. insect trapping and barriers; and biological techniques, e.g. conserving and importing beneficial insects. Tracking records are available and show long-term reduction; use in any one year may increase or decrease due to differences in weather, pest populations and other factors.

Non-conformance (0 points): Organization does not track and reduce pesticide use over time or complete tracking records are not available.

Not applicable (0 points) if: no pesticides are used.

1.17.9 Is pesticide risk tracked and reduced over time?

Total conformance (40 points): Organization tracks and reduces pesticide risk over time by transitioning to lower risk options, reducing pesticide use and/or by implementing mitigation measures. Tracking records are available and show long-term reduction; risk in any one year may increase or decrease due to differences in weather, pest populations and other factors. Tools for tracking risk include the Pesticide Risk Tool (pesticiderisk.org), Environmental Impact Quotient.

Non-conformance (0 points): Organization does not track and reduce pesticide risk over time or complete tracking records are not available.

Not applicable (0 points) if: no pesticides are used.

1.17.10 Does organization identify pesticide modes of action, and specific pesticide uses most at risk for pest resistance?

Total conformance (40 points): Organization has contracted or has in-house capability to identify and group pesticides by modes of action, and can report those for pesticides in use. Organization identifies specific current pesticide uses at greatest risk for resistance and can report those verbally or in writing.

Non-conformance (0 points): Organization does not identify and group pesticides by modes of actions and does not report those for pesticides in use. Organization does not identify specific current pesticide uses at greatest risk for resistance and does not report those verbally or in writing.

Not applicable (0 points) if: no pesticides are used

1.17.11 In addition to reducing reliance on pesticides through scouting, monitoring, thresholds and/or spot treatments, are other strategies used to delay resistance?

Total conformance (50 points): Organization implements strategies to delay resistance for pesticides at risk, in addition to reducing reliance on pesticides through scouting, monitoring, thresholds and/or spot treatments. Other strategies may include rotating annual crops, establishing refuges (untreated areas), rotating or combining modes of action, and rotating chemical controls with non-chemical methods.

Non-conformance (0 points): Organization does not implement strategies to delay resistance.

Not applicable (0 points) if: no pesticides are used

1.17.12 Does organization formally assess performance of pesticides most at risk of resistance to detect and report problems early?

Total conformance (10 points): Organization formally assesses performance through in-field check or comparison strips, post-treatment pest counts in the field and/or laboratory testing of samples collected on site. Organization can report and/or provide results of testing, and detail how results have guided decision-making to delay resistance.

Non-conformance (0 points): Organization does not formally assess performance through any of the above methods. The organization cannot report and/or provide results of testing, and detail how results have guided decision-making to delay resistance.

Not applicable (0 points) if: no pesticides are used.

1.17.13 Does organization rank pesticides used by potential for residue post-harvest, and reduce/restrict use of those with greatest residue potential?

Total conformance (30 points): For each pesticide used, organization evaluates potential for residue at or after harvest using the Pesticide Risk Tool at pesticiderisk.org, lists provided by commodity organizations, universities or other credible sources or other tools. A ranked list is

available for review, as well as pesticide application records demonstrating use practices designed to minimize residues at or after harvest. Using the Pesticide Risk Tool is not a requirement if other written scientific evidence is available to support the ranked list.

Non-conformance (0 points): Organization does not use the Pesticide Risk Tool or other credible lists or sources to evaluate if there is a potential for pesticide residues at or after harvest. Organization does not have records and a ranked list of applications to verify that practices are used.

Not applicable (0 points) if: no pesticides are used.

1.17.14 Does organization rank pesticides used by acute toxicity to mammals, and reduce/restrict use of those with greatest risk?

Total conformance (20 points): Organization uses resources such as pesticide labels, expert publications, pesticiderisk.org or pesticideinfo.org to rank pesticides in use by acute toxicity to mammals, and can provide those rankings. Organization can demonstrate reduction in use of pesticides highly toxic to mammals over time based on pesticide application records. Using the Pesticide Risk Tool is not a requirement if other written scientific evidence is available to support the ranked list.

Non-conformance (0 points): Organization does not have a credible list of pesticide use and acute toxicity to mammals or cannot provide evidence that demonstrates the reduction in use of highly toxic pesticides to mammals.

Not applicable (0 points) if: no pesticides are used.

1.17.15 Does organization rank pesticides used by toxicity to beneficials, including pollinators, and reduce/restrict use of those with greatest risk?

Total conformance (20 points): Organization uses resources such as pesticide labels, expert publications, pesticiderisk.org or pesticideinfo.org to rank pesticides in use by toxicity to beneficials including pollinators, and can provide those rankings. Organization can demonstrate reduction in use of pesticides highly toxic to beneficials over time based on pesticide application records. Using the Pesticide Risk Tool is not a requirement if other written scientific evidence is available to support the ranked list.

Non-conformance (0 points): Organization does not have a credible list of pesticide use and acute toxicity to beneficials or cannot provide evidence that demonstrates the reduction in use of highly toxic pesticides to beneficials.

Not applicable (0 points) if: no pesticides are used.

1.17.16 Does organization rank pesticides used by chronic toxicity to mammals, and reduce/restrict use of those with greatest risk?

Total conformance (20 points): Organization uses resources such as pesticide labels, expert publications, pesticiderisk.org or pesticideinfo.org to rank pesticides in use by chronic toxicity to mammals, and can provide those rankings. Organization can demonstrate reduction in use of pesticides highly toxic to mammals over time based on pesticide application records. Using the Pesticide Risk Tool is not a requirement if other written scientific evidence is available to support the ranked list.

Non-conformance (0 points): Organization does not have a credible list of pesticide use and chronic toxicity to mammals or cannot provide evidence that demonstrates the reduction in use of highly toxic pesticides to mammals.

Not applicable (0 points) if: no pesticides are used.

1.17.17 Does organization rank pesticides used by additional eco-toxicity measures, and reduce/restrict use of those with greatest risk?

Total conformance (20 points): Organization uses tools such as pesticide labels, expert publications, pesticiderisk.org or pesticideinfo.org to rank pesticides in use by additional factors such as ground or surface water contamination potential, toxicity to birds, aquatic organisms, amphibians, ozone depletion, or volatile organic compounds, and can provide those rankings. Organization can demonstrate reduction in use of pesticides with those risk factors over time based on pesticide application records. Using the Pesticide Risk Tool is not a requirement if other written scientific evidence is available to support the ranked list.

Non-conformance (0 points): Organization does not use tools or have a credible list of pesticide use and chronic toxicity to the above additional factors or cannot provide evidence that demonstrates the reduction in use of the pesticides that increase risk factors for those additional items.

Not applicable (0 points) if: no pesticides are used.

1.17.18 Organization protects bees and other pollinators from exposure to pesticides toxic to bees.

Total conformance (40 points): Organization uses at least three measures to protect bees and other pollinators from exposure to toxic pesticides. Example measures include not making applications to crops in bloom, preventing drift onto adjacent blooming plants attractive to pollinators; identifying pollinator habitat outside of cropped areas, and if present, > 20 ft. buffers are maintained around habitat to reduce risk from pesticide drift; making applications when most pollinators are less active, e.g., evening, night; informing beekeepers when, where, how and what pesticide(s) are being applied if managed bees are present in the area; apiaries and sites on the farm containing crops sensitive to pesticide drift are registered online at www.driftwatch.org or a similar system to enhance communication between growers and pesticide applicators and reduce drift incidents.

Partial conformance (20 points): Organization uses two measures, but does not have three defined measures in place.

Non-conformance (0 points): Organization does not use three measures to protect bees and other pollinators from exposure to toxic pesticides.

Not applicable (0 points) if: no pesticides are used.

1.17.19 Do nutrient application rates reflect available nutrients and projected crop need, i.e. by nutrient management planning?

Total conformance (40 points): For each crop in question, nutrient application rates reflect available nutrients and projected crop need, i.e. by nutrient management planning. Nutrient application rates are determined by one or more of the following: soil sampling, foliar analysis, nutrient crediting from prior to concurrent crops, crop nutrient removal and requirements, pH and electrical conductivity

testing (hydroponic producers) or other science-based techniques. A nutrient management plan is not required for credit on this question, but could be included as evidence that the auditee is keeping track of the above methods.

Non-conformance (0 points): The organization does not implement nutrient application rates for each individual crop based on available nutrients, projected crop need or by using one of the above science-based techniques to establish nutrient application rates.

1.17.20 Is nutrient use efficiency, i.e., nutrient use per unit of production, measured and recorded?

Total conformance (15 points): For each crop in the scope of the application, nutrient use efficiency, i.e., nitrogen, phosphorus and potassium use per unit of production, is measured and recorded. Records of crop and/or variety-specific nutrient efficiency calculation are available. Tools for calculating nutrient use efficiency are used such as spreadsheets, or the Stewardship Index for Specialty Crops or Field to Market calculators.

Non-conformance (0 points): The organization does not measure and record nutrient use efficiency of nitrogen, phosphorus and potassium for every crop in the application.

1.17.21 Is nutrient use efficiency tracked and improved over time?

Total conformance (40 points): For each crop in the scope of the application, nutrient use efficiency, i.e., N, P and K used per unit of crop produced, is tracked and improved over time by strategies such as auto-steering, variable rate application, cover crops and green manures, crop rotations with legumes, reduced tillage, timing application to match crop need/split applications and nutrient film technique (hydroponic producers). For example, number of lbs. of nitrogen used per ton of crop produced. At least two years of nutrient use efficiency calculations are available along with records of practices implemented. If new operation, one year of records is acceptable, with verbal commitment to maintain records for second year.

Non-conformance (0 points): The organization does not have records that track and demonstrate nutrient efficiency improvement over time. A record of nutrient efficient practices added must also be available.

1.17.22 Does organization staff or contracted advisors responsible for pest management meet minimum continuing education requirements for pesticide applicator licensing/certification?

Total conformance (20 points): Individuals employed or contracted by organization to direct pest management meet minimum continuing education requirements for pesticide applicator licensing/certification. Organization is aware of minimum requirements and can document those are met with current applicator licenses for key staff or schedules of training staff/contractors have completed that meet those requirements.

Non-conformance (0 points): Organization cannot document that the minimum requirements for pesticide applicator licensing/certification is met.

1.17.23 Have organization staff involved in implementing sustainable agriculture practices participated in sustainable agriculture-related training events in the past year exceeding minimum legal requirements?

Total conformance (40 points): Organization staff have participated in sustainable agriculture-related training events in the previous year exceeding minimum legal requirements. Training events

may include sustainable ag/IPM training sessions at industry association meetings, field days held on farms in season, extension, government, or industry-produced web-based training and extension meetings. Certificates of completion, receipts for registration and/or event handouts with dates, times and topics covered are available for review.

Non-conformance (0 points): Organization staff have not participated in sustainable agriculture-related training events in the previous year that exceed the minimum legal requirements or no documentation is available.

1.17.23.1 Were at least three different sustainable agriculture topics covered in training events that organization staff participated in within the last year?

Total conformance (20 points): Three or more IPM/sustainable agriculture topics were covered in training events that organization and grower participated in within the last year. Example topics include soil health/quality management; biological controls; scouting, monitoring and/or thresholds; new pests and resistance management.

Non-conformance (0 points): Less than three IPM/sustainable agriculture topics were covered in the training that the organization and grower participated in within the last year.

Not applicable (0 points) if: staff did not participate in any sustainable-agriculture related n events.

1.17.24 Are training records written and include staff attending, name of session, topics addressed and date?

Total conformance (10 points): Training records are written and include the names of staff attending, the name of the session, the topics addressed and the date.

Non-conformance (0 points): There are no training records, or the records do not include one of the following: staff attending, name of session, topics addressed and date.

Not applicable (0 points) if: staff did not participate in any sustainable-agriculture related training events.

1.17.25 Has organization provided, hosted or supported one or more events in the past two years that include training in one or more aspects of sustainable agriculture?

Total conformance (10 points): Organization has provided, hosted or supported one or more training events in the past two years that address sustainable agriculture topics. Agendas, minutes and/or announcements are available for review which include information on the topics covered.

Non-conformance (0 points): Organization has not hosted a training event in the past two years that address sustainable agriculture or documentation from the event does not exist.

Informational

1.18.1 Have any of the operations in the scope of the application been cited for violations of any legal requirements since the previous audit or within the last three years if they are a new applicant? (Informational only, answer will not affect score.)

Total conformance (0 points): Organization describes any citations issued by legal authorities against operations in the scope of the application including those concerning hiring and employment, worker health and safety, and the handling, storage and application of pesticides and

nutrients since the previous audit (or within the last three years if a new application). The organization will report status of any open or unresolved violations.

- 1.18.2** Have any operations in the scope of the application experienced an environmental emergency since the previous audit, or within the past three years for new applicants? (Informational only, answer will not affect score.)

Total conformance (0 points): Organization describes any environmental emergencies experienced since the previous audit. New applicants report any experienced within the previous three years. Environmental emergencies include only those events that result in a threat of environmental contamination or worker exposure, e.g., vehicle accident, fire, fuel, fertilizer or pesticide leak or spill, earthquake, tornado, volcanic eruption that result in release of hazardous materials into the environment or worker exposure.

- 1.18.3** Have any operations in the scope of the application been cited for off-target application of fertilizers or pesticides since the previous audit, or within the last three years for new applicants? (Informational only, answer will not affect score.)

Total conformance (0 points): Organization describes any citations from local, regional or federal regulatory authorities regarding off-target fertilizer and pesticide applications since the previous audit. New applicants report any citation regarding, or incidence of, off-target fertilizer or pesticide application within the previous three years.

- 1.18.4** Are any significant disputes with trade partners open or unresolved? (Informational only, answer will not affect score.)

Total conformance (0 points): Organization and/or grower describes any significant open or unresolved disputes with trade partners including customer, supplier or employee groups. Significant disputes include any that have been reported publicly.